

SMLT/T&C/S02/OMC-5937/NIT/5254

Subject: Mechanical Maintenance Contract for Cast House, Smelter Plant.

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## **NOTICE INVITING TENDER (NIT)**

NIT No: SMLT/T&C/S02/OMC-5937/NIT/5254 DATE: 27.02.2025

Sub: Mechanical Maintenance Contract for Cast House, Smelter Plant.

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# PART-A

General information



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#### 1. Company Information

- 1.1. National Aluminum Company Limited (NALCO), incorporated in 1981, is a premier Navaratna Public Sector Enterprise under administrative control of Ministry of Mines of Govt. of India in the field of Alumina/Aluminium having integrated multi-locational facility of Bauxite Mining, Alumna Refining, Aluminum Smelter, Power Generation and Port. NALCO has one of the major Aluminum production facilities consisting of Bauxite Mines, Alumina Refinery, Aluminium Smelter and Captive Power Plant, all located in the state of Odisha.
- 1.2. More details on NALCO can be viewed on company's website www.nalcoindia.com

#### 2. GeM-Procurement

- 2.2 The bidder wishes to participate in the published tender should have his firm registered in the GeM portal. Accordingly, bidder should do the registration in the tender site <a href="http://gem.gov.in">http://gem.gov.in</a> using the option available. Then the Digital Signature registration has to be done with the e-token, after logging into the site. The e-token may be obtained from one of the authorized Certifying Authorities of Govt. of India such as MTNL / SIFY / TCS / nCode/ eMudhra / NIC etc. After that, bidder will login to the site through using his user ID & Password chosen during registration. The e-token that is registered should be used by the bidder and should not be misused by others.
- 2.2 Reverse Auction:- In case of Reverse auction tendering, the Date, time and quantum of decremental value will be mentioned in the NIT. Hence bidder should take a note of it and see the details as per **Annexure-A8**.

#### 3. Purpose of this NIT

- 3.1. SMELTER-NALCO invites digitally signed online bids under Open, Two-part Tender system.
- 3.2. The Salient features of the Tender are as detailed F-02 Form (Annexure-B1).

#### 4. Bidding Process

- 4.1 The entire set of Tender document needs to be uploaded and digitally signed in GeM Portal (www.gem.gov.in) before the scheduled time of bid submission.
- 4.2 Bids will be received up to last date and time specified or extended bid due date, as the case may be through e-tendering at <a href="https://www.gem.gov.in">www.gem.gov.in</a>.
- 4.3 NALCO shall not be responsible for any expenses incurred by bidders in connection with the preparation & submission of their bids, and other expenses incurred during bidding process.
- 4.4 The bidders are advised to submit the tender document online well in advance before the prescribed time to avoid any last-minute hitch / problem.
- 4.5 After the bid submission, the acknowledgement number generated by the e-tendering system should be printed by the bidder and kept as a record of evidence for online submission of bid for the tender.
- 4.6 Further, bid shall be evaluated based on documents furnished. So bidder must ensure that all relevant documents are furnished at the time of submission of offer.
- 4.7 This NIT is in three parts .The part -A is mainly General information and instructions to bidder, Part-B is about the contract details and Part-C consists of various forms ,agreement formats, declarations etc. The bidder should go through full NIT before filling.
- 4.8 The bidder should go through 'Annexure-A1' i.e. instructions to the bidders prior to bidding.



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- 4.9 Bidders are required to submit the hard copy of the followings in a sealed envelope and should reach General Manager (T&C) Tender & Contract Department, SMLETER, NALCO, Angul-759145 (Odisha) by Speed Post/By Hand before the due date & time of bid opening.
  - 4.9.1 Earnest Money Deposit (EMD) (Refer Clause no. 4.0 of Annexure-A1 & Format for BG-EMD is available at Annexure-C12)
  - 4.9.2 Tender Fee (In case of Open/LTE/Single/Proprietary, Tender Fee is not applicable)
    - NB:- Earnest Money Deposit(EMD) is a prerequisite, otherwise the Tender will be normally rejected. Earnest Money Deposit (EMD) may be submitted in the account details of respective Unit of NALCO as available at 4.0 of NIT. However, the bidder may submit attested copy of certificate such as NSIC / MSME / other category for Earnest Money Deposit (EMD) exemption.
  - 4.9.3 The signed & sealed copy of "The Integrity Pact (Annexure-C21).
  - 4.9.4 Affidavit in Original towards Litigation History (Annexure-C22) duly signed after the NIT publication date.
  - 4.9.5 Bid submission conformation page from GeM System Government of India
  - 4.9.6 Internet Bank Mandate along with Cancelled Cheque (all in original) as per Annexure-C10.
  - 4.9.7 The party, if registered with NSIC/MSME, then they should submit the documentary proof of the same mandatorily.
    - Copy of all these above documents are also required to be uploaded in GeM Portal along with Bid documents.
- 4.10 Clarifications, if any, regarding this tender can be obtained from the undersigned through mail or phone no. at Pq-8 before the TSD
- 4.11 After downloading / getting the tender schedules, the bidder should go through them carefully and then submit the documents as asked. If there are any clarifications, this may refer online through the tender site, or through the contact details. Bidder should consider the corrigendum published before submitting the bids online. Bidders in their own interest should get ready in advance to submit the bid documents as indicated in the tender schedule. These documents should be in PDF / XLS / RAR / DWF formats. If there is more than one document, they can be clubbed together.
- 4.12 Bidder should clearly fill up the PQC Technical (Detailed work order and execution statistics) (Annexure-C6) and Details of present commitments of the tenderer (Annexure-C8) for his offer evaluation. Suppression of credential / facts may lead to penal action as per procedure.
- 4.13 It is mandatory for the bidder to fill up the Annexure-C19 and Annexure-C20 (regarding declaration of the relatives in Nalco) and Annexure-C3 (Deviation statement to the tender terms and conditions) and **Annexure-C4** (Declaration by the bidder) while submitting the offer.
- 4.14 Bidder should check his mail and GeM portal for any information regarding tender from time to time.
- 4.15 In case any specific adverse report is found against any bidder during enguiry about the statement made / credential submitted along with the offer documents in respect of capabilities, spare capacities, performance, completion certificates and criminal background of the bidder, the offer submitted by such bidder shall be rejected and penal action as deemed fit may be initiated.
- 4.16 If the bidder submits the bid in manual form (if permitted categorically in the tender), he should have already registered in the tender site and he shall have to mention the registration ID in the bid submitted otherwise his tender will not be considered.
- 4.17 Nalco reserve the right to seek any document / information at later stage in respect of evaluation of bid which the bidder must submit failing which the bid may be rejected.

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#### 5 Bid Evaluation

- Evaluation will be done strictly in line with the facilities available under government website <a href="www.gem.gov.in">www.gem.gov.in</a> i.e. based on documents uploaded by the bidder as per PQC. In case of non-compliance to the PQC requirement, i.e. any shortfall documents arise out of submitted technical as well as commercial credential submitted within tender submission date, bidders will be given normally one chance under GeM portal to upload shortfall documents within a stipulated date. No new documents would be called up as part of PQC experience documents.
- 5.2 The technical acceptability will be strictly as per matching of PQC with submitted work credential by the bidder
- 5.3 In case any specific adverse report is received against any bidder and proved to be correct after enquiry about the statement made / credential submitted along with the offer documents in respect of capabilities, spare capacities, performance, completion certificates and criminal background of the bidder, the offer submitted by such bidder shall be rejected and penal action as deemed fit may be initiated.
- 5.4 Concurrent commitment: The concurrent commitments of bidder on various jobs under execution by the bidder will be considered to assess the spare capacity available with the bidder. The bidder must confirm that they have disclosed all the works being executed by them in the offer. If the annualized concurrent commitments of the bidder plus annualized estimated value of the work (for single agency)/ annualized estimated maximum percentage of work in split case under consideration (for multiple agency) exceeds four times the average annual turnover of the bidder during the last three Financial Years, then the price bid of such a bidder shall not be recommended for opening as the bidder may not have adequate resources to execute the tendered work. Suppression of fact /data regard to jobs under execution will be considered as gross violation and rejection of bid including penal action such as banning/ blacklisting, as deemed fit. [Not applicable for this contract]
- 5.5 In-house information for assessment of capability of bidder and their performance on jobs completed / in progress at NALCO shall be considered for evaluation purpose. In case of poor performance, the offer from such bidders shall not be evaluated.
- 5.6 Nalco reserve the right to seek any document information at later stage in respect of evaluation of bid which the bidder has to submit failing which the bid may be rejected.
- 5.7 In case the Bidder submits the work experience as a sub-contractor (of the Main Contractor), approval from the Principal agency/Client, against application submitted by Main Contractor, needs to be submitted along with the Bid.

#### 6 Ordering

- 6.1 On selection of Vendor for award of work, necessary internal approval processes will be completed, and during the said process, the Vendor Master data will be cross checked with documents like PAN Registration Certificate, GST Registration Certificate, Signed & Cancelled Cheque (with Name, Account No and IFSC Code printed on the Cheque) duly authenticated by the Vendor and attached to ANNEXURE- C10.
- In normal circumstances the party in whose favor the work is awarded shall be issued with LOI. The party shall have to enter into an agreement in writing on non-judicial stamp paper of appropriate value as laid down in the GCC. The agreement normally consists of LOI, BOQ at the accepted rate, complete bid document, Schedule of Agreed Variation (if any) etc. The documents such as, correspondences, minutes of meeting, (if held with the party) etc. shall also form part of the contract agreement if required. On execution of Agreement a Detailed Order will be issued.
- 7 **General Conditions of Contract** (GCC) will be a part of the NIT.

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**ANNEXURE-A1** 

#### **INSTRUCTIONS TO BIDDERS**

SMELTER / CPP of National Aluminium Company Ltd (NALCO) is situated on NH-55 at approximately 6 KM away from ANGUL (District head quarter) and 5 KM away from Banarpal in Angul district of state of Odisha, connecting between Cuttack and Sambalpur.

#### 1.0 SCOPE OF WORK:

The scope of work shall be as detailed is enclosed at <u>Annexure-B2</u>. The work shall be carried out as per direction of Engineer-in-charge/Manager-in-charge subject to special condition of contract given in **Annexure-B3**.

#### 2.0 PRE-QUALIFICATION CRITERIA (PQC)

- 2.1 Single part Tender will be evaluated on the basis of price bids only. Hence, bidder should not take any technical/commercial deviations, otherwise their offer will be liable for rejection. For other type of tenders, wherever techno-commercial evaluation is to be done first, the bidders are required to submit documentary evidences for technical experience and financial capabilities as part of Pre-Qualification Criteria (PQC).
- 2.2 It may be noted that the details of documents submitted in support of the PQC for Technical & Financial capabilities are to be specified in following formats. If no references are found in the stated Annexures and the bidder gets disqualified, non-cognizance of such documents by NALCO, even if attached somewhere else as part of bid documents, will not be seen as a deficiency in proper evaluation of such documents. Hence, bidders may ensure that such documents are invariably referred in the below-mentioned Annexures.
  - **2.2.1** Technical/Experience Criteria: **Annexure-C6**
  - **2.2.2** Financial Criteria : **Annexure-C7**
  - 2.2.3 The bidder should possess independent EPF, ESI, PAN & PAN based GST registration certificates respectively from the concerned Regional Provident Fund Commissioner for PF, Independent Account Code from concerned Regional Director ESIC for ESI, Direct Tax Authorities for PAN and Indirect Tax Authorities for GST, as applicable.
  - 2.2.4 Litigation history for criminal background: Annexure-C22
  - 2.2.5 The concurrent commitments of bidder on various jobs under execution by the bidder will be taken into account to access the spare capacity available with the bidder. Bidders are required to fill Annexure-C8 for calculation at our end. Suppression of fact and figures will liable to cancellation of bid and penal action as per rule. [Not applicable for this tender]

#### 3.0 LITIGATION HISTORY:

- 3.1 The bidder is required to give the names of other firms / agencies / partnership firm / wholly owned or partly owned subsidiary etc. where they are having financial / professional stakes and also give a certificate if any such firm / agency is participating in the subject tender.
- 3.2 Bidder may note that any pending criminal case involving moral turpitude, fraud, theft & unlawful activities or conviction by court of law or indictment/ adverse order by regulatory authority against the person, company, Directors of the Company or sister concern of the Company, partner of the firm etc. would constitute disqualification for participating for tender.
- 3.3 The bidder or its proprietor /partner(s)/director(s) of the firm should not have been convicted by court of law for an offence involving moral turpitude in relation to the business dealing during past seven years for acceptance of the offer.
- 3.4 Litigation history for criminal background is to be provided by the bidder. The bidder shall give an affidavit to this effect as per the format at <u>Annexure-C22</u>. The affidavit must be affirmed before the competent judiciary authority or duly notarized by Notary.



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#### **4.0** EARNEST MONEY DEPOSIT (EMD):

**Earnest money** may be deposited through any one of the two procedures noted below. (refer sl no:4.3 of F-02 form of contract details, **Annexure-B1**.

- **4.1** In shape of account payee Demand draft/ Banker's cheque/ Pay order, from any Nationalized or Scheduled Bank in favour of National Aluminium Company Ltd., payable to our bank as per the details below.
- 4.2 Through online bank transfer. The transaction confirmation document generated through online transaction, giving details of transaction is required to be provided as a separate document. The credit of EMD in our Bank account would be confirmed before acceptance of bid. If the transaction is not reflected or reflected with wrong reference as on TOD or credited subsequently, then the bid shall be considered to be unaccompanied by any EMD and the bid will be liable for rejection.

Our bank details for online transfer of EMD

S1.	Description	Smelter Plant	<b>Captive Power Plant (CPP)</b>
a)	Account Holder's Name	Nalco Smelter Plant	Nalco Captive Power Plant
b)	Bank Name	State Bank of India	State Bank Of India
c)	Branch Name	Kandsar	Kandsar
d)	Branch Place	Nalconagar	Nalconagar
e)	Branch City	Angul	Angul
f)	IFS Code	SBIN0008279	SBIN0008279
g)	Account Number	10657908114	10657908589

Bank transfer details of EMD to be provided.

- a) Amount transferred: Rs. \_\_\_\_\_
- b) Unique Transaction Reference (UTR) No.:
- c) Bank details from which the transaction was made:
- d) Date of transaction:
- e) Tender details (Number & Name of work):

Note: While making the online payment, the Tender Number (OMC-\_\_\_\_) may be mentioned in the text field of the transaction.—

Incase EMD amount is Rs.1.25 lakhs or more, EMD in the form of Bank Guarantee in prescribed format from NALCO approved Bankers (<u>Annexure-C12</u>) shall also be accepted. The original BG is to be submitted along with bid as indicated in the NIT.

- 4.3 Bids without EMD will be rejected. However, the Public Sectors, Government agencies and the Firms registered with NSIC/MSME, and others such as Ancillary Industries etc. for which specific exemption has been granted by NALCO may be considered for exemption from EMD subject to submission of attested documentary evidence in support of the same in sealed envelope as stipulated in NIT.MSEs having UAM no shall also submit supporting documents such as UAM certificate, CA Certificate (certifying that the unit is a MSE having valid MSE certificate).
- **4.4** EMD of unsuccessful bidders will be refunded within 15 days of finalization of contract for single part bid tender and within 15 days of acceptance of techno-commercial offers by the Competent Authority in case of two-part bid tender.
- **4.5** The EMD shall be forfeited without any notice on any of the following situations.
  - **4.5.1** On withdrawal of offer after expiry of submission date & time of bid offered.
  - **4.5.2** If the bidder does not submit the agreement prior to effective date mentioned in the Service Purchase Order/LOA/LOI considering the criteria of Clause No. 15.0 of this **Annexure-A1**.
  - **4.5.3** If the work is not commenced from the effective date of Service Purchase Order, after award of the work.
  - **4.5.4** At any point of time if it is found that the party has submitted any false declaration in his offer.
  - **4.5.5** If the bidder modifies its bid after the opening of the bids without written instruction from NALCO.



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#### 5.0 BANK GUARANTEES: -

- 5.1 The vendor may submit Bank Guarantee against Earnest Money Deposit (EMDBG), Performance Guarantee Bond (PGB), Security deposit (SDBG), Free Issue Material (FIMBG), Advance BG (ADVBG) Performance Bank Guarantee (PBG), and Contract Cum Performance Guarantee (CPBG) where ever applicable.
- 5.2 The BG in prescribed format (<u>Annexure-C11</u> to <u>Annexure-C16</u>) should be issued by approved Banks listed at <u>Annexure-C17</u> having its branch at Angul/Bhubaneswar and the BG should be registered in Structured Financial Messaging System (SFMS) for BG Conformation and Lodging of claim. Place of Encashment may be limited to Angul/Bhubaneswar only.
- 5.3 The original EMD-BG should be sent by the Bank directly in the address of Tender Inviting Authority (TIA) and for other BGs to EIC/MIC mentioned in the Work Order through Registered/Speed Post with AD. It may be noted that the BG Format requires mentioning of the address, Phone, Fax no. and email ID of the issuing Bank. On receipt of Original BG, it will be forwarded to Finance by EIC/MIC through Inter Office Memo (IOM).
- 5.4 Each BG contains a start date, expiry date and claim date. The validity of BG (Start date to expiry date) should cover the Tender/Contractual execution period. A further claim period of 3 months is required to lodge a claim for extension/encashment of BG if necessary. Therefore, the claim date should be 3 months beyond the expiry date. If a consolidated BG is provided including claim period, 3 months will be considered as claim period and accordingly BG extension should be provided to cover Tender/Contract requirement.
- 5.5 BG extension whenever required should ideally be provided 15 days prior to Expiry date from the same Banker against the Original BG with reference to the Tender/Contract. However, in specific cases if a new BG from a different bank is provided against the Original BG the subsequent BG should also cover the obligations under original BG period. The subsequent banker has to give an undertaking in this regard in their BG forwarding letter in letter head.

#### 6.0 ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS:

- 6.1 The documents as stated below shall constitute the integral part of Contract Documents. In the event of any ambiguity or conflict between the Contracts documents as given below, the order of precedence shall be the order in which they are listed. All documents forming part of this tender are intended to be correlative, complimentary and mutually explanatory. The tender documents should be read by the bidder as a whole before bidding the tender.
  - **6.1.1** Conditions of Integrity Pact.
  - **6.1.2** Bill of Quantity.
  - **6.1.3** Scope of Work/Technical Specifications.
  - **6.1.4** Drawings if any.
  - **6.1.5** Special Conditions of Contract.
  - **6.1.6** Instruction to bidders/NIT.
  - **6.1.7** General Conditions of Contract (GCC).
  - **6.1.8** Relevant Indian Standards.
- 6.2 If any varying of conflicting situation arises in any of the document forming part of the Contract, NALCO's decision with regard to intention/interpretation of the document and the decision shall be final and binding on the parties.



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#### 7.0 MODE, SUBMISSION, RECEIPT AND OPENING OF TENDER:

- 7.1 Corrigendum and/or Clarification, if any issued for the NIT shall form part of the Tender Documents. Corrigendum and/or Clarifications will be hosted on the web-site <a href="www.gem.gov.in">www.gem.gov.in</a> and no separate intimation will be given to the bidders or released in the press. Bidders are requested to visit the web-sites from time to time to note the Corrigendum and/or Clarifications before submission of their bid. NALCO shall not be responsible if any bidder omits to notice any Corrigendum and/or Clarifications and make necessary change if required in their submitted final bid.
- **7.2** Telex/ Telegraphic/ Fax/ E-mail bids shall not be accepted.
- 7.3 Before submission of the bid, the bidders are requested to read the bid document carefully to make themselves fully conversant with the GCC, Special Conditions of Contract and Conditions of bidding, Specific conditions, technical Specifications and bid drawings if any. The bidder should visit site and get familiarized with the site conditions so that, no ambiguity may arise in these respects, subsequent to submission of the bids.
- 7.4 Nalco's General Conditions of Contract (GCC) & Special Conditions of Contract (SCC) if any shall form part of this contract. The tenderer is advised to go through the same either in the office of the Tender Inviting Authority during office hours to seek clarification if any, or may refer to NALCO web site and get them-selves satisfied before quoting the rates. It will be taken for granted by NALCO that tenderer has seen and gone through the terms and conditions and shall abide by same.
- 7.5 The forwarding letter / covering letters & information is to be included in the offer. The instruction given in the checklist of single part / two-part bids must be strictly complied.
- 7.6 Tenders are to be uploaded in the GeM web site (<a href="www.gem.gov.in">www.gem.gov.in</a>) on or before time & date specified at Sl. No. 5.0 of F-02 form of Contract Details, <a href="Annexure-B1">Annexure-B1</a>. The PART-I bids in case of two-part tendering and Single part bid in case of LTE shall be opened at the time & date specified at Sl. No. 6.0 of F-02 form of Contract Details, <a href="Annexure-B1">Annexure-B1</a>.
- 7.7 The price bids of technically qualified bidders shall only be opened on a later date. The date & time of opening of price bid shall be intimated to the qualified bidders through <a href="www.gem.gov.in">www.gem.gov.in</a> website.
- **7.8** Bidders are advised to submit complete set of Tender documents along with ANNEXURE-B4 & ANNEXURE-C3 etc. under GeM Portal in the Online Mode. Price Bid shall also be uploaded online only.
- 7.9 All the supporting documents to meet the PQC need to be uploaded with the offer after attesting them by a gazette officer or notary public and are required to sign each page by the bidder or by their authorized representative. The hard copy of these PQC compliant documents should reach the office of the Tender Inviting Authority before the due date & time of bid opening.
- 7.10 As per Manual for Procurement of Works 2019 Ministry of Finance Department of Expenditure 5.4.5 Normally no post bid clarification at the initiative of bidder shall be entertained. The shortfall information /documents if any may be sought only in case of historical documents which pre- existed at the time of tender opening and which have not undergone change since then. So far as the submission of documents is concerned after submission of the tender, Nalco may ask and consider, only related shortfall documents. For example, if the bidder has submitted a contract without its completion / performance certificate / annual turnover, the certificate can be asked for and considered. However, no new contract will be asked further so as to qualify the bidder. No post-bid clarification at the initiative of the bidder shall be entertained. Hence bidders are required to take due care to upload all relevant work credentials available with them in order to avoid rejection.



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- 7.11 Deviations of any form are not acceptable in case deviation is unavoidable, bidders are instructed to give all deviations in the enclosed deviation statement sheet (<u>Annexure-C3</u>) only, along with the tender document. Please be informed that only deviation statement will be considered for further evaluation. Deviations at any other place will not be considered. Deviations in LTE single part will not be considered in any case and the bids will be rejected.
- **7.12** Deviation(s) listed at any other place of the tender shall not be considered at all and shall not be binding on NALCO. The tender shall be evaluated based on the deviation statement and no claim whatsoever shall be entertained irrespective of bidder has accepted this particular clause or not.
- **7.13** Financial implications of the agreed deviation as per assessment of NALCO will be loaded on the price quoted by the bidder. Deviation not accepted by NALCO will have to be withdrawn by the bidder otherwise such bids may be disqualified/rejected.
- **7.14** NALCO reserves the right to defer the date of tender opening in case the response is considered inadequate or due to any other reasons. In such event, the bidders shall be intimated the next date of opening subsequently.
- 7.15 The bidder shall ensure submission of complete information / documents in the first instant itself. NALCO reserves the right to evaluate the offer based on the details furnished by the bidders on the scheduled date of tender submission without seeking any subsequent additional information.
- **7.16** All the pages of GCC duly signed & stamped by authorized signatory should be submitted along with the agreement / offer. In case of online offers, the copy of GCC is to be uploaded with the offer after digitally signed by the bidder.
- 7.17 Declaration regarding Relationship with Board of Directors and Employees of Nalco: The contractors must furnish certificate as mentioned in <a href="Manuere-C19">Annexure-C19</a> & <a href="Manuere-C20">Annexure-C20</a> enclosed, disclosing in detail about their relatives in Nalco. Suppression of this information in any form if detected at any stage will lead to disqualification and lead to rejection of the offer or termination of the contract as the case may be. The concerned party may also be banned from participation in future tenders.
- **7.18** Owner's Right to Accept or Reject a Bid: A bidder may seek clarification regarding the bidding document provisions, bidding process and / or rejection of his bid. NALCO/Consultant shall respond to such queries within a reasonable time.

#### **8.0 EVALUATION OF BIDS:**

- 8.1 The price bids of the techno-commercially qualified bids in case of two-part bid system & bids in case of single part bidding shall be evaluated as per the note of "Quantity & Rate Schedule" (Annexure-B4) in the excel format available in the e-procurement site.
- 8.2 In case there is a tie in L-1 position, the concerned bidders may be called to offer maximum possible discount on their quoted rates/revised rate in sealed envelope in order to decide the L-1 bidder among the considered bids.
- **8.3** In case "tie" of price bids, even after application of clause 8.2 above, the following criteria shall prevail in the given order.
  - **8.3.1** Bidder having highest average turnover during last three years shall be preferred. Average Annual Turnover shall be decided based on audited profit and loss account submitted by the bidder for the last three financial years.
  - **8.3.2** The contractor executing the same contract satisfactorily will be preferred.
  - **8.3.3** The contractor of the previous contract, who has executed the same work satisfactorily, will be preferred.
- 8.4 In case of tie for L2 or other positions and L1 price matching is to be made for splitting of the job as per NIT condition, then L2, L3 etc. positions shall be determined by applying criteria at sl no. 8.3 above.
- 8.5 Where the tender is being finalized through GeM Portal, as per GTC applicable for GeM procurement, if multiple L-1 bidders have quoted the lowest allowed price for the tender service (i.e. TIE cases), NALCO shall place the contract by selection of resultant bidder amongst the L-1 bidders through a random algorithm executed by GeM system. This will supersede Clause No. 8.2 to 8.4 as above.



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#### 9.0 ACCEPTANCE OF TENDER:

- **9.1** NALCO reserves the right to reject or accept any or all the offers in full or part, split the work, reduce or increase the quantity, without assigning any reason thereof.
- 9.2 NALCO reserves the right to award the work in parts between two or more agencies if considered expedient. The quoted rates shall hold good for such an eventuality. Reference is also invited to clause No: 9 of General conditions of contract.
- **9.3** Validity of Offer: The validity of the offers submitted by the bidders shall be as per F-02 Form i.e. Contract Details in **Annexure-B1**.
- 9.4 Bidders may note that, Brief Order / Letter of Intent / Fax of Intent / Service Purchase Order placed, is in acceptance of their offer by NALCO and shall be binding on them. However, the bidder has to return a copy of LOI / FOI / Service Purchase Order duly signed by them or their authorized representative as a token of receipt of the same within seven days of issue of the same for our records. In case of no communication of the same is received within the stipulated time from their end, it will be presumed that the party has received the Brief Order / Letter of Indent / Fax of Intent / Service Purchase Order.
- 9.5 Any communication such as Letter, BO, LOI, FOI, SPO etc. shall be communicated to the Bidder through Registered post/ Speed post/ Fax/ Hand delivery/ By mail registered with Nalco. Any communication through any one or more of above modes shall be valid and binding on the Bidder.

#### 10.0 CONTRACT PERIOD:

**10.1** Timely completion is the essence of the Contract. The contract period for this work shall be as mentioned in S1 no:3 of F-02 form (<u>Annexure-B1</u>) of contract details and shall be applicable from the effective date as mentioned in the service purchase order/LOI. Time period of completion" of individual items/activities may be decided jointly by Manager-In-Charge and contractor, which shall be adhered to by the contractor.

#### 11.0 OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM:

- **11.1 Safety**: The contractor shall have to take necessary safety arrangements/ precautions for the workmen engaged by him and shall be responsible for any First Aid / Emergency treatment for his labours / workmen. In addition, the contractor shall have to abide by all fire & safety regulations of the owner. The contractor has to execute the works after taking necessary instruction & safety clearance from the safety officer.
- 11.2 All lifting/handling tools & tackles deployed by the contractor should have been load-tested as per the prevailing rules & regulations. Mobile equipments such as Truck, Tractors, Tippers, Dumpers etc. shall have valid fitness certificate with due insurance required as per the prevailing rules & regulations. Wherever transport of material is applicable, the contractor has to ensure that goods carried during transportation do not exceed the permitted laden weight as certified by registering authority for the respective vehicles.
- 11.3 Personal Protective Equipment (PPE): The contractor shall have to provide all the necessary PPE to the workmen engaged by them as per the requirement, area wise as mentioned in the PPE format. In case the contractor fails to provide PPEs as per requirement, at the time of starting the job, they will not be allowed to carry out the assigned job. PPEs can be got issued from NALCO on request with recovery of purchase cost, plus administrative charge @25% of Procurement cost as penalty plus GST on administrative charges as applicable. (Annexure-A3).
- 11.4 The contractor, before starting the work, shall collect a copy of the <u>safety manual</u> from Safety Department and shall abide by all instructions mentioned therein.
- 11.5 The contractor shall be responsible to promote awareness on the OSHAS requirements among the workmen engaged by them for the subject job and ensure adherence to sound OSHAS related practices as detailed in the "Occupation Health & Safety Policy" enclosed herewith. The contractor shall be responsible for abiding by all the applicable provisions of safety code of contractors which is available in the NALCO web site. The contractor shall contact Safety Dept. for getting necessary advice/compliances as required.
- 11.6 Medical Checkup of Workmen: Contractors will have to submit medical certificate from a Govt. Hospital or registered medical practitioner in the prescribed format for the workmen engaged by him along with application for gate pass and for annual renewal. No gate pass will be issued/ renewed unless the medical certificate is enclosed along with the application.



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#### 12.0 ENVIRONMENTAL REQUIREMENTS:

- 12.1 The contractor shall be responsible to promote awareness on the Environmental requirements among the workmen engaged by them for the subject job and ensure adherence to sound environmental practices as detailed in the "General Environmental Requirement & Environmental Policy" enclosed at Annexure-A7.
- 12.2 The contractor shall remove all the waste/debris generated during the work on each occasion & dispose off to a place identified by Manager-in-charge. The thorough up-keeping of the work spot before the contractor leaves the work spot is essential. In case the contractor fails to comply with the above, the owner may get the up-keeping done & recover expenses incurred plus administrative charge @25% of the expenses incurred as penalty plus GST on administrative charges as applicable from the contractor.

#### 13.0 ENERGY MANAGEMENT SYSTEM (ISO 50001):

- **13.1** The Energy Policy of NALCO is attached (<u>Annexure-A6</u>). The Service Provider needs to comply all the requirements of the Policy in consultation with the Manager-in-Charge of the contract.
- 13.2 Mandatory guidelines for saving any form of energy: Energy is lifeline of an Organization and SMELTER / CPP, NALCO is implementing Energy Management Systems (EnMS) ISO 50001 in all activities. The contractual service providers are advised to train his workmen for practicing the following "Dos & Don'ts" while executing the assigned work at site.

	WHAT TO DO?		WHAT NOT TO DO?
1.	Use compressed air for instrument cleaning if	1.	Never open any compressed air for body / dress/
	advised by NALCO		vehicle cleaning.
2.	Close water line valves if they are in open	2.	Never allow any water line in open condition.
	condition		
3.	Use water for instrument equipment cleaning if	3.	Never use any water line of the plant for
	advised by NALCO		cleaning of bicycles / vehicles.
4.	Use LPG for cooking if at all required	4.	Never use any electrical heater for cooking or
			room heating.
5.	Switch off lights/ fans in day time when not	5.	Never waste electricity in any way.
	required		
6.	Touch only that part of equipment for which	6.	Never touch any isolators / switches of any
	you are authorized by the Engr. I/C		equipment.
7.	Handle coke, pitch, oil (FO, HSD, LDO) &	7.	Never waste any quantity coke, pitch, oil (FO,
	LPG with due care as they are costly.		HSD, LDO) & LPG a drop of any types of oil.

#### 14.0 SECRECY TERMS: -

- 14.1 The contractor shall use all the documents, drawings, data & information of proprietary in nature, received from NALCO, solely for the purpose of performing and carrying out the obligations on their part under this contract. He shall not disclose the same to any other person except to the extent required in the performance of the work and shall maintain the utmost secrecy. Contractor and NALCO shall bind their employees, who are involved in engineering of the project by a suitable secrecy contract. The documents, drawings, data and information received from NALCO shall not be used by contractor for any other purpose and will also keep them confidential. All data, documents and information provided by Contractor during the course of execution of the work will be treated as confidential by NALCO and will not be released to any third party, without specific written permission of Contractor.
- **14.2 Breach of Secrecy:** In case of breach of secrecy by the Contractor, Nalco will have right to terminate contract, Performance Security and claim damages from the party.



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#### 15.0 EXECUTION OF CONTRACT AGREEMENT:

- 15.1 The contractor shall have to execute an agreement on **Rs.**50/- non-judicial stamp paper to be purchased from any stamp vendor under the jurisdiction of the Odisha High Court, in the specific format (<u>Annexure-C23</u>). Issuing authority of work order shall sign the agreement on behalf of NALCO. The agreement shall not be required to be executed for work orders of value less than or equal to **Rs.**1,00,000/-.
- 15.2 The agreement should be submitted to T&C Department, within 10 days of issuance of LOA/LOI/SPO or before the effective date mentioned in the Service Purchase Order whichever is later.
- **15.3** Contract Agreement is mandatory before starting of work. EIC/MIC will ensure before Gate Pass is issued.
- 15.4 No bill shall be payable unless the agreement is signed, if signing of agreement is applicable

#### 16.0 **SUPERVISION:**

- 16.1 The contractor shall have to work as per direction of the Manager-in-charge and shall report to him daily regarding day-to-day progress. The contractor shall give full access to the Manager-in-charge / authorized representative of NALCO to inspect day-to-day work executed by the contractor. Besides, the Contractor will take full responsibility to ensure proper workmanship, good quality of work and supervision during the contract period without any additional cost.
- 16.2 Under prevailing statute, the supervision should be carried out by a capable competent person.

#### 17.0 PAYMENT OF WAGES TO ENGAGED LABOUR AT SITE:

- 17.1 Payment of wages to the labour employed by the contractor shall be as per the Central Government notification fixing minimum wages for different categories of labour in Central Public Enterprises from time to time plus an additional element as indicated below (as a part of wages). The contractor shall have to make labour payment accordingly, along with applicable statutory benefits. Therefore, the contractor must quote their rates considering the labour rates indicated at **Annexure-B5**.
- 17.2 The contractor has to ensure payment of minimum bonus @ 8.33% on the notified minimum wages for each category including the additional elements but excluding canteen subsidy (Considering minimum salary as Rs.7000/- per month) to all his workmen engaged in the contract annually.
- 17.3 As per statutory provisions, contractors will have to pay the monthly wages of contract labourers latest by 10<sup>th</sup> of subsequent month as well as deposit the statutory contributions within due date. In case of failure to do so, NALCO as principal employer will pay wages/release the payments to the concerned labourers at any time after the 10<sup>th</sup> of subsequent month without any further intimation.
- 17.4 If the date of payment is beyond 10<sup>th</sup> of subsequent month or there is direct payment, Nalco reserves the right to recover up to 25% as administrative charge on the amount of labor payment plus GST on administrative charges in the RA/Final Bill.
- 17.5 The contractor failing to make payment of labour wages as per applicable Law, may be debarred / banned for conducting future business with NALCO.

#### 18.0 LABOUR LAWS:

18.1 The successful bidder shall abide by all applicable statutory provisions in respect of workmen deployed by him to the satisfaction of Central & State Government Authority. The contractor shall comply with the provisions of all statutes and amendments thereof at their cost for different legislations as under. The contractor shall have to abide by and comply with any Modification/ Change/ Amendment to the existing laws or introduction of any new law relating to the work and rules framed there under from time to time. The list is indicative and not exhaustive.



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- **18.1.1** Building & other Construction Workers (RE & CS) Act 1996
- **18.1.2** Child Labor (Prohibition & Regulation) Act 1986,
- **18.1.3** Employees' Provident Fund and Miscellaneous Provisions Act, 1952.
- **18.1.4** Employees' State Insurance Act, 1948.
- **18.1.5** Factories Act, 1948
- **18.1.6** Industrial Dispute Act 1947,
- **18.1.7** The Inter-state Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1976
- **18.1.8** The Maternity Benefit Act 1961
- **18.1.9** Minimum wages Act 1948.
- **18.1.10** Payment of Wages Act 1936,
- **18.1.11** Payment of Bonus Act 1965,
- **18.1.12** Payment of Gratuity Act, 1972
- **18.1.13** Employees' Compensation Act 1923.
- **18.1.14** Contract Labour (R&A Act, 1970)

#### 19.0 GATE PASS & SECURITY:

- 19.1 Normally before starting of work, EIC/MIC will ensure that Contract Agreement is signed otherwise, Gate Pass should not be allowed. Therefore, the contractor shall have to produce the Contract Agreement and arrange valid gate pass for the labour/ workers engaged by him in order to enter into the factory premises if the work is to be executed inside the plant. (Refer Form No: F-02 of Sl. No- 15 at **Annexure-B1**).
- 19.2 Issue & Use of Electronic ID Card: All the contract workers will be provided with electronic entry/exit pass by CISF before mobilization of site/commencement of work by the contractor. All contract workers shall use this ID/Punch cards for making entry into /exit from the plant. After expiry of the contract, ID/Punch card will be surrendered by the workers at the time of closure of contract through the contractor. In case of loss /missing of ID/Punch card, contractor has to deposit Rs. 200/- per card in the cash counter of NALCO for issue of fresh identity card. Incase of discontinuation of job by the workers, the cards will be surrendered to the CISF under intimation to unit HRD.
- 19.3 Attendance of contractor's workers will be regulated through biometric punching systems. In case of discrepancy, decision of EIC/MIC will be Final & Binding on the contractor.

#### 19.4 Use of Online Contract Labour Management System (CLMS):

An online Contract Labour Management System (CLMS) has been launched across NALCO w.e.f. 01.07.2017. As per the portal architecture, every contractor employing contract labour in NALCO shall have to use this online portal for various activities like safety clearance, issue of gate pass, application for license in Form II, issue of certificate from Principal Employer (NALCO) in Form III for obtaining license from the Central Labour Department, preparation of monthly wage sheets, issue of wage slips, employment cards, preparation and filing of returns, maintenance of statutory registers etc. The contractors have to use the CLMS for entering relevant data about themselves and the labour engaged by them for getting the benefits of the system. Since the package has been developed as per the mandate given by the Management and is being closely monitored by the Ministry of Mines as an item on the DASHBOARD, use of the system is mandatory for the contractor.

#### 19.5 TIME OF WORK: The factory timings are as follows:

`A' shift-6.00 AM to 2.00 PM, `B' shift-2.00 PM to 10.00 PM, `C' shift-10.00 PM to 6.00 AM,

'G' shift-8.00 AM to 5.00 PM (with 1.00 Hr lunch break from 1PM to 2PM)



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#### **20.0 MATERIAL TOOLS & TACKLES:**

20.1 The contractor shall have to make his own arrangement for supply and storage of his materials / consumables and general tools, tackles, welding sets, electrodes, chain pulley blocks, slings, gas welding/cutting sets, in connection with execution of work. No extra payment shall be applicable for such provisions. Wherever required consumables of approved quality like general purpose welding electrodes, cleaning agents, Oxygen gas, D.A. gas, etc to execute the contract shall be in Contractor's scope and contractor must arrange these materials at their own cost unless mentioned otherwise in the tender documents attached herewith. Apart from the above any job /tender specific requirement of materials is indicated in special condition of contract.

#### **20.2** FREE ISSUE MATERIALS / CONSUMABLES:

Unless mentioned otherwise in the attached tender documents, Argon Gas & Co<sub>2</sub> gas will be supplied by Nalco as Free Issue Item if required for the work executed inside plant. The contractor will do transportation from issue point to work site.

**Issue of cement and steel** as Free Issue shall be governed by clauses 52 to 54 of GCC unless mentioned otherwise in scope of work / special conditions / BOQ or elsewhere in this tender document subject to the followings:

- **20.2.1** For issue of materials within plant boundary wall limit, the contractor shall submit only indemnity bond for the entire value of materials issued to them free of cost as per clause 53 (ix) of GCC.
- **20.2.2** For the materials which are issued for outside plant boundary such as Ash Pond area, Intake Pump House, Lean Slurry area, Bidyut Nagar Colony, township, CISF Barrack etc, the contractor shall furnish Bank Guarantee equivalent to 20% of the value of material and indemnity bond equivalent to 80% value of materials being issued to the contractor.(Ref Sl no. 8.1 & 8.2 of Form F-02 (**Annexure-B1**) of Contact Details)
- **20.2.3** For materials taken out side plant to the vendor's shop, Bank Guarantee equivalent 100% of the value of the materials will be submitted by the vendor before taking out the materials.
- **20.2.4** The Indemnity bond and the Bank Guarantee shall remain valid till the material account is totally settled. The BG and Indemnity Bond shall be submitted in the prescribed format enclosed (Refer Annexure-C10 & Annexure-C15).
- **20.2.5** The materials drawn if any by the party as "free issue materials" from NALCO should be reconciled. The reconciliation statement of free issue items / materials should be submitted to the EIC/MIC for certification to be submitted along with RA Bill. The final reconciliation statement should be submitted along with final bill for release of final payment.

#### 21.0 ENERGY/WATER/GROUND/BUILDING PREMISES:

- **21.1** Provision of Power/Water/Land/Building to Contractor's Works.
  - 21.1.1 Lump Sum Turn Key (LSTK) Contracts- Electricity charges shall be billed @ Rs.4.30 /KWH on meter reading. Water charges will be billed on monthly basis by Estate department, @ Rs. 150.00 per month or part thereof. Ground/Building Premises inside plant will be provided without any rent. However Building premises provided inside Township will be on chargeable basis as per Rent Circular.
  - **21.1.2** Other than LSTK Contracts: If Electricity and Water is required for the work to be executed, it will be supplied by Nalco free of cost from any suitable point. The contractor shall have to make arrangements, at his own cost, for tapping and using the power/water so required as per advice EIC/MIC. Ground/Building Premises will be provided without any rent.
  - **21.1.3** For availing Electrical energy, the contractor shall have to provide, at his own cost, a MCB (Miniature Circuit Breaker) at the point of power supply by Nalco. The MCB shall have to be of a suitable capacity as decided by Nalco's electrical authorities for the concerned area and shall have to be replaced, as and when warranted, on the grounds of changed power requirements or the MCB having been defective and/or damaged.



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- **21.2 Power and Water Supply to Contractor's** <u>Establishment:</u> The following points shall be complied in addition to Nalco GCC Clause No. 2.3 for giving power supply to Contractors' Establishments:
  - 21.2.1 Power and Water supply will be provided to the contractor to whom the permission has been granted by Estate Department to have establishment in the township/plant as per requirement. Ground/Building Premises inside plant will be provided without any rent. However Building premises provided inside Township will be on chargeable basis as per Rent Circular.
  - 21.2.2 Contractor have to make all arrangements to receive power from designated panels by laying necessary cables and installing suitable distribution board. They have to apply to Estate department through the Engineer-in-Charge. The application will be made in prescribed format and a completion certificate by licensed electrical contractor will be enclosed. The representative of DGM (Elect) will inspect the installation and after getting their clearance, power supply will be charged. The individual establishments are to be maintained and managed by contractors as per IE rules.
  - **21.2.3** At the time of charging of power supply, initial meter reading will be jointly noted by representatives of contractor, Estate Department and Electrical Department.
  - **21.2.4** Every month, energy meter reading will be jointly taken by representatives of Estate Department and Electrical Department. Electricity Bill will be raised by Estate Department @ Rs.4.30 per KWH basing on the meter reading as per the prevailing rate. However, the rate is subject to revision time to time.
  - **21.2.5** Water charges will be billed on monthly basis by Estate department, @ Rs. 150.00 per month or part thereof. However, the rate is subject to revision from time to time.
  - **21.2.6** The contractor has to deposit Water & Electrical Charges on monthly basis. While processing any Final Bill relating to any work, the contractor has to submit clearance certificate from Estate Department covering period under Final Bill.
  - **21.2.7** While processing final bill of the contractor they must enclose Disconnection Certificate from Estate Department for power/water supply connection or Certificate regarding Continuation of connection due to other valid contract with proper reference through concerned EIC & Estate Department.
  - **21.2.8** The final bill will not be processed without compliance of the above. (Supporting document to be attached)
- 21.3 The contractor must dismantle the structure constructed by him for the purpose of office-cumstore on completion of the contract as per the provision of GCC clause no.2.4.2. If the same is not dismantled within two months of completion of contract, he will not be issued any tender paper or will not be allowed to participate in any tender. Besides with-holding of final bill, other penal action as per contract / Law as deemed fit may be initiated against the contractor.
- **21.4** Following penal actions shall be initiated against the unauthorized occupant;
  - **21.4.1** Disconnection of power and water supply lines to be made,
  - **21.4.2** Penal rent @ Rs.10,000/- per month Plus GST as applicable or part thereof towards the ground rent and 20 (twenty) times penal rent towards electricity and water charges shall be recovered,
  - **21.4.3** Initiation of eviction proceedings in the Estate Court for outside Plant establishments



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#### 22.0 QUANTITY & RATE:

- **22.1** The quantity & rate schedule format is enclosed at <u>Annexure-B4</u>. Bidders are required to quote their rates in figures as well as words in the enclosed <u>Annexure-B4</u> only. In case of any discrepancy between rate in figures, words and amount quoted by the bidder, the relevant provision of GCC will apply to resolve the matter.
- 22.2 The tenderers must quote their most reasonable and workable rate. Overall total evaluated price for all items of schedule of quantities shall be the basis for determining the reasonableness of price and gradations of the tenders. In case the offered price of the tenderer(s) is found to be abnormally low (un-workable), based on the rate approved by NALCO, the tenderer(s) may be asked to justify their quoted rates within ten days of issuance of letter to that effect through email. The bidder must provide written clarification including detail price analysis of its bid price in relation to Scope, Scheduled, allocation of risks and responsibility, and any other requirement of the bid documents. However, if after evaluating the price analysis, NALCO determines that, the bidder has substantially failed to demonstrate its capability to delivered the contracts at the offered price, then NALCO may reject the bid / proposal. NALCO also reserved the right to award the job without seeking clarification or receiving clarification from the bidder about the price reasonability. EMD of such tenderer, who refuses to justify their quoted rate shall be forfeited.
- 22.3 Bidder shall quote in figures and in words for the rates tendered by him in the "Quantity & Rate Schedule" (Annexure-B4) forming part of the documents, in such a way that misinterpretation is not possible. The amount for each item shall be worked out and entered in the requisite column for all items.
- 22.4 Price bids must not contain any conditions stipulated by the bidders. Conditional price bids are liable for rejection.
  - **22.4.1** No discount over quoted rate / total amount should be mentioned separately in the offer.
  - 22.4.2 No additional rate over quoted rate / total amount should be mentioned separately in the offer.
  - 22.4.3 Bidders shall submit the details about engagement of Agents/ Middlemen/ Intermediary/ Consultants / Service Providers and payments proposed to them by the bidder and it should be a part of the present bid.
  - 22.4.4 All corrections and alterations in the entries of tender document if any shall be signed in full by the bidder with date. No erasures and over writings are permissible.
  - 22.4.5 Bidders are required to quote for all items of the "quantity and rate schedule" (Annexure-B4) otherwise the offer will be dealt as per rules of NALCO & may be rejected as an incomplete offer.
  - **22.4.6** Bidders are required to quote their best prices considering the fact that price negotiation, if required, may be held with the lowest bidder only.
  - 22.4.7 Bidders are required to quote their rates up to two decimal places only. Decimal digits beyond two will be rounded off to two decimals for evaluation/placement of order.

#### 22.5 Quantity Variation:

- **22.5.1 Item rate contracts:** The Quantities mentioned in the schedule are approximate in nature and may vary by a wide margin within the contract value for which the contractor shall have no option but to execute the works, as per direction of the Manager-in-charge at the same rates, terms & conditions of the order. NALCO may negotiate the rate of items whose execution quantities is considered for increase during their execution, which will be agreed mutually. Payment shall be released to the contractor for the actual executed quantity only.
- **22.5.2** Lump sum/ Turnkey Contracts: In case of Lump sum/ Turn key (LSTK). Adjustment to the contract value due to such change in scope of work shall be governed by the provisions of GCC.

#### 22.6 REVISED PRICE IMPLICATION:

- **22.6.1** In case of necessity due to post tender changes in specifications / scope of work / terms & conditions of NIT etc. before price bid opening, corrigendum shall be issued regarding the changes to all concerned techno-commercially qualified bidders and they shall be permitted to submit the corresponding price implication if any in offline mode in sealed envelope by hand / password protected file through e-mail within a stipulated time.
- **22.6.2** The price implication submitted in offline mode by the bidders (Refer Clause 7.13 & 22.6.1) shall be opened and uploaded in GeM Portal before opening of original price bids. The evaluation will be done taking into account the original on-line price bid along with offline price implications.
- 22.6.3 In no case, bidder shall be allowed to submit revised price bid post bid submission date.



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#### 23.0 QUALITY OF WORK:

- 23.1 The contractor shall execute the job under adequate supervision of experienced and qualified personnel in accordance with the best engineering practices and the specification laid down in the enclosed Annexures. NALCO may inspect the work any time without notice to the contractor and may order re-execution of sub-standard work reserving the right to recover compensation in terms of GCC.
- 23.2 Inspection and test procedure given in the relevant clauses of the contract or BIS codes or other codes in practices as specified in the Scope of work / Special Conditions of Contract should be strictly followed.
- **23.3** Contractor shall use instruments calibrated in a Laboratory, accredited to NABL / Laboratory approved by the manufacturer for measurements/tests/inspection.

#### 24.0 SECURITY DEPOSIT:

- 24.1 On receipt of the order, the successful bidder shall deposit with NALCO an amount, equivalent to 10% of the order value of the contract as security deposit (SD) within 20 days from the effective date, mentioned in Service Purchase Order / LOA / LOI.
- 24.2 Alternatively, successful bidder can deposit Initial Security Deposit (ISD) amounting 2.5% of the contract value, within 20 days from effective date, mentioned in Service Purchase Order / LOA / LOI. In this case, the balance amount of the security deposit shall be recovered through deductions from RA bills in installments through deductions @ 10% from gross RA bill of contract value till total SD is collected.
- 24.3 In case the successful bidder fails to submit the ISD / SD, within scheduled date, the amount along with a simple interest @12% per annum plus GST on interest amount, applicable from the schedule date till the date of submission or full recovery amount shall be made starting from 1st RA bill.
- 24.4 The contractor can submit the security deposit in the form of either bank draft or bank guarantee from any NALCO approved bank in the prescribed format (<u>Annexure-C13</u>)
- 24.5 The Earnest Money Deposited, except in the form of BG along with the tender, if any shall be adjusted towards security deposit / as per clause no 19.4 of GCC
- 24.6 The security deposit will be released along with release of final bill if there is no DLP or on successful completion of the DLP, with certification of Manager-in charge / Engineer-in charge. The vendor has to claim such refund along with Final Bill or within 15 days from the closure of DLP as the case may be

#### 25.0 TAXES & DUTIES:

#### 25.1 GOODS & SERVICES TAX (GST)

- 25.1.1 The Rates indicated in Annexure-B4 are inclusive of all but exclusive of GST.
- **25.1.2** The contractor must provide GST No including copy of Registration Certificate.
- **25.1.3** The Trade Name in GST Certificate should match to the name in vendor code and name in the Cheque. The Legal name in the GST Certificate should match to Legal Name in the PAN. In case of a Company or a Firm all the names should be same. But in case of Sole Proprietorship, the Legal Name and Trade Name may be different.
- **25.1.4** The contactor should submit the GST Invoice as per the format <u>Annexure-C9</u> providing HSN / SAC Code (first 6 digits) and GSTIN of both Vendor and Nalco in the form of Business to Business (B to B) transaction.
- **25.1.5** As per Rule-46 of GST Act, the Serial Number of Tax Invoice should be maximum up to 16 digits, and should be unique for a Financial Year.
- **25.1.6** As per Rule-47 of GST Act, time limit for issuing Tax Invoice is 30 days from the date of Supply of Service.
- **25.1.7** Payment of GST is subject to compliance as stated in Payment Terms.
- **25.1.8** The contractor shall be fully & solely responsible to the statutory authorities for compliance of all the provisions of GST and other statutory provisions applicable to this work as a service provider either already enacted or to be enacted from time to time during contractual period.
- **25.1.9** NALCO reserves the right to recover any penalty and Interest imposed on NALCO by the concerned statutory authorities due to non-fulfillment of GST compliance by the service provider.



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#### 25.2 Anti-Profiteering Clause (Sec 171 of CGST Act) Applicable for Indian Bidders)

- 25.2.1 If any new Tax/Taxes is introduced on sale of goods/service. Either in lieu of existing tax/taxes or as separate tax/taxes, then the overall incidence of tax/taxes on the Vendor on account of its inputs and outputs wherever less than the incidence of existing taxes, then the Vendor shall pass on to Owner, the benefits thereof by way of commensurate reduction in the basic price w.r.t. Input Tax benefit and reduction in Tax chargeable to Nalco w.r.t. Output Tax benefits in connection with goods and/or services provided.
- **25.2.2** If on the other hand, the incidence of tax/taxes is in excess of the incidence of existing tax/taxes, the Owner on submission of satisfactory proof, shall reimburse the Vendor the additional incidence of tax provided they are within the contractual completion date.
- **25.2.3** The Vendor has to provide a declaration along with the Tender that they will abide by the requirements under CI 171 of CGST Act, 2017.

#### 25.3 INCOME TAX:

- **25.3.1** The contractor must provide PAN including copy of Registration Certificate.
- **25.3.2** Income Tax TDS, as applicable at the prevailing rate on the gross amount billed shall be deducted from the contractor's bills.
- **25.3.3** The contractor shall be fully & solely responsible to the statutory authorities for compliance of all provisions applicable to this work as a service provider under Income Tax Act, already enacted or to be enacted from time to time during contractual period.
- **25.3.4** NALCO reserves the right to recover any penalty and interest imposed on NALCO by the concerned statutory authorities due to non-fulfillment of all provisions applicable to this work as a service provider under Income Tax Act, already enacted or to be enacted from time to time during contractual period.

#### 25.4 CESS UNDER RE&CS ACT

Cess will be deducted as per Workers' (RE&CS) Act 1996 and as stated under payment terms.

#### 25.5 ROYALTY CLEARANCE.

As per Mines and Minerals Act of Govt. of Odisha the contractor is required to pay royalty for various types of construction materials (minor minerals) used in the work. The royalty charges shall have to be deposited in the office of Tahsildar from whose jurisdiction the minerals have been lifted and submitted along with Final Bill.

#### 26.0 BILLING & INVOICING:

- 26.1 Measurement of the work done, during a period, against a Contract is very much essential for correct accounting. This is more so necessary at the end of each financial year. Therefore the contractors are expected to stick to the periodic billing schedule as per the Order. The billing system followed in Nalco is called Running Account Bills (RA Bills) to be generated in prescribed format through ERP system based on measurement of work done during a period with certification by Contractor and approval by EIC/MIC. RA Bills will be sequentially numbered and the last RA Bill will be called n<sup>th</sup> RA & Final Bill.
- **26.2** Period of raising RA Bill and GST Invoice will normally be 1 month unless otherwise specified in Special Condition of Contract (**Annexure-B3**). GST Invoice amount should always match to RA Bill / Final Bill amount.
- 26.3 Vendor/Party categorised/designated as "specified person" under Section 206AB of Income Tax Act, 1961, shall be liable for TDS at higher rate as provide under the said section, by NALCO. So, Vendors/Contractors are advised to submit self-certified copies of Income Tax return (ITR) for each of the Two Previous Years for which due date for filling of ITR has expired, along with the Invoice/Bill so as to facilitate NALCO, verify the applicability of Section 206AB.
- **26.4** The RA Bill (in duplicate) will be accompanied by
  - **26.4.1** Joint Measurement Sheet signed by Contractor & EIC/MIC.
  - **26.4.2** R.A. Bill Form signed by Contractor & EIC/MIC.
  - **26.4.3** Human Resource Dept. (HRD) Clearance (if applicable)
  - **26.4.4** Safety Certificate in 1<sup>st</sup> RA Bill issued by Safety Dept
  - **26.4.5** Any other document required by EIC/MIC or as per directive from statutory authorities.
  - **26.4.6** Deviation statement once the executed value reaches 80% of the Order value.



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- 26.5 Similarly, in addition to above the Final Bill (in quadruplicate) will be accompanied by
  - **26.5.1** Material Reconciliation Statement for Free Issue Material, (if applicable)
  - **26.5.2** Stores Issue Voucher, Stores Return Voucher, Material Transfer Voucher if any.
  - **26.5.3** No claim certificate duly signed by the contractor.(Annexure-C28)
  - 26.5.4 No due certificate from suggested by MIC. (Annexure-C28)
  - **26.5.5** Work Completion certificate from EIC/MIC. (Annexure-C29)
  - **26.5.6** Deviation Statement
  - **26.5.7** Handing over / taking over certificate (wherever applicable)
  - **26.5.8** Satisfactory commissioning protocol (wherever applicable)
  - **26.5.9** Royalty clearance certificate (wherever applicable)
  - **26.5.10** Electrical License (if required)
  - **26.5.11** Dismantling of Temp Structure, Disconnection of Water/Elect. & Clearance of Charges. Note: Certificates not applicable to a particular work will be certified by the MIC.
  - **26.5.12** Anti-Profiteering Declaration Format.
  - 26.5.13 As per Rule-47 of GST Act, time limit for issuing Tax Invoice is 30 days from the date of Supply of Service. Therefore RA/Final Bill must be submitted within 15 days from the end of the billing period. Any delay more than 30 days from Completion of Work will be considered as a failure in contractual terms and the contract may be closed ex-parte on the basis of certification of measurement and amount payable/recoverable considering all recoveries into account by the EIC/MIC. Decision of EIC/MIC shall be final & binding on the contractor. Besides above, the contractor may be treated as dormant or non-responsive and may affect assignment of further business to the vendor.

#### **27.0 PAYMENT TERMS:**

- 27.1 The contractor will complete the measurement of work done for the billing period in consultation with EIC/MIC. They will process the RA Bill along with necessary documents as defined under "Billing & Invoicing" for release of payment. It will be processed for release of payment after deductions in compliance to different statutes and retentions as recommended by EIC/MIC. Amount payable will be subjected to further adjustments against outstanding receivables against the vendor if any. The net amount will be paid online through RTGS/NEFT/IMPS/Internet Banking or any other online facility provided by our banker. Charges if any levied by respective banks, is to be borne by respective parties.
- 27.2 If the contract value is Rs.20,000/- or less, full and final bill will be admitted.
- 27.3 Payment against RA Bill will be considered only when the remaining period of the contract is not less than Billing Period defined in the contract or the remaining value of contract is not less than average periodic value executed up to previous RA Bill. In case the remaining period of contract is less than the billing period or the remaining value of contract is not less than average periodic value executed up to previous RA Bill, specific declarations that "Final Bill will be submitted in time" will be sought from the contractor with certification by EIC/MIC before processing of RA Bill.
- 27.4 On award of the contract to the successful bidder, it becomes mandatory by the bidder to enclose a deviation statement with RA bill once the executed value of the work has reached 80% of the awarded value.
- 27.5 In case of Lump sum / Turnkey contract, the payment shall be released according to approved Billing schedule and Payment Terms specified in special conditions of contract.
- 27.6 Payment of GST is subject to reflection of the party's invoice in GSTR 2A/Anx-2 (GST new return) of NALCO. If the vendor fails to comply for two consecutive periods against one order, no further payment will be released till compliance is made by 'FILLING' up to last period. If a vendor submits proof of filing GSTR1 duly authenticated by Vendor on the Main page containing Nalco's GSTIN with 'FILLED' status and detail list of invoices generated from their GST login, for Invoices already paid by Nalco, then basic amount of subsequent Invoices may be released. However, GST withheld will be released after checking of GSTR2A.
- **27.7** GST TDS as applicable at the prevailing rate on the gross amount billed shall be deducted from the contractor's bill.



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- 27.8 Cess will be deducted from Gross bill value as per Building and Other Construction Workers' (RE&CS) Act 1996 for Township construction contracts. (construction, alteration, repairs, maintenance, demolition in relation to buildings, streets, roads, drainage, electrification, distribution of power, water works, communication works etc.)
- **27.9** Payment against Final Bill will not be released if royalty clearance certificate as stated under Royalty Clearance is not submitted by the vendor.
- 27.10 Mobilisation Advance: Not applicable for this contract.
  - **27.10.1** The Rate of Interest applicable on Mobilisation Advance shall be made variable instead of fixed for entire tenure of contract, as prevailing at present.
  - 27.10.2 The Rate of Interest applicable on balance amount of Mobilisation Advance, applicable for the financial year shall be fixed to MCLR (1-year-tenor) or SBI declared in the month of April of that financial year plus 1%.

#### 28.0 PRICE VARIATION FOR LABOUR:

**28.1 Price variation for Labor (Wherever applicable):** On subsequent revision of applicable minimum wages to be notified by NALCO from time to time the differential wage and associated components will be reimbursed based on actual payment to workmen, excluding OT amount and Administrative Charges on production of documentary proof to HR Dept regarding payment through bank.

#### 29.0 PRICE VARIATION FOR FUEL

Price variation on Fuel is normally not allowed. If price variation on Fuel is applicable it will be regulated as per the Special Conditions of Contract (**Annexure-B3**).

#### **30.0 DEFECT LIABILITY PERIOD (DLP):**

- **30.1** The DLP shall be governed by the detailed terms and conditions stipulated in clause 65 and 68 of GCC. The defect liability period shall be reckoned from the date of completion of the contract period for supply and workmanship unless mentioned otherwise in Scope of Work / Special Condition of Contract. Duration of DLP is mentioned at Sl. No. 9 of F-02 form of contract details, **Annexure-B1**.
- **30.2 DLP for SPECIALISED WORKS:** 
  - **30.2.1** Water proofing (Below or above ground) and Roof treatment works -10 YEARS
  - **30.2.2** Post construction Anti-termite treatment

- 5 YEARS

**30.2.3** Weather proof Paint works

- 4 YEARS

- **30.3** In some cases appropriate DLP can be considered depending upon the nature of the job.
- **31.0 CONTRACTOR'S OBLIGATIONS AND PENALTY FOR NON-COMPLIANCE:** The contractor shall abide by the following obligations during execution of contract against deployment of contract labours.
  - **31.1** If found suitable, Preference for engagement of labourers under NALCO's contractors establishment may be given to the land affected persons.
  - 31.2 The Contractor shall not engage any contract labour having unsound mind, criminal record, and poor health or having record not suitable from security point of view to NALCO.
  - 31.3 The contractor has to ensure that no contract labour should enter the plant/work premises without valid photo pass.
  - 31.4 The contractor shall ensure that no contract labour should leave the work place/plant before time without authorization/gate pass/ permission of the representative of contractor, to check frequent entry/exit, which may also cause security/administrative inconvenience.
  - 31.5 The disputes of the Contractor's labourers are to be settled by individual contractor. In no case NALCO, as the Principal Employer will enter into the matter except witnessing the proceedings, if required by the Statutory Authorities.
  - 31.6 The contractor shall have valid labour license during the execution of the contract, wherever applicable. The contractor shall not engage child labourers, in compliance to statutory requirement.
  - 31.7 PF & ESI A/c Codes: The contractor must possess independent Account Codes from the concerned Regional Provident Fund Commissioner for PF and also independent Account Code from the concerned Regional Director, ESIC for ESI, as applicable.



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#### 32.0 RECOVERY TOWARDS COMPENSATION FOR DELAY:

- **32.1 Repetitive O&M Contracts** Recovery towards compensation for delay shall not be applicable for this type of contract, unless otherwise mentioned separately in Special Conditions of Contract (Annexure-B3).
- **32.2 Other Contracts-** Recovery towards compensation for delay shall be applicable for this type of contract. In case the contractor fails to complete the work within the stipulated period, the contractor shall be liable for a penalty @ 1% (one) of the contract value per week of delay subject to a maximum of 10% (Ten) of the value of the contract, unless otherwise mentioned separately in the Special conditions of contract. (**Annexure-B3**). GST as applicable shall also be recovered.

#### 33.0 BLACKLISTING/BANNING/SUSPENSION/DELISTING OF BUSINESS/HOLIDAY LIST

- **33.1 Blacklisting:** Blacklisting of any agency/ firm/ contractor working with the Company may be resorted to in following cases:
  - **33.1.1** If the Proprietor or Partner or Director of the Firm is convicted by a Court of Law, following prosecution under the normal process of Law for an offence involving moral turpitude in relations to business dealings;
  - **33.1.2** If security considerations including the question of loyalty to the State warrant as per recommendations of Ministry of Home Affairs.
  - 33.1.3 If there is justification for believing that the Proprietor or Partner or Director (or Employee) of the Firm has been guilty of malpractices such as bribery, corruption, cheating, fraud, substitution of bid or theft or any other illegal activities while carrying out the work etc.
  - **33.1.4** If the Firm refuses/fails to return the Company's dues without adequate cause;
  - **33.1.5** If the Firm is blacklisted by any Department of the Central Government/ State Government.
  - **33.1.6** If the Firm is a confirmed evader of Central / State taxes/duties for which NALCO has received notice from the concerned department of Central / State Govt.
  - **33.1.7** Misbehavior/ threatening of departmental supervisory staff during work execution.
  - **33.1.8** Constant non-achievement of milestones on insufficient and imaginary grounds and non-adherence to quality specifications despite being pointed out.
  - **33.1.9** Persistent & intentional violation of important conditions of contract.
  - **33.1.10** Submission of false/ fabricated/ forged documents for consideration of a bid.
  - **33.1.11** If declared bankrupt or insolvent.
- **Banning:** In case where the conduct of the firm is not serious enough to merit blacklisting but removing the name from the registered vendors of NALCO is justified in the interest of the company, the firm/company shall be banned from doing business with NALCO for a period up to 3 years but not less than one year. The reasons for banning are listed below. This list is illustrative only and not exhaustive.
  - **33.2.1** Any failure to execute the contract satisfactorily.
  - **33.2.2** Offence except criminal, such as moral turpitude, fraud, theft, unlawful activities within the premises of the company (Plant or Township) by the contractor or their workmen.
  - **33.2.3** Defaults such as failing in disbursements of wages of the workmen/contract labourers in time at least twice in a contract period.
  - **33.2.4** Submission of false declaration / documents in the offer.
  - 33.2.5 Misconduct / misbehavior of the contractor or any of the workers engaged by them.
  - **33.2.6** Non-compliance of environment, safety and health requirements including use of proper PPEs.



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**33.3 Suspension of Business:** Temporary Suspension of business may be ordered without any notice, where full enquiry into the allegation is pending and may entail the blacklisting of the firm/ party/ contractor, if the allegation is proved.

#### 33.4 Delisting from Vendor List against all Contracts:

- **33.4.1** Party's performance is being evaluated half yearly through online assessment system by the respective Managers-in-Charges for the works being executed at site / at party's premises.
- **33.4.2** Half-yearly assessment ratings are reviewed and the contractors are reminded for improvement in next assessment period if their performance rating is poor.
- 33.4.3 If two consecutive Six-monthly assessments of a contract are Very poor in a single evaluation / Safety & Environmental requirements compliance is not O.K. / SA 8000:2008 Compliance is not OK, then the concerned Vendor will be delisted for one year for that particular job subject to approval by Competent Authority of NALCO and the vendor will be intimated through a letter.
- **33.4.4** The delisted Vendor may be re-enlisted upon the request of the Vendor on completion of the delistment period and subsequent approval by Competent Authority of NALCO.
- **33.4.5** If any vendor is Black-listed / Banned by any units of NALCO, the Vendor will also be delisted.
- **33.4.6** In case the performance of the vendor is found to be unsatisfactory by the Manager-in-charge, the vendor may not be considered in future tender for similar jobs.
- 33.5 Holiday List: In case the bidder does not participate in three consecutive bids, the bidder will be put under holiday list for a period of one year.
- 33.6 NALCO will issue show-cause notice giving 15 days' time to the contractor to respond the same in cases of debarring/ blacklisting/ banning/ suspension of business with the party.
- 33.7 If any varying of conflicting situation arises in any of the document forming part of the Contract, NALCO's decision with regard to intention/interpretation of the document and the decision shall be final and binding on the parties.

#### 34.0 TERMINATION OF CONTRACT:

- 34.1 If the performance is found unsatisfactory during the period of contract, the contract will be terminated with short notice of 15 days and the same shall be carried out by any other agency at the risk & cost of the contractor. Other penal actions such as forfeiture of Performance Security Deposit and debarring the contractor for participating in future tenders of NALCO may also be taken as per clause no. given in this **Annexure-A1**.
- 34.2 If the Government of India or any Statutory Authority/empowered to do so, decides/directs to terminate the Contract, the contract shall be terminated without any notice and for that contractor shall not be entitled to any claim such as extra claim, loss, loss of profit etc. against NALCO. The settlement of the dues of contractor shall be done on the basis of execution of actual work in accordance with the terms & conditions of contract.
- 34.3 Short Closure of Contract: NALCO reserves the right to short close the contract by serving 15 days' notice to the contractor, when either of the contract value is executed or the assigned BOQ quantity is exhausted. The decision of NALCO in this regard shall be final & binding on the contractor.

#### **35.0 ARBITRATION**:

The clause No.87 of General Conditions of contract shall be applicable in case of any dispute or difference whatsoever, which may arise at any point of time. Subject to all other provisions contained in clause 87 of GCC, the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rule made there under, and for the time being in force shall apply to the arbitration proceeding under this clause. In addition to the above, OM of Department of Expenditure-Procurement Policy Division Ref: F.1/2/2024-PPD, Date: 03.06.2024 shall be applicable.



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#### **36.0 CONTRACT CLOSURE:**

- 36.1 Completion of work assigned through the contract within contractual period is both a contractual obligation and legal obligation on both the parties to the contract i.e. Contractor and Nalco. Closure of contract is achieved in stages through contractual terms or through mutual agreement/settlement. Submission of Final Bill is the 1<sup>st</sup> stage of closure. Successful completion of Defect Liability Period and Performance Guarantee Period is the 2<sup>nd</sup> Stage of closure. Settlement of all outstanding payables and receivables is the 3<sup>rd</sup> stage of closure.
- 36.2 It will be the responsibility of the Contractor in all three stages to lodge necessary claims with EIC/MIC and settle it as follows.
  - **36.2.1** 1<sup>st</sup> stage Submission of Final Bill, and Performance Guarantee Bond (PGB) maximum within 3 months from the end date of contract period.
  - **36.2.2** 2<sup>nd</sup> stage Submission of Claim letter for release of SD/PBG maximum within 15 days from the date of closure of Guarantee/DLP.
  - **36.2.3** 3<sup>rd</sup> stage Settlement of all outstanding relating to the Contract, before release of Contract Completion Certificate (**Annexure-C29**) by EIC/MIC with concurrence of Finance regarding Contract Execution Value.

#### 37.0 Energy Management System (ISO 50,001) Requirement:

#### 38.0 Mandatory guidelines for saving any form of energy:-

Energy is lifeline of an Organization and SMELTER / CPP , NALCO is implementing Energy Management Systems (EnMS) – ISO 50001 in all activities. The contractual service providers are advised to train his workmen for practicing the following "Dos & Don'ts" while executing the assigned work at site.

	WHAT TO DO?	WHAT NOT TO DO?
	Use compressed air for instrument cleaning if advised by NALCO	Never open any compressed air for body / dress/ vehicle cleaning.
	Close water line valves if they are in open condition	2. Never allow any water line in open condition.
	Use water for instrument equipment eleaning if advised by NALCO	3. Never use any water line of the plant for cleaning of bicycles / vehicles.
4. L	Jse LPG for cooking if at all required	4. Never use any electrical heater for cooking or room heating.
	Switch off lights/ fans in day time when not required	5. Never waste electricity in any way.
	Fouch only that part of equipment for which you are authorized by the Engr. I/C	6. Never touch any isolators / switches of any equipment.
	Handle coke, pitch, oil (FO, HSD, LDO) & LPG with due care as they are costly.	7. Never waste any quantity coke, pitch, oil (FO, HSD, LDO) & LPG a drop of any types of oil.

- **39.0** The Energy Policy of NALCO is attached. The Service Provider needs to comply all the requirements of the Policy in consultation with the Manager-in-Charge of the contract.
- **40.0** Owner's Right to Accept or Reject a Bid: A bidder may seek clarification regarding the bidding document provisions, bidding process and / or rejection of his bid. NALCO/Consultant shall respond to such queries within a reasonable time.



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**ANNEXURE-A2** 

#### **SAFETY GUIDELINES**

#### Special Terms and Conditions of the Contract against Electrical Safety

- 1- The Contractor shall ensure proper safety of all the workmen, materials, and equipments belonging to him or to NALCO or to others, working at the site. The Contractor shall also be responsible for provision of all safety notices and safety equipment required both by the relevant legislations and the Engineer as he may deem necessary.
- 2- All equipments used by Contractor shall meet Indian/ International Standards and where such standards do not exist, the Contractor shall ensure these to be absolutely safe. All equipments shall be strictly operated and maintained by the Contractor in accordance with manufacturer's operation Manual and safety instructions and as per Guidelines / Rules of NALCO in this regard.
- 3- Periodical Examinations and all tests for all lifting/hosting equipment & tackles used by the contractor shall be carried out in accordance with the relevant provisions of Factories Act 1948, Indian Electricity Act 1910 and associated Laws/Rules in force from time to time. A register of such examinations and tests shall be properly maintained by the contractor and will be promptly produced as and when desired by Engineer or by the person authorized by him.
- 4- The Contractor shall provide suitable safety equipment of prescribed standard to all employees and workman according to the need, as may be directed by Engineer who will also have right to examine these safety equipments to determine their suitability, reliability, acceptability and adaptability. The Contractor shall provide safe working conditions to all workmen and employees at the Site including safe means of access, railings, ladders, scaffoldings etc. The scaffoldings shall be erected under the control and Supervision of an experienced and competent person. For erection, good and standard quality of material only shall be used by the Contactor.
- 5- The Contactor shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to the Owner or other contractors under any circumstances, whatsoever, unless expressly, permitted in writing by NALCO to handle such fuses, wiring or electrical equipment.
- 6- Before the Contractor connects any electrical appliances to any plug or socket belonging to the other Contractor or Owner, he shall:
- a) Satisfy the Engineer that the appliances are in good working condition.
- b) Inform the Engineer of the maximum current rating, voltage and phases of the appliances.
- c) Obtain permission of the Engineer detailing the sockets to which the appliances may be connected.
- 7- No work shall be carried out on any live equipment unless otherwise the equipment is declared safe by the Engineer and a permit to work shall be issued by the Engineer. The Contractor before any repair work is carried out on electric lines/equipments whether live or dead shall provide suitable type and sufficient quantity of tools to electricians/ workman etc.
- 8- In case of any accident during the activities undertaken by the Contractor thereby causing any minor or major or fatal injury to his employees due to any reason, whatsoever, it shall be the responsibility of the Contractor to promptly inform the same to NALCO's Engineer and also to all the authorities envisaged under the applicable laws.
- 9- The Contractor shall follow and comply with all NALCO Safety Rules, relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservation. In case of any unconformity between statutory requirement and NALCO Safety Rules referred above, the later shall be binding on the contractor unless the statutory provisions are more stringent.



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10- The Contractors shall provide suitable latest Personal Protective Equipments of prescribed standard to all their employees and workmen according to the need. The Engineer I/c shall have the right to examine these safety equipments to determine their suitability, reliability, acceptability and adaptability. The contractor should also ensure these before their use at worksite.

- 11- Wherever the workers are exposed to the hazards of falling from height, the contractor shall provide full harness safety belts fitted with fall arresting systems to all the employees working at higher elevations and life line wire rope with turn buckles for anchoring the safety belts while working or moving at higher elevations. Safety nets shall also be provided for saving them from fall from heights and such equipment should be in accordance with BIS standards. The contractor must get a permit to work at height from the Engineer-in-Charge before starting the job.
- 12- The contractor should ensure that all electrical installations at the site comply with the requirements of latest electricity acts / rules.
- 13- The contractor shall take all adequate measures to prevent any worker from coming into physical contact with any electrical equipment or apparatus, machines or live electrical circuits which may cause electrical hazards during the work. The contractor shall provide the sufficient ELCBs / RCCBs for all the portable equipments, electrical switchboards, distribution panels etc. to be used by him to prevent electrical shocks to the workmen.
- 14- In case of fire in electrical installations, all electrical supplies are to be disconnected first to the affected system. Fire-fighting at the initial stage may be initiated with the CO2, Dry Powder etc. Water will never be sprinkled onto live electrical system.
- 15- Before starting any job the Contractor will be responsible for the following
  - a. Ensuring safe components/equipments are used.
  - b. Providing earth leakage circuit breakers on all electrically operated power tools/equipments.
  - c. Inspecting power tools before use and ensuring defective tools are discarded.
  - d. Using 3 core cable and 3 pin plugs for all portable tools and ensuring its earthing.
  - e. Authorized electrician is only attending all electrical job as per latest Electrical Rules & CEA guide lines.
  - f. Ensuring double earthing to all equipments.
  - g. Ensuring all the electrical system is as per Indian Electricity Rules.
  - h. Disconnecting and removing all unwanted cables and wires from electrical system.
  - i. Identification Marks and Numbers are clearly being marked on all electrical distribution boards, switchboards etc. used by the Contractor.
  - j. All electrical system components being protected against damage.
  - k. All electrical joints are being tested to meet the standards.
  - 1. Hand lamps are providing with suitable guards.
  - m. Providing personal protective equipments including electrical safety shoes, rubber gloves etc. as per the enclosed PPE matrix.
  - n. Ensuring unauthorized person shall not have access to electrical system.
  - o. Protecting all live parts.
  - p. Ensuring all fuses are replaced with actual current rating.



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#### **ANNEXURE-A3**

## LIST OF PPES TO BE ISSUED TO ALL THE CONTRACTUAL EMPLOYEES BY THE CONTRACTOR FOR USE DURING THE EXECUTION OF JOB AT SITE. (PPE MATRIX)

PARTS TO BE PROTECTED	PERSONAL PROTECTIVE EQUIPMENT	PROTECTION AGAINST	REMARKS
HEAD	INDUSTRIAL SAFETY HELMET (IS:2925-1975) & subsequent revision thereof, if any.	FALLING OBJECTS	
EYE	ZERO POWER GOGGLES WITH SIDE FILTER PROTECTION	EYE INJURY DUE TO FLYING OBJECTS. INJURY DUE TO SPARKS AND FLAMES.	
EAR	A) EAR PLUG (FOAM) B) EAR MUFF	HEARING LOSS IN HIGH NOISE AREAS	
RESPIRATORY SYSTEM	DUST RESPIRATOR WITH FILTER/ NOSE MASK FILTER	INHALATION OF HARMFUL DUST.	
BODY	SAFETY BELT,  ARC FLASH SUIT	FALL FROM HEIGHT, ELECTRICAL FLASH OVER.	
HAND	ELECTRICALLY TESTED ELECTRICAL RESISTANT HAND GLOVES WITH CERTIFICATE (IS: 4770-1968) & subsequent revision thereof, if any.	ELECTRIC SHOCK	
FOOT	A) INDUSTRIAL SAFETY SHOE WITHOUT STEEL TOE. B) GUM BOOT	A) ELECTRICAL SHOCK B) CABLE GALLERIES, MUDDY AREAS ETC.	



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## PPE MATRIX (CPP/SMELTER PLANT)

Major activity	Safety Shoe		Safety Goggles	Hand Gloves	Face Shields	Safety Belt	Dust control mask	plugs/		Crawl board	
Working at height	Y	Y	Y	Y	NR	Y	Y	Υ	NR	NR	NR
Excavation/earth work	Y	Υ	Υ	Y	NR	NR	Υ	Υ	NR	NR	NR
Working in noisy area	Y	Υ	Y	Y	NR	NR	Υ	Υ	NR	NR	NR
Working in dusty area	Y	Υ	Y	Y	NR	NR	Y	Υ	NR	NR	NR
Coal compaction /handling	Y	Υ	Y	Y	NR	NR	Υ	Υ	NR	NR	NR
Sand blasting	Υ	Υ	Υ	Υ	NR	NR	Υ	Υ	NR	NR	NR
Riveting	Υ	Υ	Υ	Y	NR	NR	Υ	Υ	NR	NR	NR
Chlorine gas leakage attending	Y	Y	Υ	Y	Y	NR	NR	NR	NR	NR	Υ
Working on fragile roof	Y	Y	Y	Y	NR	Y	Υ	Υ	NR	Υ	NR
Electrical panel checking	Y	Y	Y	Y TESTED RUBBER HANDGLOVES	NR	NR	Y	Y	NR	NR	NR
Gas Storage shed checking	Y	Y	Y	Y	Y	NR	Y	Y	NR	NR	NR
Confined space checking	Y	Y	Y	Y	NR	Y	Y	Y	Y	NR	Υ

**Note :** Y - yes, NR : not required, SCBA : self-contained breathing apparatus, PPE : personal protective equipment.

PPEs shall be selected depending on combination of job and site conditions.



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1. Industrial Safety Shoes with 4" ankle height as per IS 15298 Part

Safety Helmet as per IS 2925:1984, material HDPE.

5. HF Nose Mask shall be FFP2 SL as per IS 9473-2001 or its

Cotton / Leather Hand Gloves as per latest IS mark or its

Safety helmet with visor as per latest IS or its equivalent.

4. Safety Goggles as per IS 5983 or its equivalent.

8. Ear Plug / Muff as per latest IS or its equivalent.

10. Full body harness as per IS 3521 or its equivalent

Apron, Leg Guard as per latest IS or its equivalent.

Ladies Industrial Safety Shoes low ankle as per IS 15298:2011 or

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#### AREA WISE / JOB WISE PPE REQUIREMENTS SMELTER PLANT

#### CARBON AREA

- Industrial Safety Shoes with 4" ankle height as per IS 15298 Part 2-2002 OR its equivalent.
- 2. For Bake Oven area Industrial Safety Shoes with 4" ankle height having Nitrile sole as per IS 15298 Part-II -2002 or its equivalent.
- Ladies Industrial Safety Shoes low ankle as per IS 15298:2011 or its equivalent.
- 4. Safety Helmet as per IS 2925:1984, material-HDPE.
- 5. Full body harness as per IS 3521 or its equivalent.
- 6. Cotton / Leather Hand Gloves as per latest IS mark or its equivalent
- Dust / Mist Respirator shall be FFP2 SL Class as per IS: 9473-2002 or its equivalent.
- 8. Apron (Pin repair Shop)
- 9. Head Cover & Apron (Coke & Pitch handling area)
- 10. Pitch / Fume respirator as per IS 14166:1994 or its equivalent.
- 11. Safety Helmet with visor as per latest IS or its equivalent {for induction furnace & ladle cleaning of RS (O)}.
- 12. Safety goggle with blue glass as per latest IS or its equivalent {for induction furnace & ladle cleaning of RS (O)}
- 13. Special nose mask against fumes & odour as per latest IS or its equivalent for Baking Furnace.

#### 6 HORTICULTURE WORK

- Protective Footwear as per latest IS mark or its equivalent (Ladies & Gents).
- 2. Safety Helmet as per IS 2925:1984, material HDPE
- 3. Safety Goggles as per IS 5983.

POT LINE (Mechanical & Operation)

2-2002 or its equivalent.

its equivalent.

equivalent.

equivalent.

- Dust / Mist Respirator shall be FFP2 SL class as per IS:9473-2002
- Cotton Hand Gloves & Rubber Hand Gloves as per latest IS mark.
- 6. Organic vapor nose mask as per latest IS mark or its equivalent.
- 7. Full body harness as per IS 3521 or its equivalent

#### CIVIL WORK

- Protective Footwear as per latest IS mark or its equivalent (Ladies & Gents).
- Safety Helmet as per IS 2925:1984, material HDPE.
- 3. Dust / Mist Respirator shall be FFP2 SL class as per IS: 9473-2002 or its equivalent.
- 4. Hand Gloves
- 5. Full body harness as per IS 3521 or its equivalent
- 6. Safety Net as per latest IS mark.

#### CAST HOUSE (Mechanical & Operation) & Rolling Plant

- 01) Industrial Safety Shoes with 4" ankle height as per IS 15298 Part 2-2002 or its equivalent.
- 02) Ladies Industrial Safety Shoes low ankle as per IS 15298:2011 or its equivalent
- 03) Safety Helmet as per IS 2925:1984,material HDPE
- 04) Safety Goggles as per IS 5983 or its equivalent.
- 05) Cotton / Leather Hand Gloves
- 06) Dust / Mist Respirator
- 07) Leather Leg Guard
- 08) Helmet with Visor (Skimming Area)
- 09) Apron (Direct Sow Casting Area & Ingot Skimming Station)
- 10) Ear Plug / Muff (Billet Casting Area) of latest IS mark.
- 11) Full body harness as per IS 3521 or its equivalent
- 12) Safety helmet with visor as per latest IS or its equivalent

### MISCELLANEOUS WORK

## MES, CRS, CENTRAL STORES, LAB, UTILITY & DESPATCH, FINANCE, PLANT HRD & ADMINISTRATION.

Safety Helmet as per IS 2925:1984,material HDPE

- Industrial Safety Shoes as per IS 15298 Part 2-2002/ or its equivalent/Protective Footwear as per latest IS mark or its equivalent (Ladies & Gents).
- 2. Safety Goggles as per IS 5983.
- 3. Cotton / Leather Hand Gloves
- 4. Ear muff/Ear plug (Utility) of latest IS mark or its equivalent.
- Dust / Mist Respirator shall be FFP2 SL class as per IS: 9473-2002.
- 6. Rubber / Surgical hand gloves (for acid / alkali use and at the time of chemical analysis) Lab.
- 7. Full body harness as per IS 3521 or its equivalent
- 8. Safety helmet with visor as per latest IS or its equivalent

#### 4 ELECTRICAL WORKS

- 1. Industrial Safety Shoes with 4" ankle height as per IS 15298 or its equivalent.
- 2. Ladies Industrial Safety Shoes low ankle as per IS 15298:2011 or its equivalent.
- 3. Safety Helmet as per IS 2925:1984,material HDPE or its equivalent
- 4. Safety Goggles of latest IS mark or its equivalent.
- 5. Rubber Hand Gloves (for 6.6/11 KV test) as per latest IS or its equivalent.
- 6. Dust / Mist Respirator of latest IS mark or its equivalent.
- 7. Full body harness as per IS 3521 or its equivalent.

  Note: 1. The PPEs issued must confirm to latest IS / D
  - 1. The PPEs issued must confirm to latest IS / DGMS approved or its equivalent standard.
  - 2. In case of damage of any PPE of workmen the same shall be replaced by the contractor irrespective of the time of use.

#### 3. Frequency of issue

	SI	Item	Frequency of issue
Ī	1	Industrial Safety Shoe	1 pair per year.
Ī	2	Safety Helmet	1 No per 2 yrs.
I	3	Safety Goggles	1 No per year
ſ	4	Nose mask	4 Nos per month
Ī	5	Cotton hand gloves	3 pairs per month



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#### PPE REQUIREMENTS IN VARIOUS AREAS OF CPP

1.   MECHANICAL AREA   6.   POWER HOUSE OPERATION:							
(i) Industrial Safety Shoes as per IS 15298 Part-II-2002 (i) Industrial Safety Shoes as per IS 15298 F	art-II-2002 or						
or its equivalent.	art ii 2002 oi						
	rial UDDE or						
(ii) Safety Helmet as per IS 2925:1984, material-HDPE (iii) Safety Helmet as per IS 2925:1984, material-HDPE (iii) Safety Helmet as per IS 2925:1984, material-HDPE	HIAI-FIDEE OI						
or ABS. its equivalent.							
(iii) Full body harness as per IS 3521 or its equivalent. (iii) Safety Goggles as per IS 5983 or its equiv							
(iv) Cotton/Leather Hand Gloves as per latest IS mark or (iv) HF Nose Mask shall be FFP2 SL as per	IS 9473-2001						
its equivalent. or its equivalent							
(v) Dust/Mist Respirator shall be FFP2 SL Class as per (v) Cotton Leather Hand Gloves as per late	st IS mark or						
IS:9473-2002 or its equivalent. its equivalent.							
(vi) Safety goggles as per latest IS or its equivalent. (vi) Ear Plug/Muff as per latest IS or its equivalent.	alent.						
(vii) Boiler Suit/Apron. (vii) Gum boot							
(viii) Boiler suit / apron							
2. CIVIL WORK 7 HORTICULTURE WORK							
(i) Industrial Safety Shoes as per IS 15298 mark. (i) Industrial Safety Shoes as per 15298							
	ial UDDE						
(ii) Safety Helmet as per IS 2925:1984, material –HDPE (iii) Safety Helmet as per IS 2925:1984, mate	III HDPE						
or ABS.  (iii) Safety Goggles as per IS 5983.	Class server						
(iii) Dust/Mist Respirator shall be FFP2 SL Class as per (iv) Dust/Mist Respirator shall be FFP2 SL	ciass as per						
IS:9473-2002 or its equivalent. IS:9473-2002.							
(iv) Hand Gloves & Rubber Hand G	loves as per						
(v) Full body harness as per IS 3521 or its equivalent. latest IS mark.							
(vi) Safety Net as per latest IS mark. (vi) Full body harness as per IS 3521 or its eq	uivalent.						
(vii) Gum Boot depending on job requirement							
(viii) Safety Goggles							
3. CHP WORK 8 MISCELLANEOUS WORK AREAS:							
(i) Industrial Safety Shoes with as per IS 15298 Part-II- (i) Industrial Safety Shoes as per 15298							
2002 or its equivalent. (ii) Safety Helmet as per IS 2925:1984, mate	rial HDPF						
(ii) Safety Helmet as per IS 2925:1984, material-HDPE. (iii) Safety Goggles as per IS 5983.	iai i ibi L						
(iii) Safety Goggles as per IS 5983 or its equivalent. (iii) Cotton/Leather Hand Gloves							
	mark or ita						
(iv) Cotton/Leather Hand Gloves. (v) Ear Muff/Ear Plug (Utility) of latest IS	mark of its						
(v) Dust/Mist Respirator equivalent.	10.						
(vi) Ear Plug/Muff of latest IS mark. (vi) Dust/Mist Respirator shall be FFP2 SL cla	ass as per 15:						
(vii) Full body harness as per IS 3521 or its equivalent. 9473-2002.							
(viii) Special nose mask for coal dust. (vii) Rubber/Surgical Hand Gloves (for acid/a	Ikali use and						
(ix) Gum Boot depending on job requirement. at the time of chemical analysis) Lab.							
(x) Full body Apron. (viii) Full body harness as per IS 3521 or its eq	uivalent.						
4. ELECTRICAL WORKS:							
(i) Industrial Safety Shoes as per IS 15298 Part-II-2002 or its equivalent.							
(ii) Safety Helmet as per IS 2925:1984, material-HDPE or its equivalent.							
(iii) Rubber Hand Gloves as per latest IS or its equivalent.							
(iv) Dust/ Mist Respirator of latest IS mark or its equivalent.							
(v) Full body harness as per IS 3521 or its equivalent.							
(vi) Arc flash suit / apron / jacket.							
(vii) Safety Goggles							
5 DM Plant & Water Treatment Plant:							
(i) Industrial Safety Shoes as per IS 15298 Part-II-2002 or its equivalent.							
(ii) Safety Helmet as per IS 2925:1984aterial-HDPE or AQBS.							
(iii) Hand Gloves for chemical handling as per latest IS or its equivalent.							
(iv) Dust/ Mist Respirator of latest IS mark or its equivalent.							
(v) Full body harness as per IS 3521 or its equivalent.							
(vi) Acid / Alkali suit / apron / jacket.							
(vii) Safety Goggles							
(VII) Safety Goggles  ** For scaffolding / Temporary platform preparation, only MS Pipes / angles are allowed.							

\*\* For scaffolding / Temporary platform preparation, only MS Pipes / angles are allowed.

#### Note:

- 1. The PPEs issued must confirm to latest IS/DGMS approved or its equivalent standard.
- 2. In case of damage of any PPE of any PPE of workmen the same shall be replaced by the contractor irrespective of the time of use.

3. Frequency of issue:

SI. No.	Item	Frequency of issue
1	Industrial Safety Shoe	1/Year
2	Safety Helmet	½ Year
3	Safety Goggles	½ Year
4	Nose Mask	4/Month
5	Cotton Gloves	3/Month



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#### **ANNEXURE-A4**

#### **ENVIRONMENTAL POLICY (CAPTIVE POWER PLANT)**

The Captive Power Plant, NALCO located at Angul, Odisha, generating coal based thermal power, being committed to the Corporate Environmental Policy of the Company, further resolves to minimize the pollution and protect the environment in the impact zone of its operation.

#### **OBJECTIVES SPECIFIC TO CAPTIVE POWER PLANT:**

- To achieve continual improvement in use of natural resources.
- To reduce, contain and treat all effluents and emissions of the plant harmful to the environment.
- To take special care in minimizing emission of fly ash and its safe disposal including continual effort for agricultural use of fly ash.
- To reduce dust level in the coal and ash handling areas.
- To create and conserve green belt in and around the plant.
- To create awareness and concern for the environment among the employees and persons working on behalf of the organization.

#### **COMMITMENT:**

We, the employees of Captive Power Plant of NALCO commit ourselves for prevention of pollution, continual improvement of the environment. We also resolve to comply with all legal & other requirements on environment applicable to our organization.

S/d Executive Director (S&P), NALCO

#### **ENVIRONMENTAL POLICY (SMELTER PLANT)**

In recognition of interests of the society in securing sustainable industrial growth, compatible with a wholesome environment, NALCO affirms that it assigns high importance to promotion and maintenance of a pollution-free environment in all its activities.

#### **OBJECTIVES:**

- To use non-polluting and environment friendly technology.
- To monitor regularly air, water, land, noise and other environmental parameters.
- To constantly improve upon the standards of pollution control and provide a leadership in environment management.
- To develop employees awareness on environmental responsibilities and encourage adherence to sound environmental practices.
- To work closely with Government & local authorities to prevent or minimise adverse consequences of the industrial activities on the environment.
- To comply with all applicable laws governing environmental protection through appropriate mechanisms.
- To actively participate in social welfare and environmental development activities of the locality around its Units.

#### **COMMITMENT:**

We dedicate ourselves to ensure a green and wholesome environment in all areas of our operations for sustainable industrial growth and to set standards in environmental management.

S/d Executive Director (S&P), NALCO



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#### **ANNEXURE-A5**

#### **OCCUPATION HEALTH & SAFETY POLICY**

Nalco is committed to maintain a Safe, Healthy and Sustainable work environment in all its operations. This shall be achieved by:

- ♣ Focusing on prevention of Accidents and Occupational Health issues.
- ♣ Complying with all legal requirements & other requirements related to Safety and Occupational Health of persons and establishing clearly defined goals & procedures to achieve the same.
- ♣ Ensuring Safety & Health of all employees and contract workers in its premises, including those involved in transportation, cleaning and other such activities.
- Conducting Periodic Safety Audits, Environment Audits, Health Check-ups and Risk Assessment by both internal and external qualified persons.
- Considering aspects related to Safety and Health of personnel as well as environmental issues at the time of procurement of equipment and selection of technologies.
- **♣** Ensuring health of persons in the peripheral locations, likely to be affected by our operations.
- Periodically monitoring and reviewing safety & occupational health issues at relevant levels, including the highest levels.
- Communicating Safety Hazards and health related issues to all concerned through suitable means, including training.
- ♣ Involving the workmen in Policy implementation as well as identification of potential issues.
- Considering Health & Safety performance of individuals at different levels during their career advancement as per Nalco's policy.
- ♣ Establishing and maintaining suitable set-up with competent persons to monitor and bring to the notice of the management any issues related to unsafe conditions & practices.
- Striving for continual improvements, exceeding statutory compliance levels, wherever feasible.

22.10.2015 Bhubaneswar Sd/-

**Chairman-cum-Managing Director** 

#### **QUALITY POLICY**

Quality will form the core of our business philosophy. Meeting the needs and expectations of the customer and consistently improving our systems and work ethos will be our chosen path in achieving excellence in business and fulfilling our social obligations.

#### **Guiding Principles**

- ♣ To ensure a Healthy Return on investment by maximizing Operational Efficiency, Capacity Utilization and Productivity.
- ♣ To continually improve and redesign systems, Processes and Practices in order to ensure Error Prevention and improve Response Time.
- ♣ To adopt Internal Customer Focus as a means to External Customer Satisfaction.
- ♣ To treat Human Resource as the key to Quality Excellence and ensure Development, Involvement and Satisfaction of Employees.
- **★** To ensure High Quality of Inputs through Proactive Interaction with Suppliers.
- To meet obligations towards the society as a Responsible Corporate Citizen.
- ♣ To Provide value for money to all stakeholders.
- ♣ To follow Ethical Business Philosophy at all times.

#### Commitment

We dedicate ourselves to the Quality Policy and Objectives of the Company in letter and spirit and commit to continuously strive for their fulfilment.

22/10/2015

Bhubaneswar Chairman-cum-Managing Director



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#### **ANNEXURE-A6**

#### SOCIAL ACCOUNTABILITY POLICY

We at NALCO are committed to provide a socially accountable work environment to all employees and uphold ethical business practices by respecting employees' rights to ensure a decent Workplace.

We shall achieve these by adopting a companywide culture, which will help to promote:

- Involvement of all employees in sustenance of SA 8000:2014 Standard;
- Conforming to all requirements of SA 8000:2014 Standard;
- Complying with National laws, other applicable laws and other requirements to which the organization subscribes;
- Respecting the International instrument as describes in the SA 8000:2014 Standard.
- Continual improvement initiatives in all social aspects;
- Learning and training opportunities to all employees;

This policy is communicated and understood within the organization.

Sd/Date: 23.02.2017 Chairman-cum-Managing Director

#### **ENERGY POLICY**

Enhancing Energy Performance, comprehensively optimizing energy use, Energy consumption and energy efficiency, is a major imperative for an energy intensive industry like ours. In recognition of this, we focus on improvement of Energy Performance in all areas of operations with thrust on planning Energy Objectives based on the enshrined Guiding Principles.

#### **Guiding Principles**

- To Endeavour for reduction in specific consumption of energy in all forms and in all areas of operations.
- To ensure availability of information and necessary resources for achieving objectives and targets.
- To comply with all applicable legal, regulatory and other requirements related to energy use, consumption and efficiency.
- To espouse energy efficient technology encompassing procurement of energy efficient products & services and design for Energy Performance improvement.
- To carry out energy audits and energy reviews, at planned intervals, to improve energy performance.

#### **Commitment**

We affirm our commitment to continually improve our energy performance and strive for achieving the objectives and targets.

Sd/-

**Chairman-cum-Managing Director** 



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### **ANNEXURE-A7**

### GENERAL ENVIRONMENTAL REQUIREMENT (SMELTER / CAPTIVE POWER PLANT)

- 1. The contractor should adhere to safe environmental practices and shall perform in line with the environment policy of the company. The contractor has to ensure efficient use of natural resources like water, fuel oil and lubricants.
- 2. It will be the responsibility of the contractor to safely dispose off the waste generated in the processes of any job to the allotted location as assigned by Manager-in-charge in a manner so as to minimize their harmful concentration effects in the environment.
- 3. The contractor should ensure that oil/grease; chemicals and toxic substances are stored/ handled properly so that they do not find their way into the industrial drain and the atmosphere.
- 4. The contractor should make use of equipments having permissible noise limits and not polluting the atmosphere by any means. The contractor shall also guard against any hazardous & unsafe working conditions.
- 5. The various activities of the contractor should not create any adverse effect on ambient air & water quality at work site and adjoining area. It will be the responsibility of the contractor not to cause damage to the afforestation/green belt created inside/ outside the plant.
- 6. Contract should ensure proper awareness among workers to maintain a clean environment inside/outside the plant.
- 7. The emission level of the vehicles, construction equipments etc. deployed by the contractor should comply with the norms specified by statutory authorities/ acceptable standards.
- 8. The contractor should avoid use of toxic and hazardous chemicals. If use of toxic and hazardous chemicals becomes unavoidable, their presence should be within the limits specified by the acceptable standards. The contractor should declare before use of chemicals, the nature of the chemicals i.e. Toxic/ non-toxic, hazardous/ non-hazardous to the Manager-in-charge and obtain his clearance before using such chemicals.
- **9**. The contractor should ensure that disposal of used chemicals are disposed off to the drains only after neutralization of the chemicals and after clearance of the Manager-in-charge.

### MINIMUM SAFETY EQUIPMENTS TO BE PROVIDED BY THE CONTRACTOR TO THE WORKMEN.

- 1. The contractor shall provide safety shoes, safety helmets to their workmen while executing the iob.
- 2. Dust respirators must be used by the contractor workers working in dust area.
- 3. Face shield must be used by the welders.
- 4. While working on a height, Safety belt must be used by the workers.
- 5. Suitable face mask must be used the contract workers while working out painting jobs.

\*\*\*\*\*\*



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**ANNEXURE-A8** 

### GENERAL GUIDELINE TO BIDDER ON REVERSE AUCTION

- 1. If a bidder does not participate in the Reverse Auction, the price quoted by him in the price bid shall be considered as the valid price of that bidder. The inter-se position of the said bidder shall be considered based on their position on completion of reverse auction.
- 2. Price bid shall be opened at 10.00 Hrs. on DD/MM/YYYY and Reverse Auction shall commence at Not applicable Hrs. and shall remain open for minimum Not applicable hours.
- 3. Starting bid price shall be the L-1 offer price received against the tender.
- 4. <u>Bid Decremental Value shall be ` Not applicable /- (which is @ Not applicable % of the declared estimated value).</u>
- 5. Auto Extension Time shall be fixed at 10 Minutes
- 6. Other relevant parameters shall be displayed in the GeM Portal reverse auction window.
- 7. GeM Portal Server time shall be the basis of Start time & Closing time for bidding and shall be binding for all.
- 8. Auction flow is started and is closed after completion of the process. Once the Auction process is initiated the system takes over for auto auction activity. Then, comparison chart is generated.
- 9. The bidders to participate in tender-cum-auction process in GeM Portal, has to log into GeM Portal (i.e. <a href="https://gem.gov.in">https://gem.gov.in</a>) with DSC to access the application and quote from their own offices/place of their choice. Once logged in, the software gives them a platform to place bids.
- 10. All electronic bids submitted during the reverse auction process shall be legally binding on the bidder. The bid values submitted by the bidder are digitally signed by the bidders before submitting. The bidder, after initial submission of a bid, cannot subsequently increase the bid. They can only reduce their bid by the minimum permissible decrement or its multiples. The last bid submitted by the bidder in the Reverse Auction will be considered as the valid price bid offered by that bidder and will be the basis for evaluation / acceptance by Nalco.
- 11. System displays L1 landed price in auction creation form and allows TIA to edit the value as 'start bid' price. Normally, TIAs will enter the L-1 Price as the start bid price.
- 12. **Elapsed time:** Shall be fixed at ten minutes. There will be auto extensions of time, every time, (by ten minutes) in case of any reduction recorded in the last auto-extension-time-duration. The reverse auction will come to a close only when there is no further reduction recorded in the last ten minutes slot.
- 13. **Maximum Seal Percentage:** It is the maximum reduction that can be allowed in the bidding process in a single go. Higher reduction will not be allowed by the system. This protects any possible mistakes by bidders. For any higher discount, the bidder has to repeat the action and the system allows it.
- 14. Only the chronologically last bid submitted by the bidder till the end of the auction shall be considered as the valid price bid of that bidder. Any bid submitted earlier by the bidder prior to submission of his last bid will not be considered as valid price bid.



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### PROPOSED SITE ORGANISATION

### NAME OF TENDERER:

Tenderer is to indicate here the site organization, he proposes to set up for execution of the work.

It is understood that this will be augmented from time to time depending on the requirements for timely completion of the work as directed by the Engineer-in-Charge.

Tenderer is also to furnish the bio-data of the Resident Engineer & key personnel to be deployed at site.

### **COMPLIANCE TO INTEGRITY PACT:**

Bidders are required to unconditionally accept the "Integrity Pact (IP)" (to be executed on plain paper), as per format attached at Annexure-C21 of NIT, which may be considered as pre-signed by the Employer, and submit the same duly signed on all pages by the Bidder's Authorized Signatory in a separate sealed envelope before stipulated NIT / submission time at the address specified in the NIT. Bidder and its Subsidiary (ies) and/or Holding Company and/or Subsidiary(ies) of its Holding Company / Consortium members shall individually sign Integrity Pact (IP) and shall submit in a separate sealed envelope before stipulated NIT submission time at the address specified NIT. Bidder's failure to comply with the aforesaid requirement regarding submission of Integrity Pact (IP)' shall lead to outright rejection of offer Proposal as being non-responsive and shall not be opened.

In case of selected bidder being a Consortium, in addition to above, after incorporation of Joint Venture Company, Integrity Pact shall be signed by the Joint Venture Company along with Project Agreement.

### 1. Independent External Monitors (IEMs)

At present there is a panel of Independent External Monitors (IEMs) in NALCO. The panel of IEMs consists of the following.

A)	Smt. Deepa Krishan, IRS (Retd.)
	C 2603, Sushant Lok-1,
	Gurgaon, Haryana, PIN-122002,
	e-mail: deenakrishan@amail.com

B) Ms. Archana Ranjan, IRS (Retd.)
A 4/1, Vasant Vihar,
New Delhi- 110057,
e-mail: ranjan.archana@gmail.com

C) Dr. Meeran C Borwankar, IPS (Retd.)
C 10/5, Vasant Vihar,
New Delhi-110052
e-mail: mcborwankar@gmail.com

- 1. In respect of this Tender, the panel of Independent External Monitors (IEMs) would be monitoring the Bidding Process and execution of Agreement to oversee implementation and effectiveness of the Integrity Pact Program.
  - The details of the Independent External Monitors (IEMs) are given above who will oversee the compliance to the terms of The Integrity Pact (IP) which forms a part of this Tender.
  - IEMs are authorized to examine /consider all references made to it under this tender. The bidder(s), in case of any dispute(s) / complaint(s) pertaining to this package may raise the issue either with the designated 'Nodal Officer' in NALCO or directly with the IEMs.
  - Bidder may write to the IEM through E-mail (Provided in the tender) for their grievances, if any, giving details of the tender reference, name of the tender issuing officer and Nalco's Unit for quick identification of the tender by the IEM.
- 2. The Independent External Monitors (IEMs) have the right to access without restriction to all Project documentations of the NALCO. The Monitors are under contractual obligation to treat the information and documents of the Bidder / Subsidiary (ies) and/or Holding Company and/or Subsidiary (ies) of its Holding Company / Consortium members/Sub Contractors with confidentiality.
- 3. If the Employer has terminated the Contract pursuant to Section-3 of the Integrity Pact (IP), NALCO shall act in accordance with **Section 6 of The Integrity Pact**.



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**ANNEXURE-A9** 

### PREFERENCE TO MAKE IN INDIA ORDER NO. P-45021/2/2017-PP(BE-II),DTD: 16.09.2020

- 1.0 The bidders are requested to go through the GoI Order No: P-45021/2/2017-PP(BE-II), DTD: 16.09.2020 for the purpose of Purchase Preference on the basis of Local Content and submit the Declaration by the Bidder accordingly.
- 2.0 For the purpose of this order dtd.16.09.2020:-
- 2.1 Local content means the amount of value added in India which shall, unless otherwise prescribed by the nodal ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.
- 2.2 Class I local supplier means a supplier or service provider whose goods, services or works offered for procurement has local content equal to or more than 50%, as defined at cl. 2.1above.
- 2.3 Class II local supplier means a supplier or service provider whose goods, services or works offered for procurement has local content equal to or more than 20% but less than 50%, as defined at cl. 2.1above.
- 2.4 Non-local supplier means a supplier or service provider whose goods, services or works offered for procurement has local content less than 20%, as defined at cl. 2.1above.
- 2.5 'Margin of purchase preference' means the maximum extent to which the price quoted by a "Class-I Local supplier" may be above the L1 for the purpose of purchase preference. The margin of purchase preference shall be 20% against the tender.
- 3.0 Subject to the provisions of the above order and to any specific instructions issued by the Nodal Ministry or in pursuance of this order, purchase preference shall be given to 'Class-I Local supplier' in procurement undertaken by procurement entities in the manner specified here under:-
  - <u>CASE-I (FOR DIVISIBLE QUANTITY</u>): All the provisions of the order No.P-45021/2/2017-PP(BE-II) dtd. 16.09.2020 shall be applicable for this tender towards purchase preference.
  - However, in case of participation by MSE & ancillary units, the tender quantity reserved for MSE & ancillary units as per purchase preference policy of NALCO for MSEs as mentioned in the tender document shall take precedence over the purchase preference against the above mentioned order (to be mentioned, if applicable).
- 4.1 In the procurement of goods or works which are divisible in nature, the 'Class-I Local Supplier' shall get purchase preference over 'Class-II local supplier' as per the following procedure:
  - a) Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract of full quantity will be awarded toL1.
  - b) If L1 bid is not a 'Class I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter. the lowest bidder among the 'Class I Local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to Class-I local supplier's quoted price falling within the margin of purchase preference and contract for that quantity shall be awarded to such 'Class-I Local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I Local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I Local supplier', within the margin of purchase preference shall be invited to match the L1 price for the remaining quantity and so on and the contract shall be awarded accordingly. In case some quantity is still left uncovered on 'Class-I Local supplier, then such balance quantity may also be ordered on the L1bidder.



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- 'Class-II local supplier' will not get purchase preference in any procurement undertaken by procuring entities.
  - CASE-11(FOR NON-DIVISIBLE QUANTITY): All the provisions of the order No. P-45021/2/2017-PP(BE-II) dtd. 16.09.2020 shall be applicable for this tender towards purchase preference.
- In the procurement of goods or works which are not divisible in nature, the 'Class-I Local Supplier' shall get purchase preference over 'Class-II local supplier' as per the following procedure:
  - Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded toL1.
  - b) If L1 bid is not a 'Class I local supplier', the lowest bidder among the 'Class I Local supplier' will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference and contract shall be awarded to such 'Class-I Local supplier' subject to matching the L1price.
  - In case such lowest eligible 'Class-I Local supplier' fails to match the L1 price, 'Class-I Local supplier with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I Local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1bidder.
- 'Class-II local supplier' will not get purchase preference in any procurement undertaken by procuring entities.
- 5.0 Verification of local content.
  - The 'Class-I local supplier' 'Class II-local supplier' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local supplier'/ 'Class II-local supplier', as the case may be. They shall also give details of the location(s) at which the local value addition is made. Declaration to be given in the format attached/enclosed below.
  - 5.2 In case of procurement for a value in excess of Rs.10 crores, the 'Class-I local supplier'/ 'Class IIlocal supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of the companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
  - 5.3 Decisions on complaints relating to implementation of this order shall be taken by the competent authority which is empowered to look into procurement-related complaints relating to the procuring entity.
- 6.0 Only "Class-I local suppliers and Class-II local suppliers", as defined under the order, shall be eligible for participation against this tender. The offers of 'Non-Local Suppliers' shall not be considered for evaluation against this tender.



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### (Declaration by the bidder on their letter head)

To, GM(T&C), M/s. National Aluminium Company Limited, Smelter Plant, Nalconagar, DistAngul, Odisha-759145		
Sub: Declaration of % of Local content along with the place of value GoI order No: P-45021/2017-PP (BE-II), Dated: 16.09.2020)	e addition. (I	Ref. No:
Tender Ref. No.:		
Dear Sir,		
We, M/s	_ having its	office
at	_(address)	hereby
confirm that the offered product as% of the local content.		
Following is/are the location(s) at which local value addition is made:		
Yours sincerely,		
Signature		
Name :		
Designation:		
Contact No. :		



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**ANNEXURE-A10** 

Compliance of Public order on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 and ORDER NO:F.No.6/18/2019-PPD DATED 23/07/2020 & 24/07/2020

#### **DEFINITIONS**

- 1. GOI vide Order (Public Procurement No.1, 2 & 3) dated 23 Jul 2020 & 24 Jul 2020 has imposed Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 on bidders from a country which shares a land border with India.
- 2. "Bidder" for the purpose of this Order (Public Procurement No.1, 2 & 3) (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process
- 3. "Bidder from a country which shares a land border with India" for the purpose of this Order (Public Procurement No.1, 2 & 3) means
  - a. An entity incorporated, established or registered in such a country; or
  - b. A subsidiary of an entity incorporated, established or registered in such a country; or
  - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
  - d. An entity whose beneficial owner is situated in such a country; or
  - e. An Indian (or other) agent of such an entity; or
  - f. A natural person who is a citizen of such a country; or
  - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

**Note:** "Beneficial owner" for the purpose of above paragraph (3) will be as under:

i. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

### **Explanation**

- a) "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;
- b) "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholder's agreements or voting agreements;
- ii. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
- iii. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;



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- iv. Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
- v. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- vi. "Agent" for the purpose of this Order (Public Procurement No.1, 2 & 3) dtd. 23 Jul 2020 & 24 Jul 2020 is a person employed to do any act for another, or to represent another in dealings with third persons.

### Rule: Following shall be complied by the Bidders of the said countries while submitting bids.

- A) Any bidder from a country who shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the <u>Competent Authority</u>. The Competent Authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). However, Order will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs. This order shall also not apply to procurement by Indian missions and by offices of government agencies / undertakings located outside India.
- B) The Bidder shall have to submit declaration / certificate as per the attached Format towards compliance of Public Order on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017. B)
- C) For works contracts, including Turnkey contracts, the successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "Contractor from a country which shares a land border with India" shall be as in paragraph (3) above.



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Format for Declaration towards Compliance of Order (Public Procurement No.1, 2 & 3) dtd. 23 Jul 2020 & 24 Jul 2020 on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017.

This declaration must form part of all tenders & it contains general information and serves as a declaration form for all bidders. (Before completing this declaration, bidders must study the General Conditions, Definitions, Govt Directives applicable in respect of Public Procurement No.1, 2 & 3) dtd. 23 Jul 2020 & 24 Jul 2020 on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017& prescribed tender conditions).

DE	CLARATION BY AUTHORISED SIGNATORY OF THE FIRM
	ne undersigned ,
do I	hereby declare, in my capacity as
of N	M/s(name of bidder entity), that:
l	
1)	The facts contained herein are within my own personal knowledge.
2)	I have read the Order (Public Procurement No.1, 2 & 3) dtd. 23 Jul 2020 & 24 Jul 2020 on the subject of
ſ	Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 regarding restrictions on
ſ	procurement from a bidder of a country which shares a land border with India and comply to all the
ſ	provisions of the Order.
3)	I certify that M/s(name of bidder
l	entity) is not from such a country or, is from such a country (strike out whichever is not applicable), has
	been registered with the Competent Authority. I hereby certify that this SUPPLIER fulfils all requirements
l	in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the
	Competent Authority is attached].
4)	I understand that the submission of incorrect data and $\slash$ or if certificate $\slash$ declaration given by $M/s$
l	(name of bidder entity) is found to be
ſ	false, this would be a ground for immediate termination and further legal action in accordance with law as
	per Clause 12 of the Public Order on Restrictions under Rule 144 (xi) of the General Financial Rules
	(GFRs), 2017
ı	
AU'	THORISED SIGNATURE: DATE:
Sea	l / Stamp of Bidder



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# PART-B

## **Contract specific information**



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**ANNEXURE-B1** 

# SMELTER T&C DEPARTMENT Web site: www.gem.gov.in CONTRACT DETAILS

Form no: F-02/CNT/IDPM/02 Page 1 of 2

1 01111110	0. F-02/CIN 1/1DF1VI/02	<u>rage i di z</u>
1.0	Name of the Work	Mechanical Maintenance Contract for Cast House, Smelter Plant.
1.1	Nature of the Work	REVENUE (REPETITIVE CONTRACT)
1.1(i)	Details of "Items Critical to quality" in case of "Specialized Jobs".	Non Applicable
4.4(**)		
1.1(ii)	Minimum Workable offer if applicable	Clause No.22.2 of Annexure-A1 may be referred for detail.
1.2	Location of the work	INSIDE PLANT PREMISES
2.0	NIT reference	SMLT/T&C/S02/OMC-5937/NIT/5254, Date: 27.02.2025
3.0	Contract Period	24 (TWENTY FOUR) MONTHS
4.0	No. of Agency required and %distribution	a) Number of Agency: <b>02 (TWO)</b>
	of work(subject to availability of bidders)	b) Distribution of Work: <b>55:45%</b>
4.1	Mode of tendering	OPEN (GeM e-Tendering)
4.2	Type of bidding	TWO PART (E-tender)
4.3	Earnest Money Deposit (EMD)	3,50,000.00 (Rupees Three Lakhs Fifty Thousand Only) (Ref. Clause 4.0 of Annexure-A1).
4.4	Tender fee	Not applicable
5.0	Tender e-Submission Start Date/Time.	As per GeM Portal
5.1	Tender e-Submission Last Date/Time.	As per GeM Portal
6.0	e-Tender Opening Date/Time	As per GeM Portal
7.0	Validity of Offer	<b>04 (Four)</b> Months From the date of Tender Opening
8.1	Bank Guarantee / Indemnity Bond value	(i) B.G : Not applicable
	Against Free Issue Materials.	(ii) I.B Not applicable
		(Ref clause no:20.2 of Annexure-A1)
8.2	Bank Guarantee against spare materials	(i) B.G.: Not applicable
	/ equipments taken outside the Plant.	(Ref clause no:20.2 of Annexure-A1)
9.0	Defect Liability Period	01 (ONE) MONTH
7.0	20.001 2.00	(Ref clause 30 of Annexure-A1)
10.1	Current minimum daily wages of all	Refer Annexure-B5
	categories of labour	Trong of Bo
10.2.1	The values of L <sub>0</sub> and Y applicable	L <sub>0</sub> = `611.00 Y <sub>L</sub> = 96.46%
	(L <sub>0</sub> =Minimum labour rate)	(Ref Annexure-B5)
	(Y = Labour component)	
10.2.2	The values of D <sub>0</sub> and Y applicable	Not applicable
	(D <sub>0</sub> = Diesel rate at Angul at the time of tendering)	
	(Y = Fuel cost component)	
	1	



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10.3.1	Labor hike reimbursement against change in minimum wages.	Applicable (Ref clause-28.0 of Annexure-A1)
10.3.2	Fuel escalation against change in Fuel	Not applicable
	Price	(Ref clause-29.0 of Annexure-A1)
10.4	HRD clearance	Applicable
		(Ref clause 17,18, 19 of Annexure-A1)
10.5	PF & ESI	Applicable
		(Ref clause 2.2.3 ,31.7 of Annexure-A1)
11	Type of Contract under <b>GST</b> &	Applicable as per CGST/ SGST/ UTGST & IGST
	Applicability of GST & ITC on GST	(Ref Clause No.25 of Annexure-A1)
12	Service Accounting Code (SAC) of the	Applicable.
	contract/Harmonized system of	(Ref Annexure-C18)
	nomenclature (HSN) code	
13	Recovery towards compensation for delay	Ref clause no: 32 of Annexure-A1.
14	Recovery of Building and Other Const.	Not Applicable
	workers' BOCW (RE& CS) Cess.	(Ref clause no:27.8 of Annexure-A1)
15	Gate pass details	H.S.W-Nil / S.W- 22 (Twenty Two) Nos. / S.S.W- 54
		(Fifty Four) / U.S.W-10 (Ten) Nos.

### IMPORTANT POINTS TO BE NOTED FOR SUBMISSION OF BID

16.	The tender document should be digitally signed, before online submission.
17.	Correction & over writings are not permissible. Any corrections should be signed with date by the
	person, signing the tender document.
18.	If any tenderer is having any unauthorized structure / occupation inside Nalco Township / Plant,
	their offer will not be considered for evaluation and shall be liable for rejection.
19.	All the supporting documents submitted with the offer should be attested by a gazetted officer or
	Notary Public.
20.	The bidder has to submit the 'Necessary Forms' which are to be downloaded, filled up and signed
	before uploading.
21.	Pre Contract Integrity Pact at Annexure-C21 must be filled up and signed by the tenderer.
22.	You are requested to go through "Check list for bidder" and Clause No- 07 of Annexure-A1 of NIT
	details regarding Mode, Submission, Receipt & Opening of Tender.

T.K. Chhotray, DGM (Mech.)-T&C
Tender Inviting Authority
Tender & Contract Dept., SMELTER

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### SUB: MECHANICAL MAINTENANCE CONTRACT FOR CAST HOUSE, SMELTER PLANT.

AGENCIES INTENDING TO PARTICIPATE SHALL FULFILL THE FOLLOWING MINIMUM PRE-QUALIFICATION CRTIERIA (WITH SUPPORTING DOCUMENTS & THEY NEED TO FILL UP ANNEXURE-C25 TO ANNEXURE-C27 OF THE NIT TO ENSURE SUBMISSION OF ALL DOCUMENTS AS PER REQUIREMENT OF NALCO)

### PRE QUALIFYING CRITERIA.

### A) TECHNICAL

### Experience criteria

The bidder should have experience of having successfully completed "Similar Work" during the last seven years ending on last day of the month previous to the one in which NITs are invited, should be either of the followings;

Three similar completed/partially completed works each (with above criteria) having executed value not less than ` 63.49 Lakhs (Rupees Sixty Three Lakhs Forty Nine Thousands only).

**Two** similar completed/partially completed works each (with above criteria) having executed value not less than ` 79.37 Lakhs (Rupees Seventy Nine Lakhs Thirty Seven Thousands only).

(iii) One similar completed/partially completed work (with above criteria) having executed value not less than ` 126.99 Lakhs (Rupees One Hundred Twenty Six Lakhs Ninety Nine Thousand only).

The work experience should be of "Working directly" and possess relevant experience as per the details given under experience criteria. "Working directly" implies, working as a Contractor or Sub Contractor under above authorities who is the Principal Owner of the work.

Evaluation criteria: Cost of the completed works by the bidder shall be escalated @ 10% per annum (simple rate) to bring them at the current price level.

(The cost of work completed within one year prior to original date of bid opening shall not be considered for any weightage. The weightage shall only be considered for work completed prior to one year of original date of bid opening on annual basis and no weightage shall be given for part of the year)

"Similar Work" "Mechanical Maintenance jobs/contracts in any Industry".

Partially completed work in progress (not abandoned) shall be considered.

### Documentary proof

- The bidder should submit copy of following documents duly attested by a Notary Public or Gazetted Officer.
  - a) Work Order with value along with Amendment, if any, Scope of Work & Bill of quantity for assessment of Experience Criteria.
  - b) Satisfactory Completion Certificate indicating the value of work executed & period of contract obtained from Principal Owner of the work for whom the work has been executed.
- 2. In case the bidder submits the credentials as a sub-contractor the following copies are to be submitted duly attested by a Notary Public or Gazetted Officer:
  - Detailed work order / PO / Agreement from the main agency.
  - Completion certificate issued by main agency indicating the value of work executed & period of contract.
  - Completion certificate issued by the Principal / project authorities in favour of the main agency showing due completion of the package.
- 3. In case of partially completed works the party has to submit the part completion certificate indicating the value of work completed and the performance/progress of the bidder should be satisfactory.

NB:-The **Experience** Completion Certificates shall be considered only when it bears the Name and Designation of Issuing Authority. This is only applicable for Experience/Completion Certificates issued after 30/06/2022.

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### B) FINANCIAL

	Eligibility criteria	Documentary proof
1)	The average annual turnover of the vendor for last three financial years should be minimum ` 47.62 Lakhs (Rupees Forty Seven Lakhs Sixty Two Thousands only).	The bidders have to submit the copies of audited financial statements and profit & loss accounts of the relevant years duly
	(Turn over shall be escalated @10% per annum (simple rate) to bring them at the current price level. The turnover of the latest previous year shall not be considered for any weightage)	attested by a Notary Public or Gazetted Officer in support of both the qualifying criteria of turnover and net worth along with the bid.
2)	Net worth of the bidder during the last financial year shall be positive as per audited balance sheet.	
	<b>Note:</b> (For bids received prior to 30th June of any year, the financial figure for the previous to previous year may also be considered for evaluation. Whereas for bids submitted after 30th June, the bidder may also submit financial statement for the previous year certified by Chartered Accountant/Auditor for consideration of their bid.)	

### C) CRIMINAL BACKGROUND:

The bidder or its Proprietor/Partner(s)/Director(s) of the firm should not have been convicted by a court of Law for an offence involving moral turpitude in relation to business dealings during the past seven years for acceptance of the offer. The bidder shall give an **affidavit** to this effect. The affidavit must be affirmed before the competent judicial authority or duly notarized by the Notary only after date of said tender floating. Besides, bidder should furnish litigation history of their firm or group firm (if claiming fulfillment of PQC on group entity terms). The litigation history shall be as per the Format at Annexure-C22 for the purpose of affidavit:

- D) The bidder should possess independent EPF, ESI, & PAN based GST registration certificates of their firm (as applicable). The party should also possess PAN in the name of the firm or sole proprietor The bidders are required to upload copy of EPF & ESI certificates and PAN along with the proof of ownership of their firm (in case of PAN is in the name of sole proprietor) along with the offer.
- E) The bidder needs to submit (upload) the photocopies of all brief orders presently under execution by them as a part of their concurrent commitment (Ref. Cl. No. 5.4 of General Information of NIT, Part-A). [Not applicable for this tender]

**Note:** Agencies intending to participate shall fulfill minimum Pre-Qualification Criteria (With supporting documents & they need to fill up <u>Annexure-C6</u> To <u>Annexure-C7</u> Of The NIT. All the supporting documents submitted should be attested by a Notary Public or A Gazette Officer. They also have to submit Earnest Money Deposit.

T.K. Chhotray, DGM (Mech.)-T&C
Tender Inviting Authority
Tender & Contract Dept., SMELTER



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### **ANNEXURE-B2**

### **SCOPE OF WORK**

### SUB: MECHANICAL MAINTENANCE CONTRACT FOR CAST HOUSE, SMELTER PLANT.

	SUB: MECHANICAL MAINTENANCE CONTRACT FOR CAST HOUSE, SMELTER PLANT.				
Item No.	Item Description	Unit	QTY		
1	2	3	4		
Α	INGOT CASTING MACHINE OF CH-A	NO	4 000 00		
1	<b>Replacement of mould</b> : Mould fixing bolts 4 nos. to be removed, mould to be removed, new mould to be positioned and bolts to be tightened. Mould weight = 35 kgs approx.	NO	1,036.00		
2	Replacement of roller spacer bearing of casting conveyor (per roller): Damaged roller (OD= 80 mm) to be removed after removal of circlip/ secure washer and split pin from tie rod. If required, gas cutting to be done for spacer. Spare roller, spacer and bearing to be assembled and fitted, circlip/ secure washer and split pin to be fitted.	SET	1.00		
3	Replacement of tie rod along with bearing, roller, spacer (per tie rod): Both side rollers are to be removed after removal of circlip/ secure washer and split pin. Connecting links are to be removed from both sides of tie rod. New tie rod to be fitted with links; spare roller, bearing & spacer to be assembled. On both sides, rollers are to be fitted, circlip/ secure washer and split pin to be fitted thereafter.	SET	1.00		
4	Dismantling of casting conveyor & fitting after metal cleaning: Chain links are to be removed after removal of roller at chain joint. After metal cleaning by operation dept., chain to be reconnected. Roller to be fitted and shaft to be locked from inside. This includes opening of one cover each on both sides and fitting back after cleaning.	SET	61.00		
5	Repair of casting conveyor: Damaged tie rods, inner link plates to be replaced. Each roller (OD= 80 mm) to be assembled with 2 no. of bearings, one spacer and one housing. Damaged roller to be replaced with a new one. Circlip/ secure washer and split pin to be fitted thereafter.	SET	1.00		
6	Replacement of casting conveyor (47 m long, 176 pitches, pitch= 265 mm, weight per link= 20.2 kg)) with transportation: Spare casting conveyor to be transported from main store/ storage area in cast house to the area where it is required. Existing conveyor to be dismantled at joint and removed, spare casting conveyor to be repositioned and connected accordingly. Required tension adjustment to be done. For part work rate will be pro-rata	SET	1.00		
7	Replacement of rail of casting conveyor: It involves removal of damaged rail (size: 40 x 15 mm) by gas cutting, surface grinding as required and fitting of new rail by welding after leveling. Welding to be done by low hydrogen electrodes.	MTR	1.00		
8	Replacement of cooling water pump: Motor- pump to be de-coupled, motor to be removed from its position. Pump to be removed, coupling to be reclaimed from the pump. Spare pump & coupling to be fitted. Motor to be positioned. Pumpmotor to be coupled, if required alignment to be done.	NO	3.00		
9	Cleaning of suction strainer/ foot valve and replacement/ repair of the same. Removal of suction pipe by opening flange bolts, cleaning/ repair/ replacement of foot valve, pipe to be fitted back.	NO	5.00		
10	Repair of cooling water piping of casting conveyor: Cooling water pipes to be checked/ cleaned/ repaired/ replaced. Moulds 3 nos. (each weighing 35 kg) to be removed from joint. Pipe to be checked/ cleaned/ repaired/ replaced and moulds to be fitted back.	NO	39.00		
11	Replacement of roller, bearing, sprocket & housing of cross conveyor (C/C): Replacement of roller, bearing, sprocket & housing of C/C after assembling (1 set = 1 roller + 1 housing + 2 bearings + 1 sprocket).	SET	1.00		
12	Repair of complete cross conveyor & replacement: All rollers (16 nos.) replacement, chain replacement, tensioning arrangement overhauling, chain guides repair & replacement	SET	1.00		



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Item No.	Item Description	Unit	QTY
1	2	3	4
13	Replacement of cooling conveyor drive shaft assembly: Cooling conveyor drive gear box (approx. wt.= 200 kg) to be removed, cooling conveyor drive shaft assembly to be replaced, gear box to be put to position, alignment of chain & sprocket checking.	NO	1.00
14	Replacement of layer conveyor drive shaft assembly: Layer conveyor drive gear box to be removed, shaft assembly to be replaced, gear box to be put to position, alignment of chain & sprocket checking.	NO	5.00
15	Replacement of chain of cooling conveyor (100 mm pitch x 167 links each side):Cooling conveyor chain to be removed after dismantling link joint, spare cooling chain to be positioned on sprocket, reconnect with link joint	NO	1.00
16	Replacement of rail of cooling conveyor: Existing rail (size: 40 x 15 mm) to be removed, surface grinding to be done, spare rail to be put after preparing edges.	MTR	1.00
17	Replacement of side flap of cooling conveyor: Side flap to be removed, spare flap to be fitted	NO	1.00
18	Cleaning of water spraying system: of cooling chamber of cool conveyor: Nozzles fitted to cooling pipe to be removed, cleaned and then again to be fitted back.	NO	1.00
19	Cleaning of water Jacket of cooling chamber of cool conveyor: 3 no. of roof screens to be removed after removal of pipes, to be cleaned with wire brush, cover to be fitted to roof screen, roof screens to be put to positions, pipes to be reconnected.	NO	1.00
20	Replacement of chain of layer conveyor (100 mm pitch x 83 links): Existing layer chain to be removed after dismantling link joint, spare layer chain to be positioned on sprocket, reconnect with link joint	NO	1.00
21	Replacement of rail of layer conveyor: Existing rail to be removed after removal of covers, chain etc, surface grinding to be done, spare rail to be put after preparing edges.	MTR	1.00
22	Repair & replacement of grab: Replacement of wheel, bearings, cylinders, shaft, guides, hoses.	SET	1.00
23	Repair & replacement of stack table : 4 no. rollers to be removed and shaft, bearings, rack, pinion to be replaced, rollers to be put back into position.	SET	1.00
24	Repair & replacement of stack table brake assembly:4 no. rollers to be removed, air distributor, hoses to be replaced, rollers & hoses to be fitted back after repair & replacement of brake assy	SET	5.00
25	Repair & replacement of roller assembly of stack conveyors- I & II: Roller assembly comprises of one roller, 2 no. bearings with housing, sprocket. For replacement bearing housing mounting bolts to be removed, roller assembly to be fixed with new bolts.	SET	1.00
26	Replacement of chain of stack conveyors- I & II (P= 19 mm): Idler rollers mounting tightness to be checked, existing chain to be dismantled by opening the chain, new chain to be put on sprocket, to be connected with link, tension to be adjusted.	MTR	1.00
27	Replacement of stack transfer fork: Existing fork assembly, cylinder, hydraulic motor, hoses to be removed, new fork assembly to be fitted, cylinder, motor to be fitted, hoses to be fitted.	SET	5.00
28	Fabrication & replacement of stack rest: Stack rest (wt.10 kg app.) to be fabricated by welding & fitted with 4 nos. mounting bolt in place of existing.	NO	1.00
29	Replacement of rail of stack conveyor- III: Existing rail (40 x 15 mm) to be removed, surface grinding to be done, new rail to be fitted.	MTR	1.00
30	Repair of stack conveyor- III (160 mm pitch): Replacement/ repair of links, rollers, split pins etc.	MTR	1.00
31	Replacement of stack conveyor- III (160 mm pitch): It involves removal of existing chain with spare one	MTR	1.00



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Item	Item Description	Unit	QTY
No.	nem bescription	Onne	Q I I
1	2	3	4
32	Stack rest fitting: stack rest (weight: 10 kg approx.) to be fitted with 4 no. M10 x 40 bolts.	NO	1,331.00
33	Mould bolt tightening (one mould): All 4 nos. of mounting bolts (size: M10 x 40) to be tightened.	NO	7,039.00
34	Casting wheel replacement: Casting wheel to be removed by removing mounting bolts, new wheel to be fixed with mounting bolts after proper alignment.	NO	3.00
35	Casting conveyor chain COVER OPENING/FITTING: Mounting bolts to be loosened, cover to be taken out from position and to be fitted back after metal cleaning (metal cleaning by operation).	NO	387.00
36	Maintenance of drop-out device: Drop-out device arm assly removal and re-fitting after replacement of bearings if any and alignment	NO	5.00
37	Stack conveyor-3 bearing replacement: The job includes disconnecting chains, removal of stack rest and re-assembly after replacement of bearings. It also includes replacement of tensioning stud if required.	NO	1.00
В	WIRE ROD MILL OF CH- A		
38	Dismantling of copper ring mould: Removal of ring mould assembly with frame from flange (hub), removal of top cover frame and then copper mould.	SET	5.00
39	Fitting of copper ring mould: Putting new copper mould on the lower frame, assembly with top cover and erection to flange (hub).	SET	5.00
40	Dismantling & replacement of casting wheel: Removal of flange (hub)of casting wheel (dia.: 2 m approx.) from the casting motor gear box shaft and putting back on the shaft.	SET	1.00
41	Maintenance of Plate Heat Exchanger (PHE) of casting water: After opening, all plates to be shifted to cleaning bay. The cleaned plates then to be collected and to be fitted in the PHE. It includes addition or removal of PHE plates if any as per requirement	NO	33.00
42	Replacement of gasket of casting water PHE plates: Removal, cleaning & fixing of the gaskets.	NO	5,682.00
43	Dismantling, erection & fixing of rotary launder: Rotary launder to be dismantled, erected & fixed after leveling.	NO	84.00
44	Dismantling, rectification and fixing of bypass launder: Dismantling, erection & fixing of bypass launder with leveling & alignment.	NO	87.00
45	Dismantling, rectification & fixing of large tundish: Dismantling, rectification & fixing of large tundish with leveling & alignment.	NO	98.00
46	Dismantling, rectification & fixing of tilting launder: Tilting launder to be dismantled, rectification to be done as required and thereafter to be fixed properly to its location.	NO	91.00
47	Fabrication of casting water header cover: Casting water header cover (size: 1.5 m x 1 m x 0.3 m approx.) to be fabricated from 6 mm MS plate.	NO	1.00
48	Dismantling & erection of casting water header cover: Header cover to be dismantled & fitted back after cleaning of water nozzles in the header. Handling to be done by EOT crane.	NO	117.00
49	Repair of cooling water header assembly with manifold and trolley: Correction of distortion if any in the frame/ manifold, alignment w.r.t. casting wheel and overhauling of trolley wheels and replacement of bearings if required.	NO	5.00
50	Replacement of header with manifold & trolley: Removal of old header with manifold & trolley and fitting new assembly and checking alignment w.r.t. casting wheel.	NO	1.00
51	Replacement of header cylinder: Removal & fitting of header cylinder.	NO	3.00
52	Replacement of manifold trolley wheel bearings/ wheel: Removal & fitting of manifold trolley wheel bearings/ wheel.	NO	10.00
53	Repair of single manifold in position: Alignment checking w.r.t. casting wheel,	NO	3.00



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Item No.	Item Description	Unit	QTY
1	2	3	4
	distortion correction and tapping of nozzle mounting threads.		
54	Replacement of single manifold: Removal & fitting of single manifold (internal, external, lateral).	NO	1.00
55	Casting water hose replacement: Removal & fitting of casting water hose.	NO	8.00
56	Replacement of tilting conveyor roller: Removal & fitting of tilting conveyor roller.	NO	61.00
57	Dismantling & fitting of casting water pump: The submersible pump to be removed from the casting pit with necessary arrangement. Spare pump assembly to be assembled with head shaft and then the pump to be fitted back.	NO	1.00
58	Replacement of bearing of casting water pump: Removal & fitting of bearing of casting water pump including removal & fitting of electric motor and repair of gland area/gland replacement.	SET	1.00
59	Strainer cleaning of casting water pump: Casting water pump suction strainer to be cleaned.	NO	173.00
60	Casting water delivery filter cleaning & replacement: Removal, cleaning & fixing back of the delivery filter.	NO	3.00
61	Repair/ replacement of roller of bar straightener (manual): Checking shaft straightness, checking bearings and fitting of roller.	NO	418.00
62	Repair & replacement of roller of sensor & bar quench: Removal & fitting of roller of sensor & bar quench. Repair includes bearing replacement if required.	NO	256.00
63	Maintenance of PHE of lub. oil of rolling mill: Opening, cleaning & setting of the PHE. It includes addition or removal of PHE plates if any as per requirement	NO	3.00
64	Gasket replacement of PHE plates: Removal, cleaning & fixing of the PHE plates.	NO	812.00
65	Repair & replacement of emulsion pump: Removal & fitting of emulsion pump. Repair of pump includes overhauling of bearing block if required and fitting of mechanical seals.	NO	8.00
66	Maintenance of PHE of emulsion: After opening, all plates to be shifted to cleaning bay. The cleaned plates then to be collected and to be fitted in the PHE. It includes addition or removal of PHE plates if any as per requirement	NO	20.00
67	Gasket replacement of plates: Removal, cleaning and fixing of the plates.	ОИ	1,375.00
68	Opening and fitting of transmission gear train cover including pipes: Pipes includes supply headers of stand oil, emulsion and gear oil to rolling mill.	NO	5.00
69	Opening and fitting of transmission gear cover guard: Opening and fitting of transmission gear cover guard.	NO	5.00
70	Replacement of damaged gear of transmission gear assembly: Removal of damaged gear and fitting back new/ repaired gear.	NO	1.00
71	Replacement of damaged bearings of transmission gear assembly: Removal of damaged bearings and fitting back new bearings.	NO	1.00
72	Replacement of stand oil/ gear oil pump: Removal of stand oil/ gear oil pump and associated pipes/valves and fitting a new/ repaired pump and associated pipes/valves.	NO	3.00
73	Replacement of shear pin of stand: Removal of transmission housing at the front, removal of broken shear pin and assembly with new shear pin.	NO	1.00
74	Replacement of spare stand: Removal of existing stand and replacing it with a spare OK stand.	NO	1.00
75	Replacement of wheel in emulsion paper conveyor disposal bucket: Removal of an existing wheel and replacing it with a new/ repaired wheel.	NO	1.00
76	Cutting of cobbling in stands: Cobbling in stand to be cut with a machine saw(saw to be supplied by NALCO), removal of cobbled stand and erection of repaired stand.	NO	1.00
77	Alignment of long tilting conveyor: Alignment with repair of stoppers to hold the long tilting conveyor in position.	NO	75.00



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Item	Item Description	Unit	QTY
No.	item bescription	Oilit	QII
1	2	3	4
78	Alignment of small tilting conveyor. Alignment with repair of stoppers to hold the small tilting conveyor in position.	NO	1.00
79	Replacement of long tilting conveyor: The long tilting conveyor to be removed and a new/ repaired conveyor to be fitted	NO	5.00
80	Replacement of small tilting conveyor: The small tilting conveyor to be removed and a new/ repaired conveyor to be fitted.	NO	5.00
81	Repair of emulsion paper conveyor. For description of conveyor please refer item 82	MTR	573.00
82	Replacement of emulsion paper conveyor. The emulsion conveyor consists of 3 parallel chains of 5/8 inch. pitch and having total conveyor width of 1070 mm. It is located below ground level.	MTR	115.00
83	Cleaning & guide replacement of rod quench with hose fitting.	SET	10.00
84	Replacement of barrel collapse / expansion shaft per reel. This includes replacement of bearings if any.	NO	3.00
85	Replacement of pin & bushes of segments per reel: Removal of the pins and bushes and replacing with new ones.	NO	3.00
86	Replacement of flap assembly: Removal of flap assembly and fitting of new/repaired flap assembly.	NO	3.00
87	Replacement of couplings of reel: Removal of the defective coupling and replacing with a new one.	NO	1.00
88	Replacement of coil lift table cylinder: Removal of the defective cylinder and replacing with a new/ repaired one. The job includes dismantling & erection of coil lift table.	NO	10.00
89	Replacement of coil carriage cylinder: Removal of the defective cylinder and replacing with a new/ repaired one.	NO	1.00
90	Replacement of main shear knife drum & shaft.	NO	1.00
91	Replacement of bearing of main shear: Removal of the defective bearing and replacing with a new one.	NO	1.00
92	Complete overhauling of main shear assembly: Dismantling of components, checking/ replacement of all wearing parts like bushes/ pins, checking/ replacement of bearings, replacement of seals and assembly.	NO	5.00
93	Complete overhauling of crop shear assembly: Dismantling of components, checking/ replacement of all wearing parts like bushes/ pins, checking/ replacement of bearings, replacement of seals and assembly.	NO	1.00
94	Replacement of plywood of unloading platform: Removal of damaged piece of plywood and replacement by a new one.	NO	13.00
95	Fabrication steel belt for Casting Wheel: Belt to be loaded in the real stand, sheared to required size (14.8m) ends to be joined by welding with ss welding rods (rod will be provided by Nalco free of cost). Total length of welding is 200mm per belt. Thickness of belt is 1mm. Weld surface to be finished by grinding to remove extra weld.	NO	1.00
96	Replacement of water spraying nozzles of casting zone -removal of water spraying nozzle from manifold, cleaning, fitting & adjustment for flow	NO	5.00
97	Replacement of coiler output shaft: Removal of all strap guides, all segments, barrel, slider, end piece, flap assy, brake assy, overhead cover, fixed flange, bearing housing of collapse-expand shaft, top cover of gear box, output shaft of reel. After fitting of pre-assembled shaft in gear box all the items earlier removed to be fitted back. The job also includes assembly of shaft with reel- gear, bearings, keys, oil seals ,seal housings and end covers etc. Gears /bearings are to be fitted to the shaft after heating in oil or as suggested by EIC or his representative, key and oil seal with oil seal housing also to be fitted to output shaft	NO	5.00



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Item	Item Description	Unit	QTY
No.	·		
1	2	3	4
98	Replacement of strap guides -Damaged strap guides to be removed, New/repaired strap guide fitting to be done with M12 bolts, alignment to be checked with straps.1 No consists of 1 guide each of movable, fix flange side & barrel side	NO	10.00
С	ECL CRANES OF CH- A & CH- B		
99	Replacement of LT wheel: Raising the wheel end with 50 T Hyd jack, giving supports, removal of damaged wheel assembly and fitting of the new/ repaired wheel assembly, Damaged assembly to be shifted to mechanical maintenance bay.	SET	1.00
100	Replacement of LT guide wheel (2 nos. per set): Removal of existing LT guide wheel and fitting of new/ overhauled wheels.	SET	1.00
101	Replacement of CT wheel: Raising the wheel end with 20 T hyd jack, giving supports, removal of damaged wheel assembly and fitting of the new/ repaired wheel assembly, Damaged assembly to be shifted to mechanical maintenance bay.	SET	5.00
102	Replacement of CT guide wheels (2 nos. per set): Holding the cross travel structure suitably to release the load on guide wheels using 02 Nos 50 T hyd jacks, removal of set of guide wheels and replacement with new / repaired set ( after maintenance by NALCO)	SET	5.00
103	Replacement of LT/CT gear box: Removal of defective / old gearbox (Approx. Wt.= 200 Kgs)and fitting of new / repaired gear box in position, oil filling & testing for correct functioning.	SET	13.00
104	Replacement of Hoist Gear Box Removal of defective / old gearbox (Approx. Wt.= 2T) and fitting back new repaired gearbox, oil filling & testing for correct functioning.	SET	1.00
105	Replacement of cabin trolley gear box: Replacement of old cabin trolley gear box and fitting of new/ overhauled gearbox.	NO	1.00
106	Replacement of brake assembly of LT/ CT/ MH/ AH/ Cabin Trolley: Removal of old gearbox and fitting of new/ overhauled gear box.	NO	25.00
107	Replacement of brake disc of LT/ CT/ MH/ AH/ Cabin Trolley: Removal of old brake disc and fitting of new/ overhauled brake disc.	NO	5.00
108	Replacement of wire rope of main hoist: Removal of old rope and winding of new rope(L= 115- 130 m, dia= 18- 20 mm) lubrication of rope, testing for correct functioning, disposal of old rope at designated place.	NO.	1.00
109	Replacement of main hoist hook per crane (2 nos. per set): Removal of old main hoist hook and fitting of new hook.	SET	3.00
110	Replacement of hoist drum of MH/ AH: Removal of old hoist drum and fitting of new/ overhauled hoist drum.	NO	1.00
111	Replacement of AH assembly carrying pulleys for wire rope: Removal of old assembly and fitting of new/ overhauled assembly including removal and refitting of wire rope.	NO	3.00
112	Replacement of MH assembly consisting of hydraulic motor unit for hook rotation: Removal of old assembly and fitting of new/ overhauled assembly.	NO	1.00
113	Replacement of wire rope of Auxiliary hoist: Removal of old rope and winding of new rope(L= 80 m, dia=12 mm) lubrication of rope, testing for correct functioning, disposal of old rope at designated place.	NO.	3.00
114	Replacement of guide rollers of main hoist (per roller): Removal of old roller and fitting of new/ overhauled roller.	NO	5.00
115	Replacement of cabin trolley wheel: Removal of old wheel and fitting of new/overhauled wheel.	NO	1.00
116	Replacement of Cabin glass with cutting into shape (Approx. 1.5 m x 1.0 m) and fixing with rubber beading, checking for looseness / gap and correction of the	NO.	1.00



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Item	Item Description	Unit	QTY
No.	·	•	
1	same.	3	4
	Same.		
117	Replacement of rail with alignment, levelling & bolt tightening.	MTR	1.00
118	Alignment/levelling of rail with mounting tightening.	MTR	566.00
119	Repair & replacement of operator seat: Dismantling of seat from cabin, foam & rexin fixing & erection of complete seat, testing for correct function.	NO.	1.00
120	Replacement of operator cabin Removal of old cabin and fitting the new / repaired cabin (Approx Wt=1T) with the help of suitable lifting tools. Testing for correct function.	NO.	1.00
121	All mounting bolts tightening: All mounting bolts of the crane (Complete set of bolts) to be tightened.	SET	15.00
122	Greasing of all grase points of one ECL Crane (LT, CT, Cabin Trolley, MH, AH).1NO=1 ECL CRANE	NO	3.00
123	Replacement of pulley block of main hoist: The job involves ,dismantling of hook, hook rotation aasly, wire ropes and removal of the pulley block. All associated jobs like cutting, welding etc. are included in it	NO	1.00
D	EOT CRANES OF CH- A & CH- B (MAKE- SIKA (2T/ 3 T), MUKAND (5 T/ 8 T / 15 T), ARMSELL (6 T), MEEKA(10T & 5T) and Hoists		
124	Replacement of LT/CT wheel or LT/CT gear box:1)For wheels - Raising the damaged wheel end with 50T Hyd jack, giving supports, removal of damaged wheel assembly and fitting of the new/ repaired wheel assembly(Approx. Wt= 250 Kg), Damaged assembly to be shifted to mechanical maintenance .For gear boxes-:Removal of defective / old gearbox and fitting of new / repaired gear box (Approx. Wt= 250 Kg)in position. Levelling & alignment. Oil filling	SET	1.00
125	EOT crane wheel bearing and mounting bolt checking: The job includes lifting of wheel assly by hyd jack and checking of bearings and mounting bolts.	SET	1.00
126	Replacement of Hoist Gear Box: Removal of defective / old gearbox and fitting of new / repaired gear box (Approx. Wt. = 500 Kg) in position. Levelling & alignment. Oil filling & testing for proper functioning.	SET	1.00
127	Replacement of wire rope: Removal of old rope and winding of new rope (dia=upto 20 mm, L= 100 m)and clamping the rope ends properly, lubrication of rope, testing for correct functioning, disposal of old rope at designated place.	NO.	1.00
128	Replacement of rail with alignment(per Meter):levelling & bolt tightening, disposal of old rail at designated location	MTR	36.00
129	Alignment/levelling of rail with mounting tightening.	MTR	478.00
E	DROSS RECOVERY PLANT OF CH- A		
130	Repair & replacement of hydraulic cylinder of charging assembly: Cylinder to be removed after removing mounting pins, cylinder seals to be replaced, cylinder to be fitted back to position.	NO	1.00
131	Overhauling of charging assembly: Repair of rail, rollers, changing structural as required.	SET	1.00
132	Leveling & alignment of cooling drum: Leveling & alignment to be done with the help of water level and packing to be provided or removed below rollers as per requirement.	NO	1.00
133	Repair/ replacement of discharge vane of coolers: Discharge vane to be removed from flange joint, to be repaired or new vane to be fitted after proper alignment.	SET	1.00
134	Replacement of gearbox of drum cooler: Motor & fluid coupling to be removed, gear box to be removed, pinion to be reclaimed from gearbox shaft, pinion to be fitted to new gear box, gear box to be fixed at its position, fluid coupling & motor to be fitted with alignment.	NO	10.00
135	Cleaning of water tank of drum cooler: Level float to be removed, tank to be	NO	1.00



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Item No.	Item Description	Unit	QTY
1	2	3	4
	cleaned, float to be fitted back.		
136	Overhauling of blower of rotary furnace: Impeller to be removed from motor after opening the casing/ cover, cleaning, impeller fitting to motor, casing fitted back.	SET	1.00
137	Replacement of blower of rotary furnace: Removal of complete blower assembly from foundation and fitting back the assembly after repair/ overhauling with vibration pads.	SET	1.00
138	Leveling & alignment of rotary furnace: Leveling & alignment to be done with the help of water level, proper packing either to be given or to be removed as per requirement.	NO	1.00
139	Replacement & repair of burner of rotary furnace: Burner to be removed, tubes & nozzles to be dismantled, cleaned, assembled & fitted back.	NO	1.00
140	Replacement/ repair of radial/ axial roller of rotary furnace / drum cooler: Rotary furnace/ drum cooler height to be raised by jacking, rollers to be removed, bearings to be checked/ replaced, rollers to be fitted, furnace/ drum cooler to be brought to original position.	NO	39.00
141	Replacement of bag filter with cage (set of 64 nos.): Removal of cover/ cage with filter cloth, cleaning, fitting the same, checking for trial.	SET	1.00
142	Replacement of impeller of blower of bag house filter system: Removal of impeller after removal of casing/ cover, cleaning, new impeller fitting, casing/ cover fitting.	NO	1.00
143	Lubrication of open gear /girth gear of dross cooler: Deposited grease and dust to be cleaned using diesel/solvent & cotton waste (Provided by NALCO), cleaned gear teeth to be lubricated using grease (Provided by NALCO)	NO	10.00
144	Replacement of gearbox of of rotary furnace: Brake assembly to be disengaged, after removal of motor by electrical deptt. Gearbox to be removed using hydra crane, new/repaired gearbox to be fitted at its position by Hydra crane (Hydra crane shall be provided by NALCO)	NO	1.00
F	LADDLE SKIMMING STATION OF CH- A		
145	Replacement/ repair of skimming tool hoist: Skimming tool hoist removal, rope positioning on drum, fitting back of tool.	NO	3.00
146	Replacement of skimming tool: Old skimming tool to be removed from rope, new skimming tool to be fitted.	SET	3.00
147	Replacement / repair of radial/ axial roller of drum cooler: Drum cooler to be raised by giving packing below it. Radial/ axial rollers to be removed, bearings to be checked & replaced if necessary, rollers to be fitted back. Drum cooler to be brought back to original position.	NO	1.00
148	Cleaning of water tank: Level floats to be removed, tank to be cleaned, float to be fitted back.	NO	1.00
149	Leveling & alignment of cooling drum: Leveling & alignment to be done by water level, packing to be either provided or removed as per requirement.	NO	1.00
150	Repair/ replacement of discharge vane of cooler: Discharge vane to be removed from flange, replace with new, fix with bolts, check for alignment.	SET	1.00
151	Replacement of bag filter with cage: Removal of cone/ cage with filter cloth, cleaning, fitting the same, checking for trial.	SET	1.00
152	Replacement/ repair of blower of bag house filter: Removal of blower, removal of impeller after removing casing/ cover, cleaning, fitting of new/ same impeller, cover/ casing.	SET	1.00
153	Replacement of impeller of blower of bag house filter system: Removal of impeller after removal of casing/ cover, cleaning, new impeller fitting, casing/ cover fitting.	NO	1.00
154	Repair of screw conveyor: Dismantling, cleaning, overhauling & erection.	SET	1.00
155	Lubrication of open gear/girth gear: Deposited grease and dust to be cleaned using diesel /solvent & cotton waste (Provided by NALCO) cleaned gear teeth to be lubricated using grease (Provided by NALCO)	NO	1.00



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Item No.	Item Description	Unit	QTY
1	2	3	4
G	BILLET CASTING AND BILLET CUTTING MACHINE OF CH- A		
156	Backwash filter (ADAM make) cleaning of BCF: Dismantling of gear box assembly, removal of gland assembly, removal of cover plate, dismantling locking links, removal of filter cartridges.	NO	32.00
157	Duplex water filter cartridge cleaning & replacement: Removal of cover plate, removal of filter cartridge, cleaning & assembly back.	NO	1.00
158	Chip evacuator chips cleaning: Chip evacuator cover removal, cleaning of chips, suction pipe removal, site chute removal & cleaning of chips.	NO	25.00
159	Chip evacuator blower dismantling & erection: Chip evacuator suction pipe removal, cover plate removal & impeller to be pulled out by puller.	NO	1.00
160	Chip evacuator impeller cleaning:: Pipe removal, cover removal & impeller cleaning.	NO	1.00
161	Mould table replacement: Mould table both end launder to be removed, injector pipe to be removed, platen table fixing bolts to be removed and socket to be fitted and bolts to be tightened with the mould table and platen table and mounting bolts of mould table to be removed and to be taken out by crane. Same procedure for fitting back. The jobs also includes alignment of the table.	NO	48.00
162	Alignment of billet mould table: Mould table alignment, remove the platen table mounting bolts, fix the sockets and fixing bolts, lift the assy and fix back.	NO	17.00
163	Replacement of anode stem/ busbar mould table: Replacement of Anode stem / Bus bar table moulds fitting, static shoe box fitting, drain pipe removal and refitting, launder end pieces removal and refitting (inclusive of mould base plate).	NO	8.00
164	Replacement of keystone pne. actuator: Replacement of keystone actuator, removal of pneumatic pipes and mounting bolts.	NO	1.00
165	Replacement of butterfly valve of size: 8", 10" and 12": Removal of key-stone actuator, removal of flange joints bolt and replacing valve & flange gaskets.	NO	1.00
166	Replacement of butterfly valves of size 4" & 6": Replacement of key-stone actuator & removal of bolts and replacement of valve with flange gasket.	NO	5.00
167	Return turbine pump replacement: Removal of mounting bolts and lifting of pumps from wet pit.	NO	10.00
168	Return Turbine Pump suction strainer cleaning.	NO	70.00
169	Submersible pump dismantling & erection: Removal / refitting of pipe flanges with gaskets and pulling out the pump assembly from wet pit.	NO	1.00
170	Replacement of mould of anode stem & bus bar with alignment: Removal / fitting of mounting bolts with alignment and fittings of hoses.	NO	22.00
171	Replacement of starting shoe of Anode stem & Bus bar with alignment of starting shoe with mould.	NO	19.00
172	Replacement of starting shoe base plate of anode stem, bus bar & billet: Removal of starting shoe base plate of anode stem, bus bar and billet, mounting bolts removal & refitting.	NO	13.00
173	Alignment of mould table of bus bar & anode stem: Alignment of mould table of bus bar & anode stem, mould and starting shoe mounting bolts loosening & adjusting back, alignment and bolts tightening.	NO	3.00
174	Shear pin replacement and table alignment: Jacking and positioning of platen table, removal of broken pin, and refitting of shear pin and locking, table top alignment with the moulds.	NO	22.00
175	Replacement of filter board: Removal of filter board: Removal of filter board, repositioning and alignment of the same	NO	3.00
176	Replacement of Backwashing pump with alignment: Dismantling the suction, discharge flange, Removal of pump, replacing the same with new or repaired pump and alignment	NO	3.00



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Item	Item Description	Unit	QTY
No.			
1	2	3	4
177	Return Turbine pump overhauling: Dismantling of shafts, Impeller, replacement of Bushes and reassembly	NO	8.00
178	Exit conveyor roller replacement with chain: Exit conveyor chain cover removal, mounting bolts removal and roller removal & replacement with bearing removal & fitting.	NO	46.00
179	Infeed conveyor roller replacement (vertical/ horizontal): Infeed conveyor chain shifting / roller mountings removal with bearing assembly & refitting the roller after bearing fitting.	NO	75.00
180	Infeed conveyor chain pad replacement: Removal of chain & mating screws of pad.	NO	1.00
181	Infeed conveyor guide pad replacement.	NO	17.00
182	Infeed conveyor chain replacement (per side of chain): Infeed conveyor chain link removal & chain removal and fitting.	NO	19.00
183	Billet pusher cylinder replacement: Removal of hose connection, mounting bolts & removal & refitting of pusher head.	NO	1.00
184	Saw feed cylinder dismantling & erection: Saw feed cylinder dismantling & erection, saw frame positioning & removal of clevis pins.	NO	1.00
185	Clamping cylinder dismantling & erection: Dismantling of mounting screws, piston rod & hose connection.	NO	1.00
186	Measuring head gear box dismantling & erection: Measuring head gear box dismantling & erection, measuring head positioning and removing mounting bolts.	NO	1.00
187	Measuring head gearbox replacement: Removal of gearbox with the bracket and reflecting of gearbox with proper locking arrangement.	NO	1.00
188	Removal and refitting of measuring head assembly: Removal of gearbox, lifting cylinder, cable tray and brackets Replacement of brass pads, polishing and assembling back.	NO	1.00
189	Replacement of saw blade: Cover to be opened, stopper to be given for saw bolt removal & dismantling of saw blade & refitting.	NO	1.00
190	Cutting Machine clamping fixture bush replacement: Removal of clamping fixture pin, brackets, cylinder clevis pin, replacing the bush and assembly of charging fixture.	NO	1.00
191	Removal & positioning of Scrap conveyor: Removal of scrap conveyor and refixing of same in position	NO	96.00
192	Removal of saw blade, saw guard, frame, lifting cyl. Clips brackets. Replacement of bearings and locks and assemblling back	NO	1.00
193	Tubular Heat Exchanger cleaning: Plates to be removed & cleaned.	NO	8.00
194	Tubular heat exchanger replacement.	NO	1.00
<b>H</b> 195	HOMOGENISING FURNACE OF CH- A  Homo FCE bogie platform repair ,straightening & leveling: Homo FCE bogie platform repair / straightening & leveling including spacer stand positioning.	NO	81.00
196	Homo FCE buffle plate (SS) straightening: Homo FCE buffle plate (SS) straightening & leveling (including removal & refitting).	NO	5.00
197	Homo furnace roof plate (SS) straightening: Roof plate straightening (removal & straightening after heater coil removal).	NO	1.00
198	Bogie side wall plate positioning & straightening: Bogie side wall plate positioning & straightening & fixing with nuts bolts & welding.	NO	13.00
199	Forced cooling fan silencer dismantling & erection.	NO	1.00
200	Dismantling & erection of re-circulation fan: Cover removal, pulley belts removal & refitting, water pipe line removal & refitting.	NO	23.00
201	Repair of re-circulation fan: Removal of impeller, bearing, blades and shaft removal and assembly back with greasing.	NO	23.00
202	Dismantling & erection of forced cooling fan impeller.	NO	1.00



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Item No.	Item Description	Unit	QTY
1 1	2	3	4
203	Dismantling & erection of forced cooling fan: Cover plate removal and removal of fan assembly with motor & fitting back the fan assembly with cover plates.	NO	3.00
204	Door rope replacement with door alignment.	NO	15.00
205	Door chain replacement with door alignment.	NO	1.00
206	Bogie drive unit dismantling & replacement: Plummer block mounting removal & lifting out the unit & re-erection.	NO	15.00
207	Bogie drive assembly overhauling: Gear box, pinion, shaft & plummer block removal & overhauling and erection at position.	NO	8.00
208	Cross travel / Long travel chain repair	NO	58.00
209	Mobile cooler / Bogie wheel bearing replacement without load on bogie.	NO	175.00
210	Mobile cooler / Bogie wheel bearing checking without load on bogie.	NO	1,505.00
	INDUCTION FURNACE OF CH- A		
211	Dismantling & erection of cooling tower fan: Dismantling & erection of cooling tower fan including cover plate removal, fan belt fitting, overhauling of fan drive shaft, replacement of fan.	NO	1.00
212	Dismantling & erection of hyd. cylinder: Dismantling & erection of hyd. cylinder inclusive of positioning of furnace, removal of mounting pins & refitting.	NO	1.00
213	Repair of hyd. cylinder: Dismantling & overhauling, changing of piston rod, seals etc.	NO	1.00
214	Dismantling & erection of fume exhaust blower.	NO	1.00
215	Induction furnace removal and refitting: Inclusive of removal of hoses & fitting back, spout fitting, cover plates and ring plate removal & refitting.	NO	1.00
216	Dismantling & erection of spout.	NO	1.00
217	Replacement of Casting Water Pump.	NO	18.00
218	Ind. F'ce former setting & removal.	NO	1.00
219	Ind. F'ce heat exchanger cleaning: Opening of plates, cleaning & assembly of the PHE.	NO	1.00
J	SNIF DEGASSING UNIT AND NITROGEN PLANT OF CAST HOUSE A&B		
220	Snif Degasser rotor replacement: Removal of Gearbox assembly, removal of unit gas containers and re-assembling with proper packing.	NO	3.00
221	Snif degasser rotor assembly: Removal of stator, rotor, shaft coupling, bearing housing of rotor, shaft checking, 'O' ring replacing & reassembling.	NO	1.00
222	Snif degasser cover lift cylinder replacement: Removal of hydraulic pipe, mounting fens, covers and assembling back and proper tightening of mountings of cylinder.	NO	1.00
223	Snif degasser tilting cylinder replacement: Jacking up of furnace, removal of pipe fittings & cylinder mounting and assembling back.	NO	1.00
224	Snif Degasser spout replacement.	NO	10.00
225	Snif degasser top cover replacement / erection: Includes dismantling of rotor assembly cylinder mountings and proper assembling.	NO	1.00
226	Nitrogen plant compressor Heat Exchanger cleaning: Removal of pipe lines, lifting out the heat exchanger assembly, removal of tube bundle & proper cleaning by water and assembling back with proper packing.	NO	8.00
227	Nitrogen plant compressor Heat Exchanger replacement: Removal of pipelines and mounting bolts and reassembling with proper packing.	NO	3.00
228	Nitrogen plant compressor water jacket cleaning: Removal of jacket covers, proper cleaning of sealing and assembly with proper packing.	NO	3.00
229	Nitrogen plant PSA tower CMS, Dehydrated alumina & coconut fiber removal, cleaning & refitting: Removal of cover, drain cover removal, cleaning of CMS & Dehydrated alumina and cleaning dust and sieving of CMS and refilling of the CMS & dehydrated alumina & proper fitting of coconut fiber.	NO	1.00



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3WE17 1007 3027 0W0-37377 W117 3234

Item No.	Item Description	Unit	QTY
1	2	3	4
230	Nitrogen plant Copper De-oxidation Unit cleaning: Removal and fitting of cover includes sieving of Copper Catalyst, dehydrated alumina and refilling & proper packing.	NO	1.00
231	PSA and Cu De oxo heat exchanger cleaning: Removal of the cover, cleaning of the tubes and reassembly.	NO	1.00
K	MELTING -CUM- HOLDING FURNACES:		
232	Replacement of complete blower (per blower) of 35 T furnace of CH- A: Removal of entire blower assembly from foundation and fitting back the assembly after repair/ overhauling or with new assembly along with replacement of vibration pads.	SET	3.00
233	Replacement of Impeller (1 no.) for 35 T furnace removal of blower filter, blower impeller cover, removal of impeller (App dia=1 m) using puller etc. and fitting back new impeller, cover and filter.	NO	1.00
234	Replacement of tilting cylinder (1 no.) of any furnace(35 MT/45 MT capacity) of CH-A and CH-B: Providing supports under the furnace, removal of hoses, removal of cylinder from furnace bracket, removal of clevis pin & valve block. Replacing with new cylinder, fitting of clevis pin & valve block, hose and removal of supports provided under the furnace.	NO	3.00
235	Dismantling & erection of tilting pedestal & repair of foundation bolts of 35 T furnace of CH-A: Pedestal to be removed after providing packing below furnace, pedestal to be fitted back, leveling & alignment to be done.	NO	3.00
236	Positioning of twisted 35 T fce of CH- A in pit with alignment & levelling: Furnace to be repositioned by pulling with 10 T chain pulley by tying sling to it.	NO	10.00
237	Dismantling & fitting of burner housing & burner block of 35 T furnace of CH-A: Combustion & atomizing line flange bolts to be removed, burner tube & nozzle to be removed. Removal of burner housing & block by removing fixing bolts. Burner housing & block to be fitted back with proper positioning & dismounted items to be fitted back.	NO	1.00
238	Tilting cylinder head repair of 35 T furnace of CH-A: Dismantling of cylinder/ head in position, replace oil seals & fitting back of head.	NO	1.00
239	Fixing shaped brick brackets of 35 T furnace of CH-A: Brackets to be fixed in position.	NO	1.00
240	Impeller cleaning and casing fitting of 45 T WRM furnace of CH-A	NO	25.00
241	Cleaning of impeller of 45 T furnace of BCF in position: Removal of covers & cleaning all the dust from vane and casing of impeller.	NO	1.00
242	Positioning of twisted 45 T furnace of BCF/CH-B in pit with alignment & leveling: Jacking up of furnace, positioning of cylinder and trunion pedestal of furnace & all mounting bolts tightening, leveling & alignment checking & corrections.	ОИ	1.00
243	Dismantling & erection of twisted pedestal of 45 T furnace of BCF/ CH-B & repair of foundation bolt with levelling & alignment: Removal of foundation bolts, removal of pedestal trunion & re-assembling with proper lubrication.	ОИ	1.00
244	Replacement of complete Blower (for CH-B furnace)Removal of entire blower assembly from foundation, and fitting back the assembly after repair/ overhauling along with replacement of vibration pads.(Approx. Wt.= 1 Ton)	SET	3.00
245	Cleaning / replacement of filter (for CH-B furnace) removal of mounting bolts, cleaning of filter and refitting.(Approx. Wt.= 20 Kg)	NO.	144.00
246	Replacement of Impeller for CH-B furnace) removal of blower filter, blower impeller cover, removal of impeller (App dia=1 m) using puller etc. and fitting back new impeller, cover and filter.	NO.	1.00
247	Replacement of SMCD drive shaft plummer block and bearing of tilting furnaces of CH-B: The job involves de-coupling at both ends and replacement of one or both plummer block and / or bearings.	NO.	1.00



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Item	Item Description	Unit	QTY
No. 1	2	3	4
248	Repair of Liquid Metal Charging Door (LMCD) cylinders (for CH-B furnaces Disassembling the cylinder, replacement of seals, assembling back and testing for proper functioning. Fitting of spare sprocket to the piston rod and proper storage at designated location.	NO.	1.00
249	Replacement / repair of plummer block of Liquid Metal Charging Door (LMCD) (one number) for CH-B furnacesRemoval of chains of LMCD, removal of required shaft-sprocket assembly, replacement of plummer block, refitting shaft assembly and chains.	NO.	1.00
250	Replacement / fitting of sprocket of Liquid Metal Charging Door (LMCD) (One number) for CH-B furnaces removal of damaged sprocket and fitting the new one after removal of relevant chain(Approx. sprocket dia= 200 mm)	NO.	1.00
251	Replacement of Solid Metal Charging Door (SMCD) sealing rope(Per door of CHB furnaces) Removal of damaged rope from the rope slot and replacing a new rope(Length=23 m. width= 75 mm Thk= 50 mm)	NO	1.00
252	Blower impeller cleaning (for CH-B furnaces) Removal of blower filter & impeller cover, removal of impeller using puller, cleaning of impeller and fitting back the dismantled items.	NO.	1.00
253	Replacement of submersible pump under the furnace: mounting bolts to be removed, pump assembly to be taken out of pit, new/repaired pump to be fitted back and testing for proper functioning to be done.(Approx. Wt.=500 Kg)	NO	1.00
254	Repair of submersible pump under the furnace: Pump casing/ cover to be opened, defective parts to be replaced. casing/ cover to be fitted back.	NO	1.00
255	Replacement of complete blower of WRM/ BCF furnace of CH- A: Dismantling, overhauling & erection including filter assembly removal, bellow fitting etc.	SET	5.00
256	Cleaning/ replacement of combustion/atomisation air filter of WRM/ BCF furnace of CH- A.	NO	10.00
257	Replacement of impeller of blower (per blower) of WRM/ BCF furnace of CH- A.	NO	19.00
258	Replacement of SMCD gear boxes of tilting furnaces of CH-B -The job includes replacement of 1st reduction and /or 2nd reduction gear boxes. The job includes necessary alignment also.	NO	1.00
259	Repair of tilting cylinder (for any furnace of Cast House-A & B of capacity 35/45 MT)- Removal of cylinder cap, piston rod, cleaning of cylinder, replacement of all the seals, assembling back and testing at Central Repair shop.	NO	1.00
260	Replacement of Liquid Metal Charging Door (LMCD)with transportation (for any furnace) Disconnection of chain from LMCD, removal of LMCD with hydra crane and refitting spare LMCD in position and connecting the chains to LMCD, testing for proper functioning, shifting of damaged door.	NO	39.00
261	Replacement of SMCD (per furnace) of any furnace of CH- A /MF or HF of SCP with transportation: Removal of existing SMCD (solid metal charging door) with the help of 25 T crane, fitting of new SMCD taking from designated area with the chain, taking old SMCD to designated repair area. The job also includes alignment of the door.	NO	17.00
262	Replacement of door cylinder (one no.) of CH- A furnace: Removal of cylinder after disconnecting the chain, cylinder to be replaced with new/ repaired OK one, chain to be fitted back.	NO	3.00
263	Repair of door cylinder (one no.) of CH- A furnace: Disassembling the cylinder after disconnecting chain, replacement of seals, assembling back and testing for proper functioning.	NO	10.00
264	Repair & Replacement of chain, shaft, sprocket, bearing & gearbox for Solid Metal Charging Door (SMCD) (for any furnace)Supporting of door, de-coupling of gear box from shaft assembly, replacement of gear box with proper shaft-GB alignment, fitting back the couplings	SET	39.00
265	Replacement of chain of door (for any furnace) removal of link connecting the	NO	489.00



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Item No.	Item Description	Unit	QTY
1	2	3	4
	chain to door sprocket, removal of chain and fitting the new chain to door and sprocket.( Length= 2.5 m approx)		
266	Replacement of pouring trough stand top (per no.) of ICM & WRM fce of CH- A from flange.	NO	39.00
267	Replacement of flow control valve (per no.) of any furnace.	NO	1.00
268	Replacement of manifold block (per no.) of any furnaces.	NO	1.00
269	Alignment & setting of Door (for any furnace) Supproting SMCD with suitable means and shifting chain position as per requirement, alignment of doors and removing the support.	NO	241.00
270	Replacement &fixing of pit skirt plates running meter Removal of damaged portion, cutting of required size of plate(Approx size: 1300 x 600 mm) & welding.	NO	120.00
271	Replacement of Heat Resistant Cast Steel (HRCS) Seal plates of Solid Metal Charging Door (SMCD) & Liquid Metal Charging Door (LMCD)(one number) removal of sill plates by opening mounting bolts, fitting new sill plate and disposal of damaged sill plates	MT	7.00
272	Replacement of Heat Resistant Cast Steel (HRCS) Liner of doors of Solid Metal Charging Door (SMCD) & Liquid Metal Charging Door (LMCD) (One number) (for any furnace) removal of liner by opening mounting bolts, fitting new liner and disposal of damaged liner to designated	NO	487.00
273	Replacement of spout jack (for any furnace) Dismantling of spout jack and erection after grouting of foundation bolt, leveling &alignment.(Approx Wt= 100 Kg)	NO	5.00
274	Replacement of pouring spout (for any furnace) Removal of spout gate, spout lock, removal of spout by loosening the mounting bolts, replacing new spout and assembling back the dismantled items(Approx Wt= 50 Kg)	NO	25.00
275	Repair of spout jack Replacement/straightening of damaged studs and repair structure for perfect alignment and levelling.	NO	25.00
276	Replacement of pouring trough (for any furnace of Cast House- A & B):- Removal of pouring trough after opening of mountings & placement/of new/ repaired trough, fixing of mountings and checking for its correctness.	NO	134.00
277	Replacement of pouring trough stand (positioning & levelling) (for any furnace of Cast House- A & B) Removal of old stand and erection of new / same stand after foundation bolts grouting, levelling and alignment.(Approx Wt= 0.5 T)	NO	13.00
278	Tightening of Blower mounting bolts (One Blower) (for any furnace of Cast House- A & B) - All mounting bolts 12 Nos. (dia=20mm) to be checked for tightness. Loose bolts to be tightened.	NO	265.00
279	Pedestal mounting bolt tightening (One Pedestal) (for any furnace of Cast House- A & B) Tightening of 52 nos.(dia=30 mm) of mounting bolts	NO	442.00
280	Tilting Cylinder mounting bolt tightening (One Cylinder & frame) (for any furnace of Cast House- A & B) Tightening of 36 nos.(dia 36 mm) of mounting bolts	NO	370.00
281	Overhauling of blower (for any furnace) Removal of filter, impeller & cleaning and refitting of impeller, filter & impeller cover/ casing).	NO	3.00
282	Blower (per no.) top casing removal (for furnaces for WRM & BCF).	NO	15.00
283	Pouring trough bearing checking and lubrication (for any furnace of CH- A).	NO	51.00
284	HFO (Heavy Furnace/Fuel Oil) pressure regulator replacement (for any furnace) Dismantling of defective regulators, fitting of new/repaired regulator & testing for correct functioning.	NO	1.00
285	HFO (Heavy Furnace/Fuel Oil) filters cleaning (for any furnace) opening of filter cover and filter element, cleaning of filter and fitting back the filter.(one filter)	LOT	1.00
286	Combustion/ atomisation pipe cleaning (for any furnace) Opening the pipe, cleaning the dirt, foreign materials, air blowing and fitting back.	LOT	1.00
287	Combustion/atomisation, butterfly valves checking/replacement (for any furnace)	SET	17.00



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Item No.	Item Description	Unit	QTY
1	2	3	4
	- Removal of defective valve, fitting of new/repaired valves & testing.(Dia =200 mm)		
288	Replacement of Solid Metal Charging Door (SMCD) with transportation (for CH-B furnace) removal of guide roller assemblies ( 02 sets), holding SMCD with suitable sling, disconnecting chain from SMCD, removal of SMCD, replacement of SMCD, fitting back the chains and guide	NO.	1.00
289	Replacement of lock cylinder of Solid Metal Charging Door (SMCD) for CH-B furnace Disconnecting hoses from the cylinder and SMCD guide from piston rod, removal of cylinder mounting bolts, removal & shifting the cylinder to maintenance bay and fitting back spare cylinde	NO.	10.00
290	Repair of lock cylinder of Solid Metal Charging Door (SMCD) for CH-B furnace Disassembling the cylinder, replacement of seals, assembling back and testing for proper functioning.	NO.	5.00
291	Replacement of Liquid Metal Charging Door (LMCD) cylinder (for CH-B furnace) Disconnecting chain from sprocket on piston, opening the mounting bolts, removal of hoses of cylinder, fitting of spare cylinder assembly and fitting of chains with proper tension and hoses to be connected.	NO.	5.00
292	Greasing of Furnaces of Cast House-A &B: Greasing of Tilt cylinder trunions, pedestal trunion, door (LMCD & SMCD), sprockets, chains, bushes and bearings to be greased (grease and grease gun shall be provided by NALCO)	NO	366.00
293	BCF Furnace Tilting cylinder. Clevis pin fixing: Repositioning and fixing of clevis pin.	NO	8.00
294	Replacement of LMCD guides of 35/45 MT furnaces: The job involves replacement of guides with pre-fabricated guides	NO	39.00
L	GENERAL ERECTION AND FABRICATION AND MISCLLENEOUS JOBS CAST HOUSE A & B		
295	Dismantling or erection of eqpts/structures. with alignment & levelling. Debris to be disposed at designated place.	MT	62.00
296	Fabrication and erection of structures/platform / staircase. Structure to be fabricated as per drawing dimensions / samples. Debris to be disposed at designated locations.	MT	14.00
297	Fab. of pouring trough . Structure to be fabricated as per drawing dimensions / samples. Debris to be disposed at designated locations.	MT	1.00
298	Fab. of launder . Structure to be fabricated as per drawing dimensions / samples. Debris to be disposed at designated locations.	MT	1.00
299	Linear welding Thick - upto 8 mm with ordinary MS electrode after cleaning & preparation	MTR	1,098.00
300	Linear welding upto 16 mm thk (with LH electrode after cleaning & edge preparation)	MTR	817.00
301	Linear welding Thick - 10 to 16 mm (with ordinary M.S. electrode after cleaning & edge preparation)	MTR	3,646.00
302	Linear welding Thick - 17 to 32 mm with low-hydrogen electrode after cleaning & edge preparation.	MTR	71.00
303	Linear welding Thick - 17 to 32 mm with ordinary M.S. electrode after cleaning & edge preparation	MTR	170.00
304	Linear cutting Thickness upto 8 mm.	MTR	1,605.00
305	Linear cutting Thickness 10 to 16 mm.	MTR	4,646.00
306	Linear cutting Thickness above 17 to 32 mm.	MTR	287.00
307	Linear gouging of steel & cast iron Thk up to 16 mm	MTR	243.00
308	Linear gouging of steel & cast iron Thk 17 to 32 mm	MTR	23.00
309	Fab. & fixing of anchors for refractory for doors/pouring trough/launder etc.as	NO.	26,301.00



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Item	Item Description	Unit	QTY
No.			7
1	2	3	4
	required.		
310	Fab. of liners for SMCD & LMCD of BCF FCEs (straight door liners) (one door length)	NO	15.00
311	Fab. of liners for SMCD & LMCD of 45T FCEs (straight door liners) (one door length)	NO	1.00
312	Fab. of liners for SMCD & LMCD of 35T FCEs (straight door liners) (one door length)	NO	1.00
313	Fabrication/ repair of hand railing/ barricade (Fabrication/ repair of complete running meter of barricade / hand railing)	MTR	461.00
314	Thermal insulation & covering of HFO pipes & valve include matl. supply (rock wool & G.I. foil), Sz: 50 mm	SQM	1.00
315	Thermal insulation & covering of HFO pipes & valve include matl. supply (rock wool & G.I. or aluminium sheet and other consumables)), Sz : 100 mm	SQM	1.00
316	Thermal insulation and covering of HFO pipes & valves without supply of material 50mm and 100mm thick with existing rock wool mattress and aluminium or GI sheet.	SQM	1.00
	Above ground piping erection/ replacement		40=00
317	Pipe work above g/l Size : 1/2"to 2"(pipe to be clamped as per requirement)	MTR.	405.00
318	Pipe work above g/l ,Size : 3" & 4".	MTR.	205.00
319	Pipe work above g/l ,Size : 6" & 8".	MTR.	1.00
320	Pipe work above g/l ,Size : 10 & 12".	MTR.	1.00
	Pipe erection/ replacement in existing trenches		
321	Pipe work in trench ,Size: 1/2"to2"	MTR.	1.00
322	Pipe work in trench ,Size : 3" & 4".	MTR.	7.00
323	Pipe work in trench ,Size: 6" & 8".	MTR.	1.00
324	Pipe work in trench ,Size: 10 & 12".	MTR.	1.00
	Replacement/ erection of bend		
325	Bend repl ,Size : upto 3"	NO	409.00
326	Bend repl ,Size : 4"	NO	13.00
327	Bend repl ,Size : 6" & 8"	NO	46.00
328	Bend repl ,Size : 10" & 12"	NO	25.00
	Erection/ replacement of valves		
329	Valve repl,size: 1/2" to 2":	NO	203.00
330	Valve repl,size: 3" & 4".	NO	25.00
331	Valve repl,size: 6" & 8".	NO	8.00
332	Valve repl,size: 10" & 12".	NO	1.00
333	Replacement of valve gland	NO	13.00
334	Fabrication of exhaust duct	MT	1.00
335	Setting of trench cover	MT	43.00
	<b>Dismantling / Erection of hydraulic pipeline</b> including acid pickling, rinsing, bending with pipe bending machine and pipe erection including pressure testing (15% payment for dismantling and 85% for balance scope):		
336	Pipe OD upto 16 mm	MTR	1.00
337	Pipe OD 16- 30 mm	MTR	58.00



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Item No.	Item Description	Unit	QTY
1	2	3	4
338	Hyd. pipeline clamping.(one clamp) clamp base welding and fitting of clamp of proper size to suit the pipe size, tightening of mounting bolts, testing for looseness and vibration.	NO	13.00
339	Greasing of plumber block /flange brg /pillow backs: Grease nipple to be cleaned to remove dust, greasing to be done (grease pump & grease shall be provided by NALCO)	NO	430.00
	Asst for man power hourly basis		
340	Assistance of skilled manpower for various jobs not envisaged in present contract. The job envisages engagement of one skilled man power on hourly basis. This rate will hold good for fitting/welding/cutting activities.	Hr	15,979.00
341	Assistance of rigger for various jobs not envisaged in present contract. The job envisages engagement of one rigger (semi skilled man) on hourly basis.	Hr	9.00
342	Assistance of unskilled nature for various jobs not envisaged in present contract. The job envisages engagement of one unskilled man on hourly basis.	Hr	2,172.00
	Replacement of couplings and coupling pads in Cast House-A & B		
343	Replacement couplings upto motor rating of 7.5 KW: Removal of coupling halves from driver and driven shaft and fitting with a new coupling with spider/pad/spacer/pin and bush/grid etc. The coupling is to be aligned and all foundation bolts to be tightened.	NO	44.00
344	Replacement couplings upto motor rating from 8 to 20 KW: Removal of coupling halves from driver and driven shaft and fitting with a new coupling with spider/pad/spacer/pin and bush/grid etc. The coupling is to be aligned and all foundation bolts to be tightened.	NO	213.00
345	Replacement of coupling spiders/pads/pin bushes/grids/spacers etc. for all types of couplings and motor ratings. The job includes checking if alignment and rectification of alignment if required.	NO	53.00
346	Replacement of Hydraulic hose/Pneumatic hose: The damaged hose to be removed by suitable spanner .The new hose to be fitted and fitting must be leak proof. The rate is applicable upto 50mm size hose. The rate is independent of the length and type of end fittings.	NO	141.00
347	Replacement of hoist: The job involves replacement of all chain/wire rope hoists of capacity 1MT to 3MT with a repaired/new one, It also includes hoists of stack manipulator hoist and stack table hoist	NO	3.00
348	Hydraulic /Pneumatic cylinder replacement upto size of bore 80mm	NO	8.00
349	Hydraulic /Pneumatic cylinder replacement size of bore more than 80mm	NO	15.00
М	MANPOWER ASSISTANCE IN CAST HOUSE-A		
350	Labour Assistance of semiskilled nature in day to day maintenance in shift (A/B/C). The job envisages engagement of minimum two semiskilled man for eight hours in each shift	Man- day	6,664.00
351	Labour Assistance of semiskilled nature in day to day maintenance in General Shift. The job envisages engagement of minimum eight semiskilled man for eight hours	Man- day	8,000.00
352	Labour Assistance of Semi Skilled man power beyond normal working hour of respective shift in extra time. The payment will be made on hourly basis.	Hr	4,827.00
353	Labour Assistance of Skilled man power (Fitter/Welder/Gas Cutter) beyond normal working hour of respective shift in extra time. The payment will be made on hourly basis.	Hr	2,411.00
N	PAINTING		



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Item	Item Description	Unit	QTY
No.	·		
1	2	3	4
354	Painting of ICM of CH- A including platform & piping (125 sq.mtr. Approx./ICM) Painting of ICM (including robotic stacker, stack manipulator, platform & piping etc.) 125 sq. metre approximately per ICM - Surface preparation i.e. removal of oily & greasy materials from surfaces to be done by wire brush & cleaning with suitable solvent . One coat of primer (red oxide) & two coats of synthetic enamel to be given	NO	1.00
355	Painting of ICM, CH-B (including robotic stacker, stack manipulator, platform & piping etc.) 160 sq. metre approximately per ICM - Surface preparation i.e. removal of oily & greasy materials from surfaces to be done by wire brush & cleaning with suitable solvent. One coat of primer (red oxide) & two coats of synthetic enamel to be applied	NO.	3.00
356	Painting of WRM including platform, tray & piping (400 sq. mtr. Approx./WRM) incl. Emulsion pit. Surface preparation i.e. removal of oily & greasy materials from surfaces to be done by wire brush & cleaning with suitable solvent. One coat of primer (red oxide) & two coats of synthetic enamel to be applied.	NO	1.00
357	Painting of ECL Crane (165 sq.mtr. Approx./Crane) - Surface preparation i.e. removal of oily & greasy materials from surfaces to be done by wire brush & cleaning with suitable solvent. One coat of primer (red oxide) & two coats of synthetic enamel to be applied.	NO	1.00
358	Painting of Mukand, Armsell, Sika Cranes & Meeka cranes of CH- A& B (150 sq.mtr. Approx./Crane) Painting of EOT Cranes (150 sq.mtr. Approx./Crane) Surface preparation i.e. removal of oily & greasy materials from surfaces to be done by wire brush & cleaning with suitable solvent. One coat of primer (red oxide) & two coats of synthetic enamel to be applied.	NO	1.00
359	Painting of other eqpts (like pipe, rotary fce, Induction furnace, cooler, platform, HPP, Blower, fan etc) -Surface preparation i.e. removal of oily & greasy materials from surfaces to be done by wire brush & cleaning with suitable solvent. One coat of primer (red oxide) & two coats of synthetic enamel to be applied	S.M	1,595.00
360	Red oxide painting of inside FCE shell (for all furnaces)	NO	1.00
361	Numbering & Letter writing Sz: 1 "	NO	1.00
362	Numbering & Letter writing Sz: 2 "	NO	1.00
363	Numbering & Letter writing Sz: 3 "	NO	1.00
364	Numbering & Letter writing Sz: 4 "	NO	1.00
0	SOW MOULD REPAIR		
365	Repair of Sow Mould (C.I.): Metal to be cleaned, surface preparation to be done, root welding and final welding to be done with the appropriate electrode as required	NO	1.00
Р	MANPOWER ASSISTANCE OF CAST HOUSE-B		
366	Assistance in welding/cutting activities in shift or General Shift as per requirement. This envisages deployment of minimum one welder (skiled Man) for eight hours in each shift	Man- day	3,600.00
367	Labour Assistance of semiskilled nature in day to day maintenance in shift (A/B/C). The job envisages engagement of minimum one semiskilled man for eight hours in each shift	Man- day	4,147.00
368	Labour Assistance of semiskilled nature in day to day maintenance in General shift. The job envisage engagement of minimum eight semiskilled man for eight hours	Man- day	5,167.00
369	Labour Assistance for roll turning CNC lathe in A/B/C shift in Cast House-B. The job envisages engagement of minimum one semiskilled man for eight hours in each shift.	Man- day	667.00



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Item	Item Description	Unit	QTY
No.	·		
1	2	3	4 055 00
370	Labour Assistance of Skilled man power (Fitter/Welder/Gas Cutter) beyond normal working hour of respective shift in extra time. The payment will be made on hourly basis.	Hr	1,055.00
371	Labour Assistance of Semi Skilled man power beyond normal working hour of respective shift in extra time. The payment will be made on hourly basis.	Hr	2,075.00
Q	INGOT CASTING MACHINE (2 NOS.) CAST HOUSE-B:		
372	Replacement of mould - 04 Nos of Mould mounting bolts to be removed, mould to be removed, new mould to be placed in position and bolts to be fitted with adequate tightness.	NO.	664.00
373	Replacement of chain link or bush brg of Casting Conveyor - Removal of 5nos of moulds one outer and one inner link connected to roller, pin and roller with bush and fitting back a spare roller or link.	SET	1.00
374	Replacement of entire casting chain, both sides (Chain pitch= 200 mm; 240 x 2 = 480 links) Dismantling of chain and fitting after metal cleaning and tray repair.	SET	3.00
375	Removal of moulds and drain pipes for metal cleaning and refitting after metal cleaning 05 nos. of moulds and drain pipes to be dismantled and fitted back after metal cleaning by other agency.	SET	65.00
376	Replacement of chain of cooling/stack convremoval of old chain, fitting of new/same/spare chain after necessary repair, if any and chain tension adjustment.(one side).	NO.	10.00
377	Repair and replacement of window glass of cooling conveyor Removal of window, repair of window, replacement of glass and fitting back.(App size of glass/ transparent sheet= 1.5 ft x 2 ft)	NO.	1.00
378	Cleaning of water spraying tray & strainer of cooling chamber of cooling Conveyor removal of water spraying tray and strainer of cooling chamber by opening the appropriate window and fitting back after necessary work (Tray size app = 1ft x 2ft)	NO.	61.00
379	Replacement of chain of layer/ bundle conveyor removal of old chain, fitting of new/same/spare chain after repair, if any and tension adjustment.(one side).	NO.	10.00
380	Replacement of robotic stacker (replacement of link arm, brg, cyl, shaft etc) removal of the entire assembly and fitting back with proper levelling and alignment (Approx weight = 1.5 Ton).	SET	1.00
381	Repair of flap of robotic stacker Removal of grabbing flap by removing its shaft, repair of flap and fitting back.(Approx. Wt.= 50 Kg)	SET	1.00
382	Replacement of stack table Removal of table top including gearbox & Connected shaft and fitting back the spare table assembly.(Approx. Wt.= 100 Kg).	SET	1.00
383	Replacement of wire rope of stack table supporting the table at appropriate height using suitable arrangement, disconnecting rope from drum and bottom pulley, replacing the rope, clamping at desired points and removal of supports (Rope length= approx. 20 mtrs.)	NO.	1.00
384	Replacement of drive end sprockets, brg.,chain of stack conv Removal of drive chain cover, drive chain & its sprocket, disconnecting stack & bundle conv. chain(04 Nos), gearbox and sprocket-shaft assembly. and re-assembly of new sprockets-shaft assembly, GB etc.	SET	1.00
385	Mould bolts tightening 04 Nos. of mounting bolts to be tightened (per mould)	NO	1,746.00
386	Casting wheel replacement supporting of casting wheel with chain pulley, removal of feeding launder, removal of mounting bolts, removal of the wheel and fitting of new casting wheel in position with its mounting bolts.(App Wt= 400 Kgs.) and fitting of feeding launder.	NO	1.00
387	Stack manipulator bucket repair Dismantling of bucket from manipulator assembly by removing mounting bolts and fitting back after repair(straightening of structures Approx. Wt.= 200 Kgs)	NO.	1.00



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Item No.	Item Description	Unit	QTY
1	2	3	4
388	Stack manipulator wire rope replacement Supporting bucket at appropriate height and removal of old ropes from drum and winding a new ropes and clamping on the hoist rope drum.(wire rope Length= 32 meters)	NO.	1.00
389	Stack manipulator LT/ CT wheel repair/ replacement Lifting the LT / CT structure with 20 T hydraulic jack on the damaged wheel end, removal of damaged wheel assembly and fitting the new one.	NO.	8.00
390	Repair / Replacement of ingot drier blower Removal of entire blower assembly from foundation, and fitting back the assembly along with replacement of vibration pads(Approx. Wt.= 150 Kgs).	NO.	1.00
391	Repl. of casting wheel shaft/brg: Removal of Casting Wheel bearing, removal of shaft and fitting of bearing, shaft and wheel.	NO	3.00
392	Tilting launder positioning/alignment: dislocated launder to be positioned and to be aligned.	NO	1.00
393	Casting conveyor non-drive end bearing replacement: casting conveyor chain tension to be loosened, chain to be opened, assembly to be taken out, bearing to be removed, new bearing to be fitted, chain to be fitted and chain tensioning to be done.	SET	3.00
394	Casting conveyor non-drive end shaft/sprocket replacement: casting conveyor chain tension to be loosened, chain to be opened, assembly to be taken out, bearing to be removed, sprocket to be removed, new/repaired sprocket to be fitted, bearing to be fitted, chain to be fitted and chain tensioning to be done.	NO	1.00
395	Casting conveyor rail replacement: Moulds 240nos to be removed, casting conveyor chain to be removed, wornout/ damged rail to be removed from its mounting, new rail to be fitted in position, alignment to be checked, chain to be fitted back, moulds to be fitted back.	MR	1.00
396	Casting conveyor non-drive end/drive end sprocket mounting bolts tightening: Casting conveyor non-drive end/drive end sprocket mounting bolts to be tightened	SET	3.00
397	Casting conveyor drive end shaft/sprocket replacement: Casting conveyor chain to be opened, Gearbox to be removed, bearing to be removed, shaft sprocket removal and replace with new/repaired sprocket, gearbox to be fitted back, chain to be fitted back.	SET	1.00
398	Casting conveyor drive end gearbox/bearing replacement: Casting conveyor chain to be opened, Gearbox to be removed, bearing to be removed, new bearings and new/repaired gearbox to be fitted, chain to be fitted back.	SET	1.00
399	Ingot receiving device shaft replacement: Drive chain to be removed, drive crank to be removed, non drive crank to be removed, shaft to be removed, new shaft to be fitted back, drive and non-drive crank to be fitted, chain to be fitted back.	NO	1.00
400	Ingot receiving device Ingot guide replacement: Complete assembly to be removed, chain to be removed, sprocket to be replaced, new chain to be fitted and the assembly to be fitted back.	NO	1.00
401	Cooling/layer/ stack conveyor rail replacement: Worn out /damaged rail to be removed, new rail to be fitted with proper alignment and mounting.	MR	75.00
402	Cooling / Layer/Transfer arm/Turning device gearbox replacement: Repaired gearbox to be removed, new gearbox to be fitted back along with all mounting.	NO	1.00
403	Cooling / Layer Conveyor DE/NDE sprocket/shaft replacement: Gearbox to be removed, bearing, sprocket /shaft to be dismantled, assembly to be done with new sprocket/shaft, to be fitted back and alignment to be checked.	NO	8.00
404	Robotic stacker gearbox replacement: Damaged gearbox to be removed, new gearbox to be fitted back along with all mounting.	NO	1.00
405	Turning device shaft/bearing sprocket replacement: Gearbox to be removed, Indexing plates to be removed, bearing sprocket/shaft to be dismantled, assembly to be done with new sprocket/shaft, Indexing plate to be fitted back,	NO	1.00



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Item No.	Item Description	Unit	QTY
1	2	3	4
	gearbox to be fitted.		
406	Casting conveyor roller greasing(480 rollers).1 NO= 1Casting Conveyor	NO	1.00
407	Replacement of robotic stacker arm(front/back side arm)	NO	1.00
408	Casting wheel handling chain pulley repairing/fitting	NO	1.00
409	Repair and replacement of bed plate(each of size 188mm x 1200 mm x 6/8 mm approx): Bed plate to be removed from the bed by gouging and fitted back after repair/cleaning work by suitable SS electrodes.	NO	389.00
410	Replacement and/or repair of hammer mounting frame: The job includes all associated jobs like removal and refitting of cylinders, Removal and refitting of pads and all cutting, welding ,heating and straightening work.	NO	1.00
411	Replacement and/or repair of cooling conveyor chain tensioning assly: The job includes all associated jobs like cutting, welding ,heating and straightening work.	NO	3.00
412	Replacement of strapping table.: The job involves removal of strapping table from position and fitting with a new/repaired table	NO	1.00
413	Robotic skimmer arm assembly replacement	NO	1.00
R	MELTING FURNACE (30 T )- 2 nos., HOLDING FURNACE (15 T)- 2 nos.		
414	Repair / replacement of shaft, sprocket:- Shaft, sprocket, bearing unit assembly to be dismantled. Damaged components are to be repaired / replaced and shaft assembly is to be fitted back (Approx. Wt.= 200 Kg).	NO.	1.00
415	Replacement of chain of door drive:- Chain of the door drive is to be dismantled as per the requirement. Links are to be changed and chain is to be fitted back.(Pitch= 2 inch, approx Length= 1.5 m)	NO.	1.00
416	Cleaning/ replacement of nozzle of burner:- Burner is to be removed, nozzle to be cleaned/ replaced and burner to be fitted back for 15T, 30T & 45T furnaces.	NO.	287.00
417	Liner replacement:- Old/ damaged liner plate to be removed and new liner is to be fitted (Approx. Wt.=35 Kg)	NO.	17.00
418	Furnace door seal replacement (One door)(Approx. Length= 20 m): Damaged door seal to be removed and new seal given by Nalco to be fitted and proper clamping to be done.	NO.	1.00
419	Greasing of all grease points of one Furnace (door drive including chains, damper etc).1NO=1 Furnace	NO.	1.00
420	Damper plate removal/Fitting after repairing	NO.	1.00
S	EOT CRANE 25 / 5 T- 1 no. and 25 / 10 T- 1 no.)		1.00
421	Replacement of L.T. wheel assembly:- L.T. wheel assembly to be dismantled & brought to the maintenance area & to be fitted back after required maintenance is done by Nalco.(Approx. Wt.= 200 Kg)	NO.	1.00
422	Replacement of C.T. wheel assembly:- C.T. wheel assembly to be dismantled & brought to the maintenance area & to be fitted back after required maintenance is done by Nalco.(Approx. Wt.= 150 Kg)	NO.	1.00
423	Replacement of guide wheel of hoist cross travel:- Guide wheel of hoist trolley C.T. to be dismantled & to be fitted back after maintenance is done by NALCO.(Approx. Wt.= 100Kg)	NO.	1.00
424	Replacement of guide wheel of cabin trolley:- Guide wheel of cabin trolley to be dismantled & shifted to maintenance area & to be fitted back after maintenance is done by NALCO.(Approx. Wt.= 100Kg)	NO.	1.00
425	Replacement of guide wheel of hoist:- Guide wheel of hoist to be dismantled and fitted back after maintenance is done by NALCO.	NO.	1.00
426	Replacement of wire rope:- Wire rope is to be dismantled and new wire rope to be	NO.	1.00



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Item	Item Description	Unit	QTY
No. 1	2	2	1
<u> </u>	fitted.(dia= 20 mm. L=130m)	3	4
427	Tightening of rail mountings with rail alignment:- Rail mountings are to be	MTR	1.00
	tightened to desired torque and torque to be checked.		
	UTILITIES (WATER PUMP HOUSE, HFO PUMP HOUSE) OF CH- B:		4.00
428	PHE cleaning:- PHE (1 no.) is to be opened, all plates are to taken out, cleaned and to be fitted back.(No. of plates=88)	NO.	1.00
429	Cleaning/ replacement of box filter per element:- Box filter cover to be opened, filter element to be taken out, cleaned and fitted back.	NO.	1.00
430	Cleaning/ replacement of HFO box filter:- Box filter cover is to be opened, filter element to be taken out, cleaned and fitted back.	NO.	1.00
431	Servicing of gate/globe valves:- Gate valve bonnet to be opened, spindle and disc to be cleaned, properly greased and to be fitted back. Gland packing to be changed if required. (Valve size 6 inches to 12 inches). This is applicable to CH-A & B	NO.	29.00
432	Servicing of gate/globe valves:- Gate valve bonnet to be opened, spindle and disc to be cleaned, properly greased and to be fitted back. Gland packing to be changed if required. (Valve size below 6 inches). This is applicable to CH-A & B	NO.	3.00
433	Cooling tower fan gear box replacement: Removal of fan blades, draining of oil, removal of gearbox, fitting of new gearbox, fitting of fan blades & oil filling.	NO.	1.00
434	Replacement of HFO day tank forwarding pump of cast house-A & B / HFO pump of HPU of any furnace of CH-A & B: This includes alignment if any.	NO.	25.00
435	Operation of utility eqp. In CH-B and Strip casting plant in A/B/C shift, as described in the scope of work for Utility Operation. The job envisages deployment of minimum one semiskilled and one skilled man for eight hours.	Man- day	2,093.00
U	STRIP CASTER		
436	Replacement of caster roll assembly:- Caster roll assembly (both upper and lower roll) fasteners are to be opened, roll assembly to be removed, shifted to designated location, cleaned properly and to be fitted back after repair is done by Nalco.(App Wt = 15 T per roll)	SET	1.00
437	Caster roll bearing, chock assembly replacement:-Caster roll bearing & chock assemblies (2 nos./ roll) to be removed from the roll by E.O.T. crane after opening the bolts. Bearings are to be taken out. Roll & shaft, bearing and chock are to be cleaned.	SET	1.00
438	Shrink fitting of caster rolls: Detailed job description is furnished in annexure-I.	NO	1.00
439	Packing of caster rolls(per pair): Detailed job description is furnished in annexure-	NO	1.00
440	Strip caster roll loading on the trailer/unloading from trailer (1 NO=1 ROLL)	NO	1.00
441	Edge trimmer trimmed scrap disposal guide removal and fitting	NO	1.00
٧	LADDLE SKIMMING		
442	Fixed tool replacement: Mounting bolts to be loosened, defective fixed tools to be removed, new tool to be fitted back, all mounting to be tightened	NO	10.00
443	Movable tool replacement: Drive gearbox to be removed, mounting bolts to be loosened, defective movable tool to be removed, new tool to be fitted back, all mounting to be tightened, gearbox to be fitted back.	NO	10.00
444	Tool drive gear box replacement: Defective gearbox to be removed, new/repaired gearbox to be fitted back.	NO	8.00
445	Guide positioning: Guide to be removed from its mounting, necessary straightening to be done, guides to be positioned	NO	3.00
446	Lifting chain/sprocket repairing (removal of chain from sprocket, replacing & fitting)	NO	1.00



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Item No.	Item Description	Unit	QTY
1	2	3	4
447	Lifting hoist overhauling: Lifting hoist mounting to be removed, hoist to be dismantled, overhauling to be done and fitted back.	NO	3.00
448	Laddle skimmer wheel and bearing checking and / or replacement(Per wheel)	NO	10.00
W	T- INGOT CASTING MACHINE		
449	Chip channel removal and fixing: Removal of chip channel after removal of bolts, repairing of chip channel, fixing back the chip channel.	NO	1.00
450	Briquetting press cyclone pipe removal and fixing: Removal of the pipe by opening the flanges, fitting back after cleaning of chips.	NO	1.00
451	Tie rod replacement: Press cylinder assy to be removed, damaged rod to be removed from the assy and new rod to be fitted and press cylinder assy to be fitted back.	NO	1.00
452	Replacement of Press cylinder of Swarf briquetting press: complete cylinder to be removed from Press assembly. Tie-rod to be removed from damaged cylinder and to be fitted back in the new or repaired cylinder. Repaired or new cylinder to be fitted back in the press assembly.	NO	1.00
453	Casting conveyor chain replacement(01 No=38 Links): Cross bar to be removed, damaged chain to be replaced with repaired/ new chain. Cross bar to be fitted back & chain ension to be adjusted as per requirement	NO	1.00
454	Casting conveyor gearbox replacement: Damaged gearbox to be removed from assembly and new or repaired gearbox to be fitted back.	NO	1.00
455	Casting conveyor DE/NDE sprocket replacement: Casting conveyor chain tension to be loosened, chain to be opened, assembly to be taken out, bearing to be removed, sprocket to be removed, new/repaired sprocket to be fitted, bearing to be fitted, chain to be fitted and chain tensioning to be adjusted.	NO	1.00
456	Tundish level adjustment gearbox replacement: Gearbox protection cover plate to be removed. Damaged gearbox to be removed and new or repaired gearbox to be fitted back.	NO	1.00
457	Secondary cooling water pipe removal & refixing after cleaning: cooling water pipe to be dismantled and water outlets to be cleaned. After cleaning pipe to be fitted back.	NO	1.00
458	Backwash filter cleaning: Filter assembly to be removed and filter element to be cleaned. After cleaning the assembly to be fitted back.	NO	17.00
459	Saw entry/saw exit/ shuttle/exit roller table roller replacement: Roller to be hang with the help of chain pulley block. Remove the bearings, dismantle the roller and replace with new roller and fitted back the bearings.	NO	1.00
460	Saw carriage star guiding car replacement: carriage to be positioned with proper support. Damaged guiding car(runner block) to be replaced with repaired or new one. After replacement runner block to be lubricated and support to be removed.	NO	1.00
461	Saw blade drive shaft replacement: saw blade to be removed, v-belt & pulley to be removed, damaged shaft to be removed and new shaft to be fitted. Pulley, v-belt & saw blade to be fitted back.	NO	1.00
462	Saw car drive shaft replacement: Dismantle universal joint and remove damaged shaft. Universal joint to be coupled with new shaft and fitted back to the assembly.	NO	1.00
463	Saw car wheel replacement: Raising the wheel end with Hyd jack, giving supports, removal of damaged wheel assembly and fitting of the new/ repaired wheel assembly, Damaged assembly to be shifted to mechanical maintenance bay.	NO	1.00
464	Water removal blower/ chips removal blower/saw chips blower removal & refixing after checking or replacement	NO	1.00
465	All roller table gearbox replacement: Damaged gearbox to be removed and new or repaired gearbox to be fitted back.	NO	1.00



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Item No.	Item Description	Unit	QTY
1	2	3	4
466	Stacker wheel replacement: Wheel to be removed from guide( check the bearing condition and if required bearing may be replaced) and new wheel to be fitted back.	NO	1.00
467	Stacker alignment: Stacker to be aligned or lebled. Stacker frames to be checked for any deformation and to be repaired. After repairing alignment to be done.	NO	1.00
468	Accumulator roller table roller/ bearing replacement: Damaged roller or bearing to be removed and new roller or bearing to be fitted back.	NO	1.00
469	Briquetting press PU hose replacement: Damaged hose to be dismantled and new hose to be fitted back.	NO	1.00
	INGOT CASTING MACHINE(02 Nos) OF CAST HOUSE-B		
470	Casting wheel and Plummer block bearing mounting bolts tightening	SET	70.00
471	Stack manipulator hoist assy or rope drum replacement: wire rope to be removed, mounting bolts to be loosened. remove the complete hoist assy from manipulator unit with EOT crane & replace with new/repaired hoist assy or new/repaired drum. mounting bolts to be tightened & wire rope to be fitted.	NO	3.00
472	Stack manipulator bucket replacement: Dismantle the damaged bucket and replace with repaired or new bucket.	NO	5.00
473	Stack manipulator LT rail mounting bolts tightening: Rail mounting bolts to be tightened.	MTR	1.00
474	Stack table hoist assy replacement: disconnect the wire rope from stack table. Mounting bolts to be loosened. Remove the complete hoist assy with EOT crane & replace it with new/repaired hoist assy. Tightened the mounting bolts, connect the wire rope with stack table.	SET	1.00
475	Stacker balancing cylinder replacement: position the stacker unit with proper support. Remove the defective cylinder & replace it with new/ repaired one. Remove the support.	NO	3.00
476	Robotic skimmer positioning for gearbox oil replacement: Skimmer unit to be positioned with the help of chain pulley block. Skimmer unit to be repositioned after replacement of gear oil.	NO	1.00
477	Secondary cooling conveyor cooling water pipe replacement (1 Set=1ICM): Remove the hood assy from cooling conveyor. Damage pipe to be removed and new pipe to be fitted. Cutting & welding to be done as per requirement. Hood assy to be fitted back.	SET	1.00
	MELTING -CUM- HOLDING FURNACES:		
478	HFO booster pump replacement: pump foundation bolts to be removed, suction & discharge flange to be disconnected, coupling & spider to be removed. Coupling & spider, suction & discharge flange to be fitted in new/repaired pump after fitting alignment to be done .old pump to be shifted to maintenance bay  TRANSPORTATION OF MATERIAL:	NO	1.00
			10.00
479	Transportation of material from steel yard to site by truck: material to be loaded on truck with hydra. necessary cutting to be done if required at steel yard. material to be unloaded at site.(designated place)	MT	13.00
480	Transportation of material from steel yard to site by trailer: material to be loaded on trailer with hydra necessary cutting to be done if required at steel yard material to be unloaded at site.(designated place)  INGOT CASTING MACHINE OF CH-B	MT	53.00
481	Replacement of NDE sprocket assembly of stack/ bundle conveyor: Chain to be removed and damaged sprocket to be dismantled. New sprocket to be fitted and alignment to done. Chain to be fitted back and tension to be adjusted.  Melting / Holding Furnace	NO	3.00
482	Melting/Holding furnace roof grating replacement (1 set per furnace): Damaged gratings to be dismantled and new gratings to be fitted.	SET	3.00



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Item	Item Description	Unit	QTY
No. 1	2	3	4
483	Replacement of SMCD guide of Melting/Holding furnace: Guide rollers to be	NO	8.00
400	removed and guide to be dismantled. New guide to be fitted in place and guide	110	0.00
	rollers to be fitted back.		
484	Replacement of SMCD guide roller of Melting/Holding furnace: Damaged guide	NO	15.00
	rollers to be removed and new roller to be fitted.		
485	Painting of 45T Melting/Holding furnace & accessories of CH-A & B (approx. 500	NO	1.00
	Square meter per Furnace): - Surface preparation i.e. removal of oily & greasy		
	materials from surfaces to be done by wire brush & cleaning with suitable solvent		
	. One coat of primer (red oxide) & two coats of synthetic enamel to be applied		
	INGOT CASTING MACHINE OF CH-A		
486	Replacement of casting conveyor clutch assembly: Removal of reducer unit,	NO	17.00
	removal of drive chain and then removal of clutch assembly. New/repaired clutch		
	assembly to be fitted back along with reducer unit and drive chain.		
487	Replacement of casting chain gear box: Opening the coupling bolts, removal of	NO	1.00
	gear box. Fitting of new/repaired gear box and then coupling to be done. Gear oil		
400	to be topped up.	OFT	20.00
488	Casting chain rollers greasing: Greasing of all 354 rollers of casting chain, which are on both side of the chain.	SET	32.00
489	Replacement of de watering pump of pipe trench: Motor to be removed after	NO	41.00
700	disconnection of cable, mounting bolts to be removed, then pump assembly to be	110	41.00
	taken out from trench. New/repaired pump to be fitted back.		
490	Replacement of Hydraulic pump of Furnace HPP: Mounting bolts to be removed,	NO	5.00
.00	pump to be removed, new/repaired pump to be fitted back after fitting of coupling.		0.00
	After fitting alignment to be checked.		
	WIRE ROD MILL OF CH- A		
491	Cooling manifold water spray nozzles setting: All spraying nozzles i.e 214	SET	127.00
	numbers fitted in external, internal and lateral manifold assembly to be removed.		
	Manifold flushing to be done. Damaged threads tapping to be done if required. All		
	the nozzles to be fitted back with sealant. Water flow and nozzle direction to be		
	adjusted.		
492	Mould groove cleaner bearing replacement: The groove cleaning roller to be	NO	101.00
	removed, old bearings to be removed and then to be refitted with new bearings.		
400	Greasing to be done.	NO	470.00
493	Coiler Reel mounting bolts tightness checking: All foundation, structural and	NO	173.00
	sub assembly mounting bolts of coiler reel to be checked for proper tightness.  Damaged bolts to be replaced. Flange carriage brass pad mounting bolts		
	tightness to be checked, damaged bolts to be replaced		
494	Coiler Reel flange carriage sliding brass pad replacement: The flange	NO	167.00
.0.	carriage assembly sliding guide mounting bolts to be removed, damaged brass	110	101100
	pad to be replaced with new one. All mounting bolts to be fitted back.		
495	Complete overhauling of casting water pump: The pump assembly to be	NO	1.00
	dismantled, the bowl and impellers to be cleaned and checked. The line shaft and		
	impeller lock collets to be replaced. Damaged impller if any to be replaced. The		
	pump then to be re assembled.		
	BILLET CASTING FACILTY OF CH-A		
496	Replacement of skimming tool/mixing tool: Old/damaged tool to be removed	NO	200
	from the frame by unwinding/gas cutting the fasteners. New tool to be assembled		
	with fasteners.		
	V-belt drives in CH-A/CH-B		
497	Replacement of V-belts for more than 30 KW drive: The motor foundation	SET	96.00
	bolts to be loosened, old/damaged v-belts to be removed and new bolts to be		
	fitted. Belt tension to be adjusted		



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Item No.	Item Description	Unit	QTY
1	2	3	4
498	Replacement of V-belts for upto 30 KW drive : The motor foundation bolts to	SET	22.00
100	be loosened, old/damaged v-belts to be removed and new bolts to be fitted. Belt	OL.	
	tension to be adjusted		
	ICM-1 &2 , 35T & 45T FURNACE		
499	Chain lubrication (LMCD & SMCD) of each Furnaces (06Nos as 01 set.)	SET	167.00
500	Launder Cover removal & fitting	SET	13.00
501	Casting Wheel Sprocket Assy. Dismantling & erection	NO	1.00
502	Removal & fitting of Overflow Tray	NO	29.00
503	Dismantling and erection of Casting Conveyor Drive / Non-Drive Shaft	NO	1.00
504	Repair & replacement of Cooling Conveyor Non-Drive Sprocket	NO	13.00
505	Repair of Cooling Conveyor / Layer Conveyor Chain	NO	3.00
506	Stack Conveyor-III Chain Lubrication	SET	17.00
507	Casting Conveyor Drain Pipe removal & fitting.	NO	44.00
508	Casting Conveyor Chain Tension adjustment.	NO	3.00
509	Furnace Tilting Hose replacement	NO	5.00
510	SMCD & LMCD Cylinder checking & Mounting Bolt tightness	SET	13.00
511	APU replacement	NO	5.00
512	Cleaning of Inclined Conveyor of Dross Plant.	NO	1.00
513	Cleaning of Screw Conveyor of De dusting unit	NO	3.00
514	Ladle Skimming Rope replacement & positioning	NO	1.00
	WIRE ROD MILL		
515	Oil replacement in Emulsion Pump	NO	315.00
516	Emulsion Filter-bed checking & Sprocket tightness	NO	63.00
517	Auto-shear Roller removal & fitting	NO	3.00
518	Auto-shear Pinch Roller Shaft / Bearing replacement	NO	10.00
519	Emulsion Filter-bed Gear Box replacement	NO	1.00
	BILLET CASTING FACILITY		
520	H.F. Rack & Gear Box mounting Bolt checking & tightness	SET	144.00
521	Bogie Wheel / Mobile Cooler Wheel lubrication	SET	192.00
522	H.F. Door positioning / Door Seal repair	NO	10.00
523	R.C. Fan Mounting Bolt tightness	NO	75.00
524	Cutting M/C Pusher Cylinder & Bracket Bolt tightness	NO	19.00
525	Cutting M/C all structures Mounting Bolt tightness	NO	15.00
526	Cutting M/C Scrap Conveyor Chain repair	NO	127.00
527	Cutting M/C mixed Filter cleaning (chips evacuator)(12 nos.= 01 set)	SET	25.00
528	Homo FCE-1 bogie shear pin replacement.	NO	29.00
500	CT Cuide Wheel / LT Cuide Wheel sheeling 8 hybridation	CET	400.00
529	CT Guide Wheel / LT Guide Wheel checking & lubrication INGOT CASTING MACHINE	SET	123.00
F20		Hr	1 211 00
530 531	Extra working Hour beyond Shift / G-Shift for unskilled worker for CH-A&B Casting conveyor primary gearbox replacement:	NO	1,211.00 1.00
532	Robotic stacker primary gearbox replacement:	NO	1.00
332	CH-B ICM & t-ICM	INO	1.00
533	Replacement of butterfly valve with Pneumatic actuator of size 6", 8", 10" and 12" in CH-B	NO	1.00
534	Replacement of Pneumatic actuator in CH-B	NO	1.00
535	T-ICM Plate Heat exchanger replacement	NO	1.00
536	T-ICM Priducting Press Hydraulic Pump replacement	NO	1.00
537	Ingot Receiving Station PM as per checklist in CH-B.	NO	13.00
538	Transfer device, rejection Device, Turning Device, Centering Device, layering	NO	13.00
	Stoppers and Stacker PM as per checklist in CH-B.		. 5.55



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Item	Item Description	Unit	QTY
No.			
1	2	3	4
539	Cooling, Layering & Stack Conveyor, Stack Table, Strapping Table, Weighing Station, Ink Marking Station & Stack Manipulator PM as per checklist in CH-B.	NO	13.00
540	Ingot receiving station arm assembly replacement in CH-B.	NO	1.00
541	Robotic stacker Horizontal / vertical / back link replacement	NO	1.00
542	All points greasing in ICM / T-ICM or Mechanized sow caster in CH-B.	NO	13.00
543	Stack Conveyor drive shaft & Gearbox replacement in CH-B.	NO	1.00
544	SMCD drive g/b gear coupling replacement ICM furnace's in CH-B	NO	1.00
545	Replacement of SMCD Plummer block and bearing (Driven) in T-ICM Furnace's	NO	1.00
546	Gear coupling replacement of EOT Cranes in CH-B	NO	1.00
547	Replacement of Hoist Gear Box of 25/5 or 25/10 EOT cranes in CH-B.	NO	1.00
548	Replacement of TICM casting conveyor intermediate roller Plummer block	NO	1.00
549	Replacement of TICM V-launder pneumatic hoist	NO	1.00
550	Replacement of Stack Conveyor & Bundle conveyor of ICM in CH-B.	NO	3.00
	Mechanized SOW Caster		
551	Tundish Hydraulic cylinder replacement	NO	1.00
552	Carousal drive wheel/gearbox replacement	NO	1.00
553	Carousal guide / support wheel replacement and alignment	NO	1.00
554	Demoulder vacuum pump replacement	NO	1.00
555	Demoulder vacuum seal replacement	NO	3.00
556	Walking Beam Raising / Indexing hydraulic cylinder replacement	NO	1.00
557	Mist extractor Blower Assembly replacement	NO	1.00
558	Reject Conveyor Lifting hydraulic cylinder replacement	NO	1.00
559	Reject Conveyor Transfer hydraulic cylinder replacement	NO	1.00
560	Reject conveyor chain replacement	NO	1.00
561	reject conveyor / exit Conveyor D.E. Shaft Sprocket Assembly / Plummer block Bearing replacement	NO	1.00
562	Reject / Exit Conveyor drive Gearbox replacement	NO	1.00
563	Reject / Exit conveyor N.D.E. Sprocket Assembly Replacement	NO	1.00
564	Reject / Exit Conveyor rail replacement	Meter	32.00
565	Exit conveyor chain replacement	NO	1.00
566	Mould Pre heating LDO Combustion Blower replacement	NO	1.00
567	Mould Pre heating LDO Burner Cleaning	NO	7.00
568	Mould Pre Heating Exhaust blower assembly Drive shaft/bearing replacement	NO	1.00
569	Thermocouple Raising cylinder replacement in Mechanized SOW caster Furnace of CH-B	NO	1.00

NOTE: THERE WILL BE WIDE VARIATION IN THE QUANTITY DEPENDING ON THE ACTUAL REQUIREMENT



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# **SCOPE OF WORK FOR CLAUSE:435**

The scope of work involves operation of utilities of strip casting plant & HFO station of Cast House - B, by carrying out the required activities. The activities mentioned are directly related to production and any delay / irregularity in any of the jobs will affect production substantially. The work shall have to be carried out by L1 VENDOR as per the following modalities and details.

#### **DETAILS OF ACTIVITIES FOR DIFFERENT WORK AREAS**

Activities envisaged are only indicative and jobs shall have to be done as per the instruction of

Engineer-in-charge / his authorized representative. Different activities are given below. One or more of which may be executed during each shift. Accordingly contractor have to make necessary arrangement during each shift

# A) Nitrogen plant:

- 1.0 Running of compressor after checking all desired parameters and checkpoints.
- 2.0 Taking PSA tower and Copper-de-oxidizing tower into line after opening all the required valves.
- 3.0 Maintaining the pressure and flow of Nitrogen and Hydrogen.
- 4.0 Removal and fitting of Hydrogen cylinder.
- 5.0 Keeping the record of all parameters like Nitrogen flow and pressure, Hydrogen flow and pressure, Oxygen and Hydrogen PPM, dew point, pressure in each vessel all water parameters and temperature of compressor and Copper-de-oxidizing towers.
- 6.0 Shifting of materials from stores and proper storage.
- 7.0 Regular cleaning of the equipment, work place and inside of the building.
- 8.0 Any activity / activities not specifically mentioned and required for smooth operation of the plant.

#### B) HFO Station:

- 1.0 Running of HFO forwarding pumps of both for Strip casting plant and for Cast House- B, as per requirement.
- 2.0 Maintenance of valves.
- 3.0 Record keeping of all parameters decided by Engineer-in-charge.
- 4.0 Shifting of materials from stores and proper storage.
- 5.0 Any activity / activities not specifically mentioned and required for smooth operation of the plant.

#### C) Water block:

- 1.0 Running of cooling tower fans.
- 2.0 Cleaning of cooling tower top periodically.
- 3.0 Running of pumps as per requirement.
- 4.0 Opening & closing of valves as per requirement before starting and after stopping any pump.
- 5.0 Maintaining desired water level in reservoir, overhead tank, sump and surge tank.
- 6.0 Maintaining desired water pressure and temperature for soft water and cooling water.
- 7.0 Preparation of dosing chemicals and dosing in both closed loop and open loop water system and keeping record of that.
- 8.0 Regenerating the softener units as and when required.
- 9.0 Back washing of Dual Media Filters.
- 10.0 Giving blow down and draining all accumulated water.
- 11.0 Collecting and sending water samples to laboratory for testing and getting the report.
- 12.0 Draining the system water when required.
- 13.0 Conducting water sample test with test kit (to be supplied by NALCO) as and when required.
- 14.0 Shifting of materials from stores and proper storage.
- 15.0 Regular cleaning of the equipment, work place and inside of the building.
- 16.0 Any activity / activities not specifically mentioned and required for smooth operation of the plant.



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# **ADDITIONAL CONDITIONS OF CONTRACT FOR ITEM NO:435**

The following conditions will be applicable to item no:435 in addition to the above special conditions of the contract:

- 1.0 The job shall have to be carried out on round the clock basis in three shifts including holidays & Sundays.
- 2.0 A minimum manpower deployment of one skilled worker (Operator) and One semi-skilled worker in each shift shall have to be ensured by the contractor.
- 3.0 The contractor or his authorized representative (Supervisor) shall have to be present in the shop floor to execute the jobs as per the instructions of the concerned Engineer- in- charge or his representative.
- 4.0 In the beginning of each shift the contractor / authorized supervisor shall have to report to the Engineer in charge about the manpower present and at the end of the shift he shall have to give report about the job status and get the attendance certified.
- 5.0 The contractor shall have to maintain well-planned manpower deployment, more specifically during festivals and local holidays.
- 6.0 The contractor shall have to submit the manpower planning report day and shift wise, with name at the beginning of every month.
- 7.0 The operator (Skilled worker) and Helper (Semi-skilled worker) shall have to report to the shift- in -charge at the beginning and end of the shift and also report any abnormality noticed in any operation / parameters to the shift-in- charge / Engineer -in charge at the earliest.
- 8.0 The contractor shall be deemed to have visited the site and fully acquainted himself with the site conditions and actual requirements of the subject work through interaction with the Engineer-in-charge prior to submission of tender and shall be liable for completion of the work in all respects to the full satisfaction of the Engineer-in-charge irrespective of any omission of the supply materials and / or job specifications indicated in the BOQ.
- 9.0 Ensuring required manpower as specified in the scope of work is the essence of the contract. However the contractor fails to supply the required manpower, penalty as per the following formula will be levied to the contractor.
  - Awarded rate for item:435 along with 25% extra as penalty rounded to nearest rupee per shift
     shall be deducted from the monthly running account bills of the contractor.



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# **JOB DESCRIPTION FOR SHRINK FITTING OF CASTER SHELL ITEM - 438**

Caster roll core and shell are assembled by shrink fitting after cleaning of the roll core and fine grinding of inner dia of shell by Nalco.

Using special tool, the shell is to be positioned vertically inside the pit furnace. Two thermocouples are to be put possibly near shell ends. And connected to a diagram recorder. Pit furnace cover s to be placed and furnace heating is to be done up to 280-300 degree Centigrade (at a gradient of 40 degree centigrade per hour) and to be allowed sufficient soaking time (about 4 Hrs) to assure uniform shell temperature and expansion. After approximately 4 hours at soak temperature, the pit furnace cover is to be opened and the shell inside diameter is checked with a preset point gauge to determine if the required clearance has been reached.(approximately 1.15 mm) Gauge length = core o.d + 1.15 mm. If the gauge clears the length of the shell inside diameter, it is ready to receive the core. If the gauge does not clear, increase the furnace temperature. Soak for 30 minutes and re-check. Repeat the procedure till the desired expansion is achieved.

A pair of steel parallel bars (38 mm thick x 50 mm wide x 1010 mm long are to be attached / bolted to the drive end of the roll core (this is to ensure that the shell is positioned correctly with respect to the core). Steel shims are to be bolted under the parallel bars to provide stock for final matching of the shell end. The special tool for lifting the roll vertical is to be bolted on to the drive side and steel cables are then slung through the clevis of the roll core. When setting down or lifting roll cores, wooden dundage should be placed on the floor to protect the thread ends. The core is positioned directly over the shell and lowered until it is completely inserted and resting parallel to the shell.

The pit furnace is to be switched off and the core / shell assembly is to be allowed to cool to ambient temperature before being lifted out of furnace.

After reaching ambient temperature, the shrink fitted roll assembly to be lifted from the furnace and kept horizontally over the wooden blocks on floor.

Care should be taken not to cause any damage to the threads during this shell changing operation.

<u>Pressure testing:</u> The assembled rolls after completion of all the above activities is to be tested for any water leakage under a test pressure of 5.7 Kg/sq.cm. The procedure for pressure testing is furnished below.

A gasket steel plate with an air inlet fitting is bolted to the water port end of the caster roll, making certain that the inlet air is lined up with a water port. Air pressure is applied at approximately 5.7 Kg / sq. cm, pressure, and the entire roll assembly is submerged in water and checked for leaks. If no leaks are present, then the roll can be removed, dried and sent for other reconditioning activities.

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# JOB DESCRIPTION FOR PACKING OF STRIP CASTER ROLLS: ITEM - 439

- Caster roll surface and journals has to be cleaned and grease / Anti-rust compound has to be applied on the journals.
- 2) Caster roll has to be wrapped with poly laminated Hessian cloth.
- 3) Roll has to be packed with 4 mm thick commercial ply.
- 4) On the journals, two 18 mm thick annular ply pieces of inner diameter as per the journals and outer diameter as per the roll diameter has to be fitted. 4 mm ply sheet has to be nailed to these annular ply pieces.
- 5) At the shaft end, two circular ply pieces of 18 mm thick has to be fitted. 4 mm ply on the journals and shaft has to be nailed to these circular ply pieces. The ply have to be strapped properly.
- 6) For execution of the job, M/s NALCO shall supply required amount / quantity of the following free issue materials.
  - i) Grease / anti-rust compound.
  - ii) Straps and seals for strapping machines.
  - iii) Poly laminated Hessian cloth.
  - iv) Utilities like compressed air, water and electricity.
- 7) Nalco shall provide the following facilities for carrying out the jobs.
  - i) EOT Cranes.
  - ii) Strapping machines.
- 8) Technical specifications of the caster rolls shall be as follows.

Weight of each roll: 14,000 Kg.

Length of each roll: 3,420 mm

Diameter of roll : 1,000 mm

9) All required ply is to be supplied by the contractor. Necessary gate entry challan for ply to be submitted for verification.



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# **BREIF DESCRIPTION OF THE EQUIPMENTS**

#### INGOT CASTING MACHINES:02 Nos in CH-A and 02 Nos in CH-B.

Supplied by M/s Brochot, France, for production of 22.5 Kg Aluminium ingots. The machine consists of major sub assemblies like, Casting conveyor, Cooling conveyor, layer conveyor, Robotic stacker, Stack table, Storage conveyor, Stack manipulator etc. Ingots produced in the moulds mounted in Casting Conveyor chain is indirectly cooled by water tray at the bottom of the chain.

Ingots from casting conveyor is transferred to cooling conveyor by receiving device. In the cooling conveyor, ingots are cooled to normal temperature. Ingots then pass through ingot drier for marking and acceptable ingots are stacked by robotic stacker into bundle of 44 ingots. These bundles travel through stacking conveyor and lifted by stack manipulator and stored at proper locations.

## T-INGOT CASTING MACHINE

T-Ingot casting machine is a continuous casting machine having production capacity of 9MT/HR. The major assemblies of the machine comprises of launder, tundish, casting conveyor, pinch roll, primary & secondary cooling water system, flying saw, saw car, saw carriage, clamping device, roller tables, T-bar pusher & turner, stacker and Swarf briquetting press.

The T-shape moulds are fitted in tundish .Moulds are lubricated & cooled by lubricant and primary cooling water respectively. As the molten aluminium passes through the mould T-shape ingots are produced .The solidified ingots has to pass through the casting conveyor & press down rolls presses the ingots constantly. Then these ingots are further cooled by secondary cooling water. Ingots are cut to desired length with the help of circular flying saw.The swarf (chips) produced are directed towards swarf briquetting press to make the compact bricks. These bricks are again charged to furnace for reprocessing.

# **MECHANIZED SOW INGOT CASTING MACHINE**

The Sow Casting Machine is custom designed to cast melted aluminum into low profile sows of 650kg each at a nominal production rate of 20,000 kg/h. The sows are cooled by means of cold water in two stages. The sow casting machine comprises one Tundish Tilter, 38 mould carousel for primary cooling (water) and mould indexing, a Skimmer Robot, a Vacuum Demoulder, A Walking Beam Conveyor for Secondary Cooling, a Weigh Scale, Marking Devices, one Reject Conveyor with a Reject Pusher, an Exit Conveyors, a Hydraulic Power Unit (HPU), plus the electrical wiring & controls for the system

The system capacity is 20 TPH.

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#### WIRE ROD MILLS 02 NS IN CH-A

Supplier of the equipment: M/s Continuus Properzi, Italy

Products: Aluminium wire rods of dia 9.53 mm and 11.95 mm

Major equipments / assemblies:

- 1. Casting wheel
- 2. Auto bar shear, Pinch roll
- 3. Tilting conveyors
- 4. 15 stand Rolling mill and pinch rolls
- 5. Main shear
- 6. Crop shear
- 7. Rod diverter, Rod elevator
- 8. Fleeter and Coiler
- 9. Associated hydraulic and Pneumatic systems
- 10. Cooling water systems comprising of pumps and PHEs
- 11. Emulsion system comprising of filter bed conveyor, pumps and PHEs.
- 12. Manual bar shear.
- 13. Lube oil systems and PHEs.

## **BILLET CASTING FACILITY**

Supplier of the equipment: M/s LOMA, USA, M/s Wagstaff, USA

Products: Aluminium billets, size-5 inch to 10 inch

Major equipments / assemblies:

- 1. Mould Tables- Air slip and Lubricated
- 2. Billet Casting Machine and associated hydraulic system
- 3. Billet Cutting Machine and associated hydraulic ,Pneumatic and Lubrication systems
- 4. Electrically heated Homogenizing Furnaces and associated bogies, fans and pneumatic systems.
- 5. Cooling water Systems with control systems
- 6. Cmpressrs and Air dryers
- 7. Sniff de-gassing unit.



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#### **NITROGEN PLANT**

Supplier of the equipment: M/s PSA Nitrogen

Products: Nitrogen Gas,5 ppm purity

Major equipments / assemblies:

- 1. Compressors
- 2. Receiver tanks, PSA unit ,Copper catalyst de-oxo unit
- Associated valves & coolers

# 45 T FURNACES:04 Nos for WRMs,02 Nos for BCF,04 Nos ICMs in CH-A,

#### 04 Nos for ICM,02 Nos for T-ICM and 02 Nos for Mechanized Sow-ICM in CH-B

Used for melting scrap and holding of hot metal at desired temperature. Scrap metals charged through Scrap Metal Charging Door and liquid metal is charged through Liquid metal charging door by pouring trough.

Liquid metal after attaining desired temperature is taken out by tilting of the furnace by Hydraulic tilting cylinders. Metal comes out through spouts and passes through launder to the casting machines.

#### ECL CRANES: 02 No in CH-A & 02 Nos.in CH-B

ECL crane 25 MT capacity is used to pour hot metal in ladle to the furnaces and for pouring of metal in sow moulds. The major sub assemblies are Long Travel, Cross Travel, Main Hoist, Auxiliary hoist etc.

## EOT CRANE: ARMSEL 02Nos, MEEKA 02Nos, GRIP 01No

These cranes are used during maintenance activities of ICM,T-ICM & S-ICM.

# **STRIP CASTER:**

Strip caster-02 Nos are used for making aluminium strips of desired thickness and width. Roll pair of approx 15 Ton each is used for casting of strip. The cast strip edge is trimmed by edge trimmer and the trimmed strip is wound in winder. After desired weight is achieved, the coil is taken out, strapped and packed for dispatch.

#### 30T FURNACE-02 Nos,15T FURNACE-02 Nos

These furnaces are used for melting & holding of molten aluminium at a desired temperature.

#### **CNC LATHE**

The CNC lathe is used for machining of caster rolls of Strip Caster and Rolling Plant.

#### EOT CRANE: 02 No(25/10T & 25/5T); 01 SIKKA CRANE

These cranes are used for handling hot metal & maintenance of caster rolls. Loading & unloading of caster rolls from CNC lathe is done by this crane.

#### **UTILITIES OF SCP & BCF**

Water pump house supplies the soft & filter water for SCP, N2 Plant, control room continuously. HFO station supplies HFO to all the furnaces of SCP & cast house-b. N2 plant provides pure N2 gas used for degassing unit of SCP & BCF.

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# LIST OF CONSUMABLES TO BE SUPPLIED BY NALCO:

- 1. All kind of structural like beams, angles channels & flats.
- 2. All kind of sheets and plates like MS Plates, SS Plates, Chequerred plates.
- 3. All types of lubricants i.e :Grase, Oil etc.
- 4. All types of gaskets.
- 5. All types of fasteners, split pins, circlips.

#### LIST OF TOOLS AND TACKLES TO BE ARRANGED BY THE BIDDER FOR EACH CAST HOUSE:

- 1. Welding machine- 02 Nos. min
- 2. Gas Cutting set- 02 Nos. min
- 3. Pipe bending machine 01 No. min
- 4. Chain Pulley blocks- 02 No min.(1T and 2T)
- 5. Portable grinder 01 No.min
- 6. Portable drilling machine 01 No.min
- 7. Tool box with complete set of tools 03 sets
- 8. Mechanical puller 01 No.
- 9. Slings, D-Shackles & Lifting tools and tackles 01 set each of 1T,2T and 5T Capacity.

# SPECIFIC SAFETY AND ENVIRONMENT REQUIREMENT

- 1) Canvas hand gloves.
- 2) Leather hand gloves & apron.
- 3) Dust / Mist respirator
- 4) Safety Shoe (4" ankle height)
- 5) Safety Helmet
- 6) Safety goggles
- 7) Cotton Overall
- 8) Ear plug
- 9) Ear muff
- 10) Safety belt.

The above items as per job requirement are to be provided by the contractor to their workmen at their own cost.

#### LIST OF FREE ISSUE MATERIALS TO BE SUPPLIED BY NALCO:

- 1. All kind of structural like beams, angles channels & flats.
- 2. All kind of sheets and plates like MS Plates, SS Plates, Chequerred plates.
- 3. All types of lubricants i.e : Grase , Oil etc.(consumables)
- 4. All types of gaskets.(consumables)
- 5. All types of fasteners, split pins, circlips.



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**ANNEXURE-B3** 

# SPECIAL CONDITIONS OF CONTRACT

#### SUB: MECHANICAL MAINTENANCE CONTRACT FOR CAST HOUSE, SMELTER PLANT.

- 1) Consumables like Oxygen, DA, electrodes etc. required for the job are to be arranged by the contractor at their cost. Electrodes to be used for welding & fabrication job shall be of L & T, Advani-Oerlicon, Diffusion, Essab, D&H make only or Nalco's approved electrodes. No other make shall be allowed for use.
- 2) Paints and primer are to be supplied by the contractor at their cost and should be of "Berger", "Jenson & Nicholson", "Asian", "Shalimar", "Nerolac" brand only.
- 3) Any spare parts and consumables like steel sections, cleaning agents / solvents, lubricants, markin cloth, cotton waste etc. required for maintenance work will be provided by NALCO free of cost.
- 4) After execution of the jobs, a copy of job card duly signed by the Engineer-in-charge (EIC) / his authorized representative is to be submitted to the EIC immediately. Job cards & bills are to be submitted in the prescribed format only. Requisite stationeries for bill submission to be arranged by the contractor.
- 5) All tools, tackles, machineries etc., required for the jobs are to be arranged by the contractor except for the lifting equipments like Forklift, Hydra crane, Overhead crane & mobile crane, which will be arranged by NALCO as & when required as per availability. Advance intimation of the requirement to be given to the EIC.
- 6) All surplus consumables if any generated during maintenance including off cuts / cut pieces of steel will have to be returned to Nalco's store immediately after the completion of the job or as directed by the EIC or his representative.
- 7) The contractor shall not utilize the consumables for any job other than those specified under scope of the contract.
- 8) Work is to be carried out if required on round the clock basis & the time schedule for completion of job is to be strictly followed as per Nalco's requirement. In matters of work execution, the decision of EIC is final and to be strictly followed.
- 9) The work spot has to be cleaned after execution of work and all the scrap steel & metallic parts, used spares, used jute, used oil, grease etc. are to be shifted to the designated locations earmarked in that area as per the direction of EIC or his authorized representative.
- 10) The welders and other technicians deployed for the job should have the desired requisite experience for carrying out the job.
- 11) In case of labour supply, against clause no: 350 & 367 ,the contractor has to ensure deployment of manpower as per the requirement of EIC or his authorized representative in the respective areas as per the schedule. Any change in the schedule will be communicated to the contractor before one month in advance. However if the contractor fails to supply the required manpower, penalty as per the following formula will be levied to the contractor at awarded rate for item no: 350 and 367.
  - Daily wage as per NALCO guideline for the worker(s) on the day of absent along with 25% extra as penalty rounded to nearest rupee per shift shall be deducted from the monthly running account bills of the contractor.



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12) It is also envisaged that the contractor shall depute a gang of minimum two skilled (one fitter &one welder) and two unskilled manpower (for each of Cast House A & B)in general shift on Sundays and holidays to take care of the emergency maintenance activities to be carried out through contract. However the contractor has to arrange additional manpower during odd hours if required.

- 13) In all cases of controversies / disputes regarding technical matters in connection with execution of job, the decision of the engineer-in-charge shall be final and binding on the contractor.
- 14) Contractor has to execute the jobs simultaneously in two different locations i.e. (CH-A & CH-B). Contractor will take full responsibility (i). to ensure proper workmanship, good quality of work, adequate supervision, safe & smooth execution of the jobs and (ii).to ensure for continuous supervision of the jobs separately for CH-A & CH-B on regular basis without any additional cost to NALCO. It is the responsibility of the contractor to effective deployment of workmen, to ensure compliance of safety norms, arrangement of gate passes and other statutory requirements etc. for successful execution of the jobs.
- 15) In case of retirement/retrenchment and/or long absenteeism of workmen, new suitable workmen can be engaged in his place only from the list of suitable workmen available with smelter plant HRD. The suitability of the workman for the work will be certified by EIC.
- 16) In case of emergency situation (Half Yearly & Annual Shut Down, Major Repair & Breakdown) contractor has to arrange additional suitable man power( over & above the existing resources) maximum up to 10(Ten) number purely on temporary basis to mitigate the emergency situation.
- 17) If contractor continues to fail in providing the sanctioned manpower the contractor shall be liable to pay penalty at twice the prevalent Lo rate @ per man days less supplied. The penalty amount shall be recoverable for any bill and/or EMD/SD of the contractor without any further reference to him.
- The components of wages which are paid annually (Leave Wages and Bonus) or at the end of the contract (Retrenchment Benefit and Gratuity) as applicable, is to be retained from the monthly RA Bills of the contractor based on recommendation/certification of HRD in respective HR clearance as these components are not paid on monthly basis. The amount so retained will be released to the contractor based on recommendation/certification of HRD on production of documentary evidence against payment of these wage related components to the bank accounts of the workers.
- 19) The contractor shall have to pay Bonus/Ex-gratia to all his workmen as per the provisions of the Payment of Bonus Act, 1965 before "Durga Puja" every year or at the time of full and final settlement, if the contract is completed before "Durga Puja".

Note: Total number of gate passes admissible for this contract (for both vendors) shall be limited to 86 (Eighty Six) Nos. which consists of 22 (Twenty Two) Nos. of Skilled Workers, 54 (Fifty Four) Nos. of Semi- Skilled Workers & 10 (Ten) Nos. of Un-Skilled Workers including off reserve, but excluding supervisor and staff. However, division of total workmen between the two vendors will be based on mutually agreed and subject to acceptance of Engineer-in-Charge.

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# **ANNEXURE-B4**

# **QUANTITY & RATE SCHEDULE**

# SUB: MECHANICAL MAINTENANCE CONTRACT FOR CAST HOUSE, SMELTER PLANT.

SI. No.	Item Description	Qty.	UoM	Material Component (In ₹)	Service Component (In ₹)	Total unit Rate (In ₹)	Amount (In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	8 = (7 x 3)
1	Replacement of mould	1,036.00	Each	0.01	46.61	46.62	48298.32
2	Replacement of roller spacer bearing of	1.00	SET	20.12	127.15	147.27	147.27
3	Replacement of tie rod along with bearin	1.00	SET	0.01	127.14	127.15	127.15
4	Dismantling of casting conveyor & fittin	61.00	SET	0.01	874.25	874.26	53329.86
5	Repair of casting conveyor:	1.00	SET	0.01	26708.18	26708.19	26708.19
6	Replacement of casting conveyor	1.00	SET	0.01	20344.90	20344.91	20344.91
7	Replacement of rail of casting conveyor:	1.00	Meter	3.49	69.93	73.42	73.42
8	Replacement of cooling water pump:	3.00	Each	0.01	1483.75	1483.76	4451.28
9	Cleaning of suction strainer/ foot valve	5.00	Each	0.01	886.99	887.00	4435.00
10	Repair of cooling water piping of castin	39.00	Each	0.01	1112.81	1112.82	43399.98
11	Replacement of roller, bearing, sprocket	1.00	SET	0.01	556.38	556.39	556.39
12	Repair of complete cross conveyor & repl	1.00	SET	0.01	7841.13	7841.14	7841.14
13	Replacement of cooling conveyor drive sh	1.00	Each	0.01	1462.63	1462.64	1462.64
14	Replacement of layer conveyor drive shaf	5.00	Each	0.01	1112.81	1112.82	5564.10
15	Replacement of chain of cooling conveyor	1.00	Each	0.01	729.99	730.00	730.00
16	Replacement of rail of cooling conveyor:	1.00	Meter	3.79	111.22	115.01	115.01
17	Replacement of side flap of cooling conv	1.00	Each	0.01	466.01	466.02	466.02
18	Cleaning of water spraying system:of coo	1.00	Each	0.01	1048.58	1048.59	1048.59
19	Cleaning of water Jacket of cooling cham	1.00	Each	0.01	1483.75	1483.76	1483.76
20	Replacement of chain of layer conveyor (	1.00	Each	0.01	609.42	609.43	609.43
21	Replacement of rail of layer conveyor:	1.00	Meter	4.23	107.49	111.72	111.72
22	Repair & replacement of grab:	1.00	SET	0.01	2225.64	2225.65	2225.65
23	Repair & replacement of stack table :	1.00	SET	0.01	699.05	699.06	699.06
24	Repair & replacement of stack table brak	5.00	SET	0.01	2437.76	2437.77	12188.85
25	Repair & replacement of roller assembly	1.00	SET	0.01	463.65	463.66	463.66



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.	item bescription	Qty.	JOIVI	Component	Component	Rate	(In ₹)
	-			(In ₹)	(In ₹)	(ln ₹)	(Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	8 = (7 x 3)
26	Replacement of chain of stack conveyors-	1.00	Meter	0.01	81.57	81.58	81.58
27	Replacement of stack transfer fork:	5.00	SET	0.01	2814.35	2814.36	14071.80
28	Fabrication & replacement of stack rest:	1.00	Each	32.50	278.03	310.53	310.53
29	Replacement of rail of stack conveyor- I	1.00	Meter	3.26	152.58	155.84	155.84
30	Repair of stack conveyor- III (160 mm pi	1.00	Meter	2.44	115.27	117.71	117.71
31	Replacement of stack conveyor- III (160	1.00	Meter	0.01	129.68	129.69	129.69
32	Stack rest fitting:	1,331.00	Each	0.01	61.41	61.42	81750.02
33	Mould bolt tightening (one mould):	7,039.00	Each	0.01	34.94	34.95	246013.05
34	Casting wheel replacement:	3.00	Each	0.01	815.90	815.91	2447.73
35	Casting conveyor chain cover opening/fit	387.00	Each	0.01	116.48	116.49	45081.63
36	Maintenance of drop-out device	5.00	Each	0.01	232.99	233.00	1165.00
37	Stack conveyor-3 bearing replacement	1.00	Each	0.01	2330.40	2330.41	2330.41
38	Dismantling of copper ring mould:	5.00	SET	0.01	2331.21	2331.22	11656.10
39	Fitting of copper ring mould:	5.00	SET	0.01	2331.21	2331.22	11656.10
40	Dismantling & replacement of casting whe	1.00	SET	0.01	3496.35	3496.36	3496.36
41	Maintenance of Plate Heat Exchanger (PHE	33.00	Each	0.01	2596.60	2596.61	85688.13
42	Replacement of gasket of casting water P	5,682.00	Each	0.01	107.49	107.50	610815.00
43	Dismantling, erection & fixing of rotary	84.00	Each	51.22	524.44	575.66	48355.44
44	Dismantling, rectification and fixing of	87.00	Each	51.22	524.44	575.66	50082.42
45	Dismantling, rectification & fixing of	98.00	Each	32.50	667.40	699.90	68590.20
46	Dismantling, rectification & fixing of t	91.00	Each	0.01	460.79	460.80	41932.80
47	Fabrication of casting water header cove	1.00	Each	512.15	7414.98	7927.13	7927.13
48	Dismantling & erection of casting water	117.00	Each	0.01	463.65	463.66	54248.22
49	Repair of cooling water header assembly	5.00	Each	143.87	4078.23	4222.10	21110.50
50	Replacement of header with manifold & tr	1.00	Each	0.01	2797.07	2797.08	2797.08
51	Replacement of header cylinder:	3.00	Each	0.01	407.75	407.76	1223.28
52	Replacement of manifold trolley wheel be	10.00	Each	0.01	582.53	582.54	5825.40
53	Repair of single manifold in position:	3.00	Each	60.52	1205.56	1266.08	3798.24
54	Replacement of single manifold:	1.00	Each	32.50	1165.61	1198.11	1198.11
55	Casting water hose replacement:	8.00	Each	0.01	1298.28	1298.29	10386.32
56	Replacement of tilting conveyor	61.00	Each	0.01	33.02	33.03	2014.83



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.	•	,		Component	Component	Rate	(In ₹)
1	2	3	4	(In ₹) 5	(In ₹) 6	(In ₹) 7 = (5 + 6)	(Excluding GST) 8 = (7 x 3)
	roller:	<b>J</b>	7	J	0	7 - (3 + 0)	0 - (7 X 3)
57	Dismantling, repair & fitting of casting	1.00	Each	0.01	7861.70	7861.71	7861.71
58	Replacement of bearing of casting water	1.00	SET	0.01	2967.55	2967.56	2967.56
59	Strainer cleaning of casting water pump:	173.00	Each	0.01	407.75	407.76	70542.48
60	Casting water delivery filter cleaning &	3.00	Each	0.01	445.05	445.06	1335.18
61	Repair/ replacement of roller of bar str	418.00	Each	0.01	445.05	445.06	186035.08
62	Repair & replacement of roller of sensor	256.00	Each	0.01	248.36	248.37	63582.72
63	Maintenance of PHE of lub. oil of rollin	3.00	Each	0.01	2437.76	2437.77	7313.31
64	Gasket replacement of PHE plates:	812.00	Each	0.01	82.04	82.05	66624.60
65	Repair & replacement of emulsion pump:	8.00	Each	0.01	1631.83	1631.84	13054.72
66	Maintenance of PHE of emulsion:	20.00	Each	0.01	5935.12	5935.13	118702.60
67	Gasket replacement of plates: .	1,375.00	Each	0.01	74.13	74.14	101942.50
68	Opening and fitting of transmission gear	5.00	Each	0.01	6411.45	6411.46	32057.30
69	Opening and fitting of transmission gear	5.00	Each	0.01	741.85	741.86	3709.30
70	Replacement of damaged gear of transmiss	1.00	Each	0.01	2596.60	2596.61	2596.61
71	Replacement of damaged bearings of trans	1.00	Each	0.01	2596.60	2596.61	2596.61
72	Replacement of stand oil/ gear oil pump:	3.00	Each	0.01	466.01	466.02	1398.06
73	Replacement of shear pin of stand:	1.00	Each	0.01	262.19	262.20	262.20
74	Replacement of spare stand:	1.00	Each	0.01	278.17	278.18	278.18
75	Replacement of wheel in emulsion paper c	1.00	Each	0.01	232.99	233.00	233.00
76	Cutting of cobbling in stands:	1.00	Each	0.01	370.91	370.92	370.92
77	Alignment of long tilting conveyor:	75.00	Each	0.01	699.34	699.35	52451.25
78	Alignment of small tilting conveyor.	1.00	Each	0.01	524.42	524.43	524.43
79	Replacement of long tilting conveyor:	5.00	Each	0.01	1818.09	1818.10	9090.50
80	Replacement of small tilting conveyor:	5.00	Each	0.01	852.84	852.85	4264.25
81	Repair of emulsion paper conveyor.	573.00	Meter	0.01	87.39	87.40	50080.20
82	Replacement of emulsion paper conveyor.	115.00	Meter	0.01	99.05	99.06	11391.90
83	Cleaning & guide replacement of rod quen	10.00	SET	0.01	927.32	927.33	9273.30
84	Replacement of barrel collapse / expansi	3.00	Each	0.01	2447.42	2447.43	7342.29
85	Replacement of pin & bushes of segments	3.00	Each	0.01	3412.87	3412.88	10238.64
86	Replacement of flap assembly:	3.00	Each	0.01	815.55	815.56	2446.68



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.	item bescription	Qty.	COIVI	Component	Component	Rate	(In ₹)
				(In ₹)	(ln ₹)	(In ₹)	(Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	8 = (7 x 3)
87	Replacement of couplings of reel:	1.00	Each	0.01	1020.07	1020.08	1020.08
88	Replacement of coil lift table cylinder:	10.00	Each	0.01	1048.87	1048.88	10488.80
89	Replacement of coil carriage cylinder:	1.00	Each	0.01	815.55	815.56	815.56
90	Replacement of main shear knife drum & s	1.00	Each	0.01	5594.98	5594.99	5594.99
91	Replacement of bearing of main shear:	1.00	Each	0.01	2596.60	2596.61	2596.61
92	Complete overhauling of main shear assem	5.00	Each	0.01	6527.46	6527.47	32637.35
93	Complete overhauling of crop shear assem	1.00	Each	0.01	3729.97	3729.98	3729.98
94	Replacement of plywood of unloading plat	13.00	Each	0.01	101.71	101.72	1322.36
95	Fabrication of steel belt for casting wh	1.00	Each	0.01	254.30	254.31	254.31
96	Replacement of water spraying nozzles of	5.00	Each	0.01	34.39	34.40	172.00
97	Replacement of coiler output shaft.	5.00	Each	970.00	17294.04	18264.04	91320.20
98	Replacement of strap guides	10.00	Each	0.01	524.42	524.43	5244.30
99	Replacement of LT wheel:	1.00	SET	0.01	5595.75	5595.76	5595.76
100	Replacement of LT guide wheel (2 nos. pe	1.00	SET	0.01	1165.59	1165.60	1165.60
101	Replacement of CT wheel:	5.00	SET	0.01	5828.57	5828.58	29142.90
102	Replacement of CT guide wheels (2 nos. p	5.00	SET	0.01	2331.41	2331.42	11657.10
103	Replacement of LT/CT gear box:	13.00	SET	0.01	4079.98	4079.99	53039.87
104	Replacement of Hoist Gear Box :	1.00	SET	0.01	13395.12	13395.13	13395.13
105	Replacement of cabin trolley gear box:	1.00	Each	32.50	2330.64	2363.14	2363.14
106	Replacement of brake assembly of LT/ CT/	25.00	Each	32.50	1204.92	1237.42	30935.50
107	Replacement of brake disc of LT/ CT/ MH/	5.00	Each	0.01	741.85	741.86	3709.30
108	Replacement of wire rope of main hoist:	1.00	Each	0.01	4662.45	4662.46	4662.46
109	Replacement of main hoist hook per crane	3.00	SET	0.01	927.32	927.33	2781.99
110	Replacement of hoist drum of MH/ AH:	1.00	Each	0.01	4451.33	4451.34	4451.34
111	Replacement of AH assembly carrying pull	3.00	Each	0.01	2225.64	2225.65	6676.95
112	Replacement of MH assembly consisting of	1.00	Each	0.01	4196.81	4196.82	4196.82
113	Replacement of wire rope of Auxilary hoi	3.00	Each	0.01	2331.41	2331.42	6994.26
114	Replacement of guide rollers of main hoi	5.00	Each	0.01	463.65	463.66	2318.30
115	Replacement of cabin trolley wheel:	1.00	Each	54.47	1483.77	1538.24	1538.24
116	Replacement of Cabin glass	1.00	Each	0.01	1096.97	1096.98	1096.98



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.				Component (In ₹)	Component (In ₹)	Rate (In ₹)	(In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	$8 = (7 \times 3)$
117	Replacement of rail with alignment, leve	1.00	Meter	0.01	487.52	487.53	487.53
118	Alignment/levelling of rail with	566.00	Meter	0.01	74.15	74.16	41974.56
119	mountin  Repair & replacement of operator seat:	1.00	Each	0.01	1271.66	1271.67	1271.67
120	Replacement of operator cabin.:	1.00	Each	326.37	10046.35	10372.72	10372.72
121	All mounting bolts tightening:	15.00	SET	0.01	3900.45	3900.46	58506.90
122	Greasing of all grease points of one ECL	3.00	Each	0.01	2034.65	2034.66	6103.98
123	Replacement of pulley block of main hois	1.00	Each	167.54	5828.60	5996.14	5996.14
124	Replacement of LT/CT wheel or LT/CT gear	1.00	SET	0.01	2098.09	2098.10	2098.10
125	EOT crane wheel bearing and mounting bol	1.00	SET	0.01	2331.41	2331.42	2331.42
126	Replacement of Hoist Gear Box	1.00	SET	0.01	5828.57	5828.58	5828.58
127	Replacement of wire rope:	1.00	Each	0.01	1864.98	1864.99	1864.99
128	Replacement of rail with alignment(per M	36.00	Meter	0.01	466.21	466.22	16783.92
129	Alignment/levelling of rail with mountin	478.00	Meter	0.01	74.15	74.16	35448.48
130	Repair & replacement of hydraulic cylind	1.00	Each	0.01	3709.45	3709.46	3709.46
131	Overhauling of charging assembly:	1.00	SET	0.01	6994.30	6994.31	6994.31
132	Leveling & alignment of cooling drum:	1.00	Each	256.08	7247.66	7503.74	7503.74
133	Repair/ replacement of discharge vane of	1.00	SET	307.29	3920.57	4227.86	4227.86
134	Replacement of gearbox of drum cooler:	10.00	Each	0.01	1981.52	1981.53	19815.30
135	Cleaning of water tank of drum cooler:	1.00	Each	0.01	2034.65	2034.66	2034.66
136	Overhauling of blower of rotary furnace:	1.00	SET	0.01	1854.69	1854.70	1854.70
137	Replacement of blower of rotary furnace:	1.00	SET	0.01	1854.69	1854.70	1854.70
138	Leveling & alignment of rotary furnace:	1.00	Each	256.08	7247.66	7503.74	7503.74
139	Replacement & repair of burner of rotary	1.00	Each	0.01	1298.28	1298.29	1298.29
140	Replacement/ repair of radial/ axial rol	39.00	Each	0.01	2797.46	2797.47	109101.33
141	Replacement of bag filter with cage (set	1.00	SET	0.01	11189.97	11189.98	11189.98
142	Replacement of impeller of blower of bag	1.00	Each	0.01	1854.69	1854.70	1854.70
143	Lubrication of open gear /girth gear of	10.00	Each	0.01	699.64	699.65	6996.50
144	Replacement of gearbox of rotary furnace	1.00	Each	0.01	2331.21	2331.22	2331.22



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.				Component	Component	Rate	(In ₹)
1	2	3	4	(In ₹) 5	(In ₹) 6	(In ₹) 7 = (5 + 6)	(Excluding GST) 8 = (7 x 3)
145	Replacement/ repair of skimming tool hoi	3.00	Each	0.01	1483.75	1483.76	4451.28
146	Replacement of skimming tool:	3.00	SET	0.01	741.85	741.86	2225.58
147	Replacement / repair of radial/ axial ro	1.00	Each	0.01	2797.46	2797.47	2797.47
148	Cleaning of water tank:	1.00	Each	0.01	2034.65	2034.66	2034.66
149	Leveling & alignment of cooling drum:	1.00	Each	256.08	6039.72	6295.80	6295.80
150	Repair/ replacement of discharge vane of	1.00	SET	307.29	3920.57	4227.86	4227.86
151	Replacement of bag filter with cage:	1.00	SET	0.01	5594.98	5594.99	5594.99
152	Replacement/ repair of blower of bag hou	1.00	SET	0.01	3263.70	3263.71	3263.71
153	Replacement of impeller of blower of bag	1.00	Each	0.01	2797.46	2797.47	2797.47
154	Repair of screw conveyor:	1.00	SET	0.01	3263.70	3263.71	3263.71
155	Lubrication of open gear /girth gear :	1.00	Each	0.01	699.64	699.65	699.65
156	Backwash filter (ADAM make) cleaning of	32.00	Each	0.01	1121.34	1121.35	35883.20
157	Duplex water filter cartridge cleaning &	1.00	Each	0.01	445.05	445.06	445.06
158	Chip evacuator chips cleaning:	25.00	Each	0.01	762.97	762.98	19074.50
159	Chip evacuator blower dismantling & erec	1.00	Each	0.01	762.97	762.98	762.98
160	Chip evacuator impeller cleaning::	1.00	Each	0.01	445.05	445.06	445.06
161	Mould table replacement and alignment:	48.00	Each	0.01	1881.17	1881.18	90296.64
162	Alignment of billet mould table:	17.00	Each	0.01	745.97	745.98	12681.66
163	Replacement of anode stem/ busbar mould	8.00	Each	0.01	2225.64	2225.65	17805.20
164	Replacement of keystone pne. actuator:	1.00	Each	0.01	1298.28	1298.29	1298.29
165	Replacement of butterfly valve of size:	1.00	Each	0.01	2225.64	2225.65	2225.65
166	Replacement of butterfly valves of size	5.00	Each	0.01	1112.81	1112.82	5564.10
167	Return turbine pump replacement:	10.00	Each	0.01	3263.70	3263.71	32637.10
168	Return Turbine Pump suction strainer cle	70.00	Each	0.01	1080.89	1080.90	75663.00
169	Submersible pump dismantling & erection:	1.00	Each	0.01	1864.98	1864.99	1864.99
170	Replacement of mould of anode stem & bus	22.00	Each	0.01	463.65	463.66	10200.52
171	Replacement of starting shoe of Anode st	19.00	Each	0.01	466.21	466.22	8858.18
172	Replacement of starting shoe base plate	13.00	Each	0.01	1049.02	1049.03	13637.39
173	Alignment of mould table of bus bar & an	3.00	Each	0.01	741.85	741.86	2225.58



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			<b>I</b>				
SI. No.	Item Description	Qty.	UoM	Material Component (In ₹)	Service Component (In ₹)	Total unit Rate (In ₹)	Amount (In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	8 = (7 x 3)
174	Shear pin replacement and table alignmen	22.00	Each	0.01	1483.75	1483.76	32642.72
175	Replacement of filter board	3.00	Each	0.01	1112.81	1112.82	3338.46
176	Replacement of backwasing pump with alig	3.00	Each	0.01	1112.81	1112.82	3338.46
177	Return turbine pump overhauling	8.00	Each	0.01	4451.33	4451.34	35610.72
178	Exit conveyor roller replacement with ch	46.00	Each	0.01	370.91	370.92	17062.32
179	Infeed conveyor roller replacement (vert	75.00	Each	0.01	466.21	466.22	34966.50
180	Infeed conveyor chain pad replacement:	1.00	Each	0.01	127.14	127.15	127.15
181	Infeed conveyor guide pad replacement.	17.00	Each	0.01	185.44	185.45	3152.65
182	Infeed conveyor chain replacement (per s	19.00	Each	0.01	1112.81	1112.82	21143.58
183	Billet pusher cylinder replacement:	1.00	Each	0.01	278.17	278.18	278.18
184	Saw feed cylinder dismantling & erection	1.00	Each	0.01	649.11	649.12	649.12
185	Clamping cylinder dismantling & erection	1.00	Each	0.01	190.72	190.73	190.73
186	Measuring head gear box dismantling & er	1.00	Each	0.01	370.91	370.92	370.92
187	Measuring head gear box replacement:	1.00	Each	0.01	3030.60	3030.61	3030.61
188	Removal refitting of measuring head asse	1.00	Each	0.01	8902.71	8902.72	8902.72
189	Replacement of saw blade:	1.00	Each	0.01	278.17	278.18	278.18
190	Cutting machine clamping fixture bush re	1.00	Each	0.01	5935.12	5935.13	5935.13
191	Removal repositioning of scrap conveyor	96.00	Each	0.01	508.63	508.64	48829.44
192	Removal of saw blade,saw guard,frame,lif	1.00	Each	0.01	11189.97	11189.98	11189.98
193	Tubular Heat Exchanger cleaning:	8.00	Each	0.01	317.88	317.89	2543.12
194	Tubular heat exchanger replacement.	1.00	Each	0.01	254.30	254.31	254.31
195	Homo FCE bogie platform repair / straigh	81.00	Each	409.72	3179.18	3588.90	290700.90
196	Homo FCE baffle plate (SS) straightening	5.00	Each	204.86	882.12	1086.98	5434.90
197	Homo furnace roof plate (SS) straighteni	1.00	Each	204.86	741.88	946.74	946.74
198	Bogie side wall plate positioning & stra	13.00	Each	0.01	1515.28	1515.29	19698.77
199	Forced cooling fan silencer dismantling	1.00	Each	0.01	1398.71	1398.72	1398.72
200	Dismantling & erection of re- circulation	23.00	Each	82.88	2744.40	2827.28	65027.44
201	Repair of re-circulation fan:	23.00	Each	64.99	3136.46	3201.45	73633.35
202	Dismantling & erection of forced	1.00	Each	0.01	1112.81	1112.82	1112.82



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SI.	Itom Description	Otv	UoM	Material	Service	Total unit	Amount
No.	Item Description	Qty.	UOIVI	Component	Component	Rate	Amount (In ₹)
				(In ₹)	(ln ₹)	(In ₹)	(Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	8 = (7 x 3)
	cooling						
203	Dismantling & erection of forced cooling	3.00	Each	0.01	1165.59	1165.60	3496.80
204	Door rope replacement.	15.00	Each	0.01	649.11	649.12	9736.80
205	Door chain replacement.	1.00	Each	0.01	649.11	649.12	649.12
206	Bogie drive unit dismantling & replaceme	15.00	Each	0.01	1854.69	1854.70	27820.50
207	Bogie drive assembly overhauling:	8.00	Each	0.01	2318.38	2318.39	18547.12
208	Cross travel/Long Travel chain repair	58.00	Each	0.01	190.72	190.73	11062.34
209	Mobile cooler / Bogie drive wheel bearin	175.00	Each	0.01	649.11	649.12	113596.00
210	Mobile cooler / Bogie drive wheel bearin	1,505.00	Each	0.01	333.66	333.67	502173.35
211	Dismantling & erection of cooling tower	1.00	Each	0.01	1398.71	1398.72	1398.72
212	Dismantling & erection of hyd. cylinder:	1.00	Each	0.01	2925.31	2925.32	2925.32
213	Repair of hyd. cylinder:	1.00	Each	0.01	1398.71	1398.72	1398.72
214	Dismantling & erection of fume exhaust b	1.00	Each	102.43	1271.67	1374.10	1374.10
215	Induction furnace setting & removal:	1.00	Each	0.01	1483.75	1483.76	1483.76
216	Dismantling & erection of spout.	1.00	Each	0.01	291.25	291.26	291.26
217	Replacement of Casting Water Pump.	18.00	Each	0.01	1112.81	1112.82	20030.76
218	Ind. F'ce former setting & removal.	1.00	Each	102.43	1568.22	1670.65	1670.65
219	Induction furnace heat exchanger cleanin	1.00	Each	0.01	1271.66	1271.67	1271.67
220	Snif Degasser rotor replacement:	3.00	Each	0.01	1483.75	1483.76	4451.28
221	Snif degasser rotor assembly:	1.00	Each	0.01	508.63	508.64	508.64
222	Snif degasser cover lift cylinder replac	1.00	Each	0.01	407.75	407.76	407.76
223	Snif degasser tilting cylinder replaceme	1.00	Each	0.01	556.38	556.39	556.39
224	Snif Degasser spout replacement.	10.00	Each	0.01	741.85	741.86	7418.60
225	Snif degasser top cover replacement / er	1.00	Each	0.01	741.85	741.86	741.86
226	Nitrogen plant compressor Heat Exchanger	8.00	Each	0.01	1165.59	1165.60	9324.80
227	Nitrogen plant compressor Heat Exchanger	3.00	Each	0.01	815.90	815.91	2447.73
228	Nitrogen plant compressor water jacket c	3.00	Each	0.01	635.80	635.81	1907.43
229	Nitrogen plant PSA tower CMS, Dehydrated	1.00	Each	0.01	1271.66	1271.67	1271.67
230	Nitrogen plant Copper De-oxidation Unit	1.00	Each	0.01	1864.98	1864.99	1864.99
231	PSA and Cu De Oxo heat exchanger cleanin	1.00	Each	0.01	762.97	762.98	762.98
232	Replacement of complete blower	3.00	SET	0.01	1854.69	1854.70	5564.10



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.	item bescription	Qty.	CON	Component (In ₹)	Component (In ₹)	Rate (In ₹)	(In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	$8 = (7 \times 3)$
	(per blow					•	, ,
233	Replacement of Impeller (1 no.) for 35 T	1.00	Each	0.01	1854.69	1854.70	1854.70
234	Replacement of tilting cylinder (1 no.)	3.00	Each	697.46	17294.04	17991.50	53974.50
235	Dismantling & erection of tilting pedest	3.00	Each	473.53	15260.10	15733.63	47200.89
236	Positioning of twisted 35 T fce of CH- A	10.00	Each	614.58	15132.28	15746.86	157468.60
237	Dismantling & fitting of burner housing	1.00	Each	32.50	2188.47	2220.97	2220.97
238	Tilting cylinder head repair of 35 T fur	1.00	Each	0.01	1864.98	1864.99	1864.99
239	Fixing shaped brick brackets of 35 T fur	1.00	Each	0.01	1165.59	1165.60	1165.60
240	Impeller cleaning and casing fitting of	25.00	Each	0.01	1112.81	1112.82	27820.50
241	Cleaning of impeller of 45 T furnace of	1.00	Each	0.01	423.80	423.81	423.81
242	Positioning of twisted 45 T FCE of BCF i	1.00	Each	409.72	14411.69	14821.41	14821.41
243	Dismantling & erection of twisted pedest	1.00	Each	512.15	14919.61	15431.76	15431.76
244	Replacement of complete Blower (for CH-B	3.00	SET	0.01	2807.72	2807.73	8423.19
245	Cleaning / replacement of filter (for CH	144.00	Each	0.01	471.96	471.97	67963.68
246	Replacement of Impeller for CH-B furnace	1.00	Each	0.01	1576.49	1576.50	1576.50
247	Replacement of SMCD drive shaft plummer	1.00	Each	882.55	4662.48	5545.03	5545.03
248	Repair of Liquid Metal Charging Door (LM	1.00	Each	0.01	1483.75	1483.76	1483.76
249	Replacement / repair of plummer block of	1.00	Each	0.01	1112.81	1112.82	1112.82
250	Replacement / fitting of sprocket of Liq	1.00	Each	0.01	1515.28	1515.29	1515.29
251	Replacement of Solid Metal Charging Door	1.00	Each	78.21	5002.24	5080.45	5080.45
252	Blower impeller cleaning (for CH-B furna	1.00	Each	0.01	640.78	640.79	640.79
253	Replacement of submersible pump under th	1.00	Each	0.01	2098.09	2098.10	2098.10
254	Repair of submersible pump under the fur	1.00	Each	0.01	1854.69	1854.70	1854.70
255	Replacement of complete blower of WRM/ B	5.00	SET	0.01	2225.64	2225.65	11128.25
256	Cleaning/ replacement of filter of WRM/	10.00	Each	0.01	508.63	508.64	5086.40
257	Replacement of impeller of blower (per b	19.00	Each	0.01	1864.98	1864.99	35434.81



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SI. No.	Item Description	Qty.	UoM	Material Component (In ₹)	Service Component (In ₹)	Total unit Rate (In ₹)	Amount (In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	8 = (7 x 3)
258	Replacement of SMCD gear boxes of tilti	1.00	Each	0.01	3729.97	3729.98	3729.98
259	Repair of tilting cylinder (for any furn	1.00	Each	60.52	9325.77	9386.29	9386.29
260	Replacement of Liquid Metal Charging Doo	39.00	Each	0.01	927.32	927.33	36165.87
261	Replacement of SMCD (per furnace) of any	17.00	Each	0.01	4831.75	4831.76	82139.92
262	Replacement of door cylinder (one no.) o	3.00	Each	0.01	1165.59	1165.60	3496.80
263	Repair of door cylinder (one no.) of CH-	10.00	Each	0.01	699.23	699.24	6992.40
264	Repair & Replacement of chain, shaft, sp	39.00	SET	0.01	2225.64	2225.65	86800.35
265	Replacement of chain of door (for any fu	489.00	Each	0.01	646.79	646.80	316285.20
266	Replacement of pouring trough stand top	39.00	Each	0.01	1112.81	1112.82	43399.98
267	Replacement of flow control valve (per n	1.00	Each	0.01	190.72	190.73	190.73
268	Replacement of manifold block (per no.)	1.00	Each	143.87	1568.22	1712.09	1712.09
269	Alignment & setting of Door (for any fur	241.00	Each	0.01	444.90	444.91	107223.31
270	Replacement &fixing of pit skirt plates	120.00	Each	150.90	490.05	640.95	76914.00
271	Replacement of Heat Resistant Cast Steel	7.00	Metric Tonne	204.86	4069.36	4274.22	29919.54
272	Replacement of Heat Resistant Cast Steel	487.00	Each	0.01	244.71	244.72	119178.64
273	Replacement of spout jack (for any furna	5.00	Each	102.43	1372.19	1474.62	7373.10
274	Replacement of pouring spout (for any fu	25.00	Each	32.50	1462.07	1494.57	37364.25
275	Repair of spout jack :	25.00	Each	32.50	784.09	816.59	20414.75
276	Replacement of pouring trough (for any f	134.00	Each	0.01	701.91	701.92	94057.28
277	Replacement of pouring trough stand (pos	13.00	Each	16.64	1462.07	1478.71	19223.23
278	Tightening of Blower mounting bolts (One	265.00	Each	0.01	233.08	233.09	61768.85
279	Pedestal mounting bolt tightening (One P	442.00	Each	0.01	262.19	262.20	115892.40
280	Tilting Cylinder mounting bolt tightenin	370.00	Each	0.01	278.17	278.18	102926.60
281	Overhauling of blower (for any furnace):	3.00	Each	0.01	1854.69	1854.70	5564.10
282	Blower (per no.) top casing removal (for	15.00	Each	0.01	874.05	874.06	13110.90
283	Pouring trough bearing checking and lubr	51.00	Each	0.01	741.85	741.86	37834.86



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.	item Description	Qty.	UOIVI	Component	Component	Rate	Ainount (In ₹)
				(ln ₹)	(ln ₹)	(In ₹)	(Excluding GST)
1	2	3	4	5	6	7 = (5 + <i>6</i> )	8 = (7 x 3)
284	HFO (Heavy Furnace/Fuel Oil) pressure re	1.00	Each	0.01	254.30	254.31	254.31
285	HFO (Heavy Furnace/Fuel Oil) filters cle	1.00	LOT	0.01	699.39	699.40	699.40
286	Combustion/ atomisation pipe cleaning (f	1.00	LOT	0.01	927.32	927.33	927.33
287	Combustion/atomisation, butterfly valves	17.00	SET	0.01	1223.70	1223.71	20803.07
288	Replacement of Solid Metal Charging Door	1.00	Each	0.01	4080.40	4080.41	4080.41
289	Replacement of lock cylinder of Solid Me	10.00	Each	0.01	1971.12	1971.13	19711.30
290	Repair of lock cylinder of Solid Metal C	5.00	Each	0.01	508.63	508.64	2543.20
291	Replacement of Liquid Metal Charging Doo	5.00	Each	0.01	778.56	778.57	3892.85
292	Greasing of wire rod mill furnaces/45 T	366.00	Each	0.01	1271.44	1271.45	465350.70
293	Furnace tilting cyl clevis pin fixing,(	8.00	Each	0.01	762.97	762.98	6103.84
294	Replacement of LMCD guides of 35/45 MT f	39.00	Each	0.01	1568.20	1568.21	61160.19
295	Dismantling / erection of eqpts.	62.00	Metric Tonne	326.37	1583.92	1910.29	118437.98
296	Fab. of structurals	14.00	Metric Tonne	1601.30	3898.88	5500.18	77002.52
297	Fab. of pouring trough	1.00	Metric Tonne	1601.30	3920.57	5521.87	5521.87
298	Fab. of launder	1.00	Metric Tonne	1646.03	3528.51	5174.54	5174.54
299	Linear welding up to 8mm thick	1,098.00	Meter	111.83	196.02	307.85	338019.30
300	Linear welding(LH) up to 16mm	817.00	Meter	156.56	196.02	352.58	288057.86
301	Linear welding 10mm to 16mm	3,646.00	Meter	156.56	196.02	352.58	1285506.68
302	Linear welding 17mm to 32mm	71.00	Meter	178.92	274.43	453.35	32187.85
303	Linear welding 17mm to 32mm MS	170.00	Meter	178.92	274.43	453.35	77069.50
304	Linear cutting thickness upto 8mm	1,605.00	Meter	75.45	97.99	173.44	278371.20
305	Linear cutting thick 10mm to 16mm	4,646.00	Meter	83.57	196.02	279.59	1298975.14
306	Linear cutting thick 17mm to 32mm	287.00	Meter	117.24	196.02	313.26	89905.62
307 308	Linear gouging of steel & cast iron Linear gouging of steel & cast iron	243.00 23.00	Meter Meter	89.46 111.83	291.27 466.04	380.73 577.87	92517.39 13291.01
309	(inc Fab. & fixing of anchors for	26,301.00	Each	1.28	9.30	10.58	278264.58
310	refractory  Fab. of liners for SMCD & LMCD of	15.00	Each	153.65	370.74	524.39	7865.85
311	BCF FC Fab. of liners for SMCD & LMCD of	1.00	Each	153.65	370.74	524.39	524.39
	45T FC						
312	Fab. of liners for SMCD & LMCD of 35T FC	1.00	Each	190.44	370.74	561.18	561.18
313	Fabrication/ repair of hand railing/ bar	461.00	Meter	80.07	92.66	172.73	79628.53
314	Thermal insulation & covering of	1.00	Square	904.00	291.27	1195.27	1195.27



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The Fig.	SI. No.	Item Description	Qty.	UoM	Material Component	Service Component	Total unit Rate	Amount (In ₹)
HFO pi   Meter   Met						•		(Excluding GST)
Thermal insulation & covering of HFO pi   Meter   Meter	1	2	3	4	5	6	7 = (5 + 6)	8 = (7 x 3)
HFC pt   Meter   Met		I		Meter				
HFO pi	315		1.00		904.00	291.27	1195.27	1195.27
317   Pipe work above gil: 1/2*\(^10 2*)   405.00   Meter   405.50   243.65   267.95   54929.75     318   Pipe work above gil: 3* & 4*.   205.00   Meter   40.50   292.40   332.90   332.90   332.90     320   Pipe work above gil: 10 & 12*.   1.00   Meter   40.50   292.40   332.90   332.90     321   Pipe work in brench: 12*\(^{10} \) & 1.00   Meter   112.56   487.35   599.91   599.91     322   Pipe work in trench: 13*\(^{10} \) & 1*\(^{10} \) & 1.00   Meter   112.56   487.35   599.91   170.94     322   Pipe work in trench: 13*\(^{10} \) & 1.00   Meter   24.30   292.40   316.70   2216.90     323   Pipe work in trench: 16*\(^{10} \) & 8*\(^{10} \)   1.00   Meter   60.75   389.87   450.62   450.62     450.62   450.62   450.62   450.62   450.62     450.62   450.62   450.62   450.62   450.62     450.62   450.62   450.62   450.62   450.62     450.62   450.62   450.62   450.62   450.62     450.62   450.62   450.62   450.62   450.62     450.62   450.62   450.62   450.62   450.62   450.62     450.62   450.62   450.62   450.62   450.62   450.62     450.62   450.62   450.62   450.62   450.62   450.62     450.62   450.62   450.62   450.62   450.62   450.62   450.62     450.62   450.62   450.62   450.62   450.62   450.62   450.62     450.62   450.6	316		1.00		0.01	291.25	291.26	291.26
319   Pipe work above gil : 10 & 12 : 1.00   Meter   40.50   292.40   332.90   332.90   329.00   320	317	Pipe work above g/l : 1/2"to 2"	405.00	Meter	7.59	121.82	129.41	52411.05
320   Pipe work above qtl. 10.8 12".   1.00   Meter   112.56   487.35   599.91   599.91   321   Pipe work in trench: 172'102"   1.00   Meter   10.13   100.81   170.94   170.94   322   Pipe work in trench: 13" & 4".   7.00   Meter   60.75   389.87   450.62   450.62   450.62   324   Pipe work in trench: 10.8 12".   1.00   Meter   60.75   389.87   450.62   450.62   450.62   324   Pipe work in trench: 10.8 12".   1.00   Meter   112.56   974.72   1087.28   1087.28   1087.28   325   Bend repl. Size: 3"   409.00   Each   32.50   331.62   346.12   141550.08   326   Bend repl. Size: 4"   13.00   Each   32.50   588.07   620.57   8067.41   327   Bend repl. Size: 6" & 8"   46.00   Each   46.99   784.09   849.09   39057.68   328   Bend repl. Size: 10" & 12"   25.00   Each   143.87   1078.14   1222.01   30550.25   329   Valve repl. Size: 112" to 2"   203.00   Each   0.01   192.27   192.28   39032.84	318	Pipe work above g/l: 3" & 4".	205.00	Meter	24.30	243.65	267.95	54929.75
321   Pipe work in trench: 1/2"lo2"   1.00   Meter   24.30   292.40   316.70   2216.90	319	Pipe work above g/l : 6" & 8".	1.00	Meter	40.50	292.40	332.90	332.90
322   Pipe work in trench : 3" & 4".   7.00   Meter   24.30   292.40   316.70   2216.90		Pipe work above g/l : 10 & 12".	1.00					
323   Pipe work in trench : 6" & 8".   1.00   Meter   60.75   389.87   450.62   450.62   324   Pipe work in trench : 10 & 12".   1.00   Meter   112.56   974.72   1087.28   10			1.00	Meter				
Pipe work in trench : 10 & 12".   1.00   Meter   112.56   974.72   1087.28   1087.28   1087.28   325   Bend repl. Size : 3"   409.00   Each   32.50   313.62   346.12   141563.08   326   Bend repl. Size : 4"   13.00   Each   32.50   588.07   620.57   8067.41   327   Bend repl. Size : 6" & 8"   46.00   Each   64.99   784.09   849.08   39057.68   328   Bend repl. Size : 10" & 12"   25.00   Each   143.87   1078.14   122.01   30550.25   329   Valve repl. Size : 10" & 12"   203.00   Each   0.01   192.27   192.28   39032.84   330   Valve repl. Size : 6" & 8"   8.00   Each   0.01   317.88   317.99   7947.25   331   Valve repl. Size : 6" & 8"   8.00   Each   0.01   741.85   741.86   5934.88   332   Valve repl. Size : 6" & 8"   8.00   Each   0.01   3864.99   1864.99   1864.99   333   Replacement of valve gland   13.00   Each   0.01   254.30   254.31   3306.03   334   Fabrication of exhaust duct   1.00   Metric   1536.45   15260.10   16796.55   16796.5								
325   Bend repl , Size : 3"   409.00   Each   32.50   313.62   346.12   141563.08     326   Bend repl , Size : 6" 8"   13.00   Each   32.50   588.07   620.57   8067.41     327   Bend repl , Size : 10" & 12"   25.00   Each   44.87   1078.14   1222.01   30550.25     328   Bend repl , Size : 10" & 12"   25.00   Each   0.01   192.27   192.28   39032.84     330   Valve repl, Size : 10" & 12"   203.00   Each   0.01   192.27   192.28   39032.84     331   Valve repl, Size : 6" & 8"   8.00   Each   0.01   741.85   741.86   5934.88     332   Valve repl, Size : 10" & 12"   1.00   Each   0.01   741.85   741.86   5934.88     333   Valve repl, Size : 10" & 12"   1.00   Each   0.01   1864.98   1864.99   1864.99     333   Replacement of valve gland   13.00   Each   0.01   254.30   254.31   3306.03     334   Fabrication of exhaust duct   1.00   Metric   Tonne   1.00   Metric   1536.45   15260.10   16796.55   16796.55     337   Pipe OD upto 16 mm   1.00   Meter   32.50   392.04   424.54   424.54     338   Pipe OD upto 16 mm   1.00   Meter   32.50   392.04   424.54   424.54     339   Pipe OD 16-30 mm   58.00   Meter   32.50   392.04   424.54   424.54     330   Pipe OD the 30 mm   58.00   Meter   32.50   392.04   424.54   424.54     331   Pipe OD fie-30 mm   58.00   Meter   32.50   392.04   424.54   424.55     332   Greasing of plummer block/flanged   430.00   Each   0.01   137.68   137.69   2200148.51     333   Assistance for skilled   15,979.00   Hours   0.01   116.58   116.59   1049.31     344   Assistance for skilled   15,979.00   Hours   0.01   116.58   116.59   1049.31     345   Replacement couplings upto motor   213.00   Each   0.01   381.46   381.47   16784.68     346   Replacement of coupling   53.00   Each   0.01   254.30   254.31   35857.71     347   Replacement of hydraulic   141.00   Each   0.01   1483.75   1483.76   4451.28     348   Hydraulic /Pneumatic cylinder   8.00   Each   0.01   556.38   556.39   4451.12     349   Hydraulic /Pneumatic cylinder   8.00   Each   0.01   741.85   741.86   111127.90     349   Hydr								
326   Bend repl , Size : 4"   13.00   Each   32.50   588.07   620.57   8067.41		•						
327   Bend repl   Size   6" & 8"   46.00   Each   64.99   784.09   849.08   39057.68     328   Bend repl   Size   10" & 12"   25.00   Each   143.87   1078.14   1222.01   30550.25     329   Valve repl   Size   10" & 12"   203.00   Each   0.01   192.27   192.28   39032.84     330   Valve repl   Size   6" & 8"   8.00   Each   0.01   317.88   317.89   7947.25     331   Valve repl   Size   10" & 12"   1.00   Each   0.01   741.85   741.86   5934.88     332   Valve repl   Size   10" & 12"   1.00   Each   0.01   1864.98   1864.99   1864.99     333   Replacement of valve gland   13.00   Each   0.01   254.30   254.31   3306.03     334   Fabrication of exhaust duct   1.00   Metric   Tonne   1536.45   15260.10   16796.55   16796.55     335   Setting of trench cover   43.00   Meter   32.50   392.04   424.54   424.54     336   Pipe OD upto 16 mm   1.00   Meter   32.50   392.04   424.54   424.54     337   Pipe OD Lefo 30 mm   58.00   Meter   32.50   470.45   502.95   29171.10     338   Hyd. pipeline clamping (one clamp)   13.00   Each   16.74   127.15   143.89   1870.57     339   Greasing of plummer block/flanged   bearin   15,979.00   Hours   0.01   137.68   137.69   2200148.51     340   Assistance for skilled   15,979.00   Hours   0.01   116.58   116.59   1049.31     341   Assistance for gigger   9.00   Hours   0.01   381.46   381.47   16784.68     343   Replacement couplings upto motor   213.00   Each   0.01   254.30   254.31   358669.04     344   Replacement couplings upto motor   213.00   Each   0.01   254.30   254.31   35857.71     346   Replacement of Hydraulic   141.00   Each   0.01   1483.75   1483.76   4451.28     347   Replacement of Hydraulic   141.00   Each   0.01   1483.75   1483.76   4451.28     348   Hydraulic /Pneumalic cylinder   8.00   Each   0.01   741.85   741.86   11127.90     349   Hydraulic /Pneumalic cylinder   15.00   Each   0.01   741.85   741.86   11127.90     349   Hydraulic /Pneumalic cylinder   15.00   Each   0.01   741.85   741.86   11127.90     349   Hydraulic /Pneumalic cylinder   15.00   E								
328   Bend repl. Size : 10" & 12"   25.00   Each   143.87   1078.14   1222.01   30550.25     329   Valve repl.size : 172" to 2"   203.00   Each   0.01   192.27   192.28   3903.284     330   Valve repl.size : 6" & 8"   25.00   Each   0.01   317.88   317.89   7947.25     331   Valve repl.size : 6" & 8"   8.00   Each   0.01   741.85   741.86   5934.88     332   Valve repl.size : 10" & 12"   1.00   Each   0.01   1864.98   1864.99   1864.99     333   Replacement of valve gland   13.00   Each   0.01   254.30   254.31   3306.03     334   Fabrication of exhaust duct   1.00   Metric   Tonne   1536.45   15260.10   16796.55   16796.55     335   Setting of trench cover   43.00   Metric   Tonne   44.00   Each   16.74   127.15   143.89   1870.57     340   Assistance for rigger   9.00   Hours   0.01   137.68   137.69   2200148.51     341   Assistance for rigger   9.00   Hours   0.01   116.58   116.59   1049.31     342   Labour assistance of unskilled   2.172.00   Mandays   0.01   854.81   854.82   1856669.04     343   Replacement of couplings upto motor   rating   340   Replacement of Hydraulic   141.00   Each   0.01   254.30   254.31   335857.71     344   Replacement of Hydraulic   141.00   Each   0.01   254.30   254.31   335857.71     345   Replacement of Hydraulic   141.00   Each   0.01   1483.75   1483.76   4451.28     346   Replacement of Hydraulic   141.00   Each   0.01   1483.75   1483.76   4451.28     347   Replacement of Hydraulic   141.00   Each   0.01   1483.75   1483.76   4451.28     348   Hydraulic /Pneumatic cylinder   15.00   Each   0.01   741.85   741.86   11127.90     349   Hydraulic /Pneumatic cylinder   15.00   Each   0.01   741.85   741.86   11127.90     340   Replacement of Lydraulic   15.00   Each   0.01   741.85   741.86   11127.90     344   Replacement of Lydraulic   141.00   Each   0.01   1483.75   1483.76   4451.28     345   Replacement of Hydraulic   141.00   Each   0.01   1483.75   1483.76   4451.28     346   Hydraulic /Pneumatic cylinder   15.00   Each   0.01   741.85   741.86   11127.90     347								
329   Valve repl.size: 1/2",to 2"   203.00   Each   0.01   192.27   192.28   39032.84								
330   Valve repl.size: 3" & 4".   25.00   Each   0.01   317.88   317.89   7947.25								
331   Valve repl.size : 6" & 8"   8.00   Each   0.01   741.85   741.86   5934.88     332   Valve repl.size : 10" & 12"   1.00   Each   0.01   1864.99   1864.99   1864.99     333   Replacement of valve gland   13.00   Each   0.01   254.30   254.31   3306.03     334   Fabrication of exhaust duct   1.00   Metric   Tonne   1536.45   15260.10   16796.55     335   Setting of trench cover   43.00   Metric   Tonne   43.00   Metric   Tonne   44.00   Metric   Tonne   44.00   Each   16.74   127.15   143.89   1870.57     337   Pipe OD upto 16 mm   13.00   Meter   32.50   392.04   424.54   424.54     338   Hyd. pipeline clamping.(one clamp)   13.00   Each   16.74   127.15   143.89   1870.57     339   Greasing of plummer block/flanged   430.00   Each   0.01   42.34   42.35   18210.50     340   Assistance for skilled   15,979.00   Hours   0.01   116.58   137.69   2200148.51     341   Assistance for rigger   9.00   Hours   0.01   116.58   116.59   1049.31     342   Labour assistance of unskilled   2,172.00   Mandays   0.01   854.81   854.82   1856669.04     343   Replacement couplings upto motor rating   344   Replacement couplings upto motor rating   44.00   Each   0.01   254.30   254.31   13478.43     346   Replacement of Hydraulic   141.00   Each   0.01   254.30   254.31   33857.71     347   Replacement of Hydraulic   141.00   Each   0.01   556.38   556.39   4451.12     348   Hydraulic /Pneumatic cylinder   8.00   Each   0.01   556.38   556.39   4451.12     349   Hydraulic /Pneumatic cylinder   15.00   Each   0.01   741.85   741.86   11127.90     349   Hydraulic /Pneumatic cylinder   15.00   Each   0.01   741.85   741.86   11127.90     349   Hydraulic /Pneumatic cylinder   15.00   Each   0.01   741.85   741.86   11127.90     340   Hydraulic /Pneumatic cylinder   15.00   Each   0.01   556.38   556.39   3451.12     341   Hydraulic /Pneumatic cylinder   15.00   Each   0.01   556.38   556.39   3451.12     342   Hydraulic /Pneumatic cylinder   15.00   Each   0.01   556.38   556.39   3451.12     343   Hydraulic /Pneumatic cylin								
332   Valve repl.size : 10" & 12".   1.00   Each   0.01   1864.98   1864.99   1864.99   333   Replacement of valve gland   13.00   Each   0.01   254.30   254.31   3306.03   334   Fabrication of exhaust duct   1.00   Metric   Tonne   1536.45   15260.10   16796.55   16796.55   16796.55   335   Setting of trench cover   43.00   Metric   Tonne   32.50   392.04   424.54   424.54   424.54   336   Pipe OD upto 16 mm   1.00   Meter   32.50   392.04   424.54   424.54   424.54   337   Pipe OD 16-30 mm   58.00   Meter   32.50   470.45   502.95   29171.10   338   Hyd. pipeline clamping.(one clamp)   13.00   Each   16.74   127.15   143.89   1870.57								
Replacement of valve gland   13.00   Each   0.01   254.30   254.31   3306.03								
Setting of trench cover   43.00   Metric Tonne   1536.45   15260.10   16796.55   16796.55   16796.55   16796.55   335   Setting of trench cover   43.00   Metric Tonne   32.50   392.04   424.54   424.54   337   Pipe OD upto 16 mm   58.00   Meter   32.50   392.04   424.54   424.54   337   Pipe OD 16-30 mm   58.00   Meter   32.50   470.45   502.95   29171.10   338   Hyd. pipeline clamping.(one clamp)   13.00   Each   16.74   127.15   143.89   1870.57   1339   Greasing of plummer block/flanged   430.00   Each   0.01   42.34   42.35   18210.50   433.54   433								
Tonne								
Tonne   Tonn				Tonne				
337   Pipe OD 16-30 mm   58.00   Meter   32.50   470.45   502.95   29171.10     338   Hyd. pipeline clamping.(one clamp)   13.00   Each   16.74   127.15   143.89   1870.57     339   Greasing of plummer block/flanged bearin   15,979.00   Hours   0.01   137.68   137.69   2200148.51     340   Assistance for skilled manpower(fitting/   341   Assistance for rigger   9.00   Hours   0.01   116.58   116.59   1049.31     341   Assistance for rigger   9.00   Hours   0.01   116.58   116.59   1049.31     342   Labour assistance of unskilled nature   2,172.00   Mandays   0.01   854.81   854.82   1856669.04     343   Replacement couplings upto motor rating   44.00   Each   0.01   381.46   381.47   16784.68     344   Replacement couplings upto motor rating   53.00   Each   0.01   762.97   762.98   162514.74     345   Replacement of coupling spiders/pads/pi   53.00   Each   0.01   254.30   254.31   13478.43     346   Replacement of Hydraulic hose/Pneumatic   141.00   Each   0.01   254.30   254.31   35857.71     347   Replacement of hoist   3.00   Each   0.01   1483.75   1483.76   4451.28     348   Hydraulic /Pneumatic cylinder replaceme   15.00   Each   0.01   741.85   741.86   11127.90     349   Hydraulic /Pneumatic cylinder replaceme   15.00   Each   0.01   741.85   741.86   11127.90     349   Hydraulic /Pneumatic cylinder replaceme   15.00   Each   0.01   741.85   741.86   11127.90     340   Replacement of the cylinder replaceme   15.00   Each   0.01   741.85   741.86   11127.90     340   Replacement of the cylinder replaceme   15.00   Each   0.01   741.85   741.86   11127.90     340   Replacement of the cylinder replaceme   15.00   Each   0.01   741.85   741.86   11127.90     341   Replacement of the cylinder replaceme   15.00   Each   0.01   741.85   741.86   11127.90	335	Setting of trench cover	43.00		64.99	1001.09	1066.08	45841.44
Hyd. pipeline clamping. (one clamp)   13.00   Each   16.74   127.15   143.89   1870.57				Meter	32.50	392.04	424.54	
State								
bearin	338	Hyd. pipeline clamping.(one clamp) :	13.00	Each	16.74	127.15	143.89	1870.57
manpower(fitting/         9.00         Hours         0.01         116.58         116.59         1049.31           342         Labour assistance of unskilled nature         2,172.00         Mandays         0.01         854.81         854.82         1856669.04           343         Replacement couplings upto motor rating         44.00         Each         0.01         381.46         381.47         16784.68           344         Replacement couplings upto motor rating         213.00         Each         0.01         762.97         762.98         162514.74           345         Replacement of coupling spiders/pads/pi         53.00         Each         0.01         254.30         254.31         13478.43           346         Replacement of Hydraulic hose/Pneumatic         141.00         Each         0.01         254.30         254.31         35857.71           347         Replacement of hoist         3.00         Each         0.01         1483.75         1483.76         4451.28           348         Hydraulic /Pneumatic cylinder replaceme         8.00         Each         0.01         556.38         556.39         4451.12           349         Hydraulic /Pneumatic cylinder replaceme         15.00         Each         0.01         741.85         741.86	339	0 1	430.00	Each	0.01	42.34	42.35	18210.50
341         Assistance for rigger         9.00         Hours         0.01         116.58         116.59         1049.31           342         Labour assistance of unskilled nature         2,172.00         Mandays         0.01         854.81         854.82         1856669.04           343         Replacement couplings upto motor rating         44.00         Each         0.01         381.46         381.47         16784.68           344         Replacement couplings upto motor rating         213.00         Each         0.01         762.97         762.98         162514.74           345         Replacement of coupling spiders/pads/pi         53.00         Each         0.01         254.30         254.31         13478.43           346         Replacement of Hydraulic hose/Pneumatic         141.00         Each         0.01         254.30         254.31         35857.71           347         Replacement of hoist         3.00         Each         0.01         1483.75         1483.76         4451.28           348         Hydraulic /Pneumatic cylinder replaceme         15.00         Each         0.01         741.85         741.86         11127.90	340		15,979.00	Hours	0.01	137.68	137.69	2200148.51
nature         44.00         Each rating         0.01         381.46         381.47         16784.68           344         Replacement couplings upto motor rating         213.00         Each         0.01         762.97         762.98         162514.74           345         Replacement of coupling spiders/pads/pi         53.00         Each         0.01         254.30         254.31         13478.43           346         Replacement of Hydraulic hose/Pneumatic         141.00         Each         0.01         254.30         254.31         35857.71           347         Replacement of hoist         3.00         Each         0.01         1483.75         1483.76         4451.28           348         Hydraulic /Pneumatic cylinder replaceme         8.00         Each         0.01         556.38         556.39         4451.12           349         Hydraulic /Pneumatic cylinder replaceme         15.00         Each         0.01         741.85         741.86         11127.90	341	Assistance for rigger	9.00	Hours	0.01	116.58	116.59	1049.31
rating         213.00         Each rating         0.01         762.97         762.98         162514.74           345         Replacement of coupling spiders/pads/pi         53.00         Each Pacement of Hydraulic hose/Pneumatic         0.01         254.30         254.31         13478.43           346         Replacement of Hydraulic hose/Pneumatic         141.00         Each O.01         254.30         254.31         35857.71           347         Replacement of hoist Start Hydraulic /Pneumatic cylinder replaceme         3.00         Each O.01         1483.75         1483.76         4451.28           349         Hydraulic /Pneumatic cylinder replaceme         15.00         Each O.01         741.85         741.86         11127.90	342		2,172.00	Mandays	0.01	854.81	854.82	1856669.04
344         Replacement couplings upto motor rating         213.00         Each         0.01         762.97         762.98         162514.74           345         Replacement of coupling spiders/pads/pi         53.00         Each         0.01         254.30         254.31         13478.43           346         Replacement of Hydraulic hose/Pneumatic         141.00         Each         0.01         254.30         254.31         35857.71           347         Replacement of hoist         3.00         Each         0.01         1483.75         1483.76         4451.28           348         Hydraulic /Pneumatic cylinder replaceme         8.00         Each         0.01         556.38         556.39         4451.12           349         Hydraulic /Pneumatic cylinder replaceme         15.00         Each         0.01         741.85         741.86         11127.90	343		44.00	Each	0.01	381.46	381.47	16784.68
345         Replacement of coupling spiders/pads/pi         53.00         Each         0.01         254.30         254.31         13478.43           346         Replacement of Hydraulic hose/Pneumatic         141.00         Each         0.01         254.30         254.31         35857.71           347         Replacement of hoist         3.00         Each         0.01         1483.75         1483.76         4451.28           348         Hydraulic /Pneumatic cylinder replaceme         8.00         Each         0.01         556.38         556.39         4451.12           349         Hydraulic /Pneumatic cylinder replaceme         15.00         Each         0.01         741.85         741.86         11127.90	344	Replacement couplings upto motor	213.00	Each	0.01	762.97	762.98	162514.74
346         Replacement of Hydraulic hose/Pneumatic         141.00         Each         0.01         254.30         254.31         35857.71           347         Replacement of hoist         3.00         Each         0.01         1483.75         1483.76         4451.28           348         Hydraulic /Pneumatic cylinder replaceme         8.00         Each         0.01         556.38         556.39         4451.12           349         Hydraulic /Pneumatic cylinder replaceme         15.00         Each         0.01         741.85         741.86         11127.90	345	Replacement of coupling	53.00	Each	0.01	254.30	254.31	13478.43
347         Replacement of hoist         3.00         Each         0.01         1483.75         1483.76         4451.28           348         Hydraulic /Pneumatic cylinder replaceme         8.00         Each         0.01         556.38         556.39         4451.12           349         Hydraulic /Pneumatic cylinder replaceme         15.00         Each         0.01         741.85         741.86         11127.90	346	Replacement of Hydraulic	141.00	Each	0.01	254.30	254.31	35857.71
348         Hydraulic /Pneumatic cylinder replaceme         8.00         Each         0.01         556.38         556.39         4451.12           349         Hydraulic /Pneumatic cylinder replaceme         15.00         Each         0.01         741.85         741.86         11127.90	347		3.00	Each	0.01	1483.75	1483.76	4451.28
349 Hydraulic /Pneumatic cylinder 15.00 Each 0.01 741.85 741.86 11127.90 replaceme		Hydraulic /Pneumatic cylinder						
	349	Hydraulic /Pneumatic cylinder	15.00	Each	0.01	741.85	741.86	11127.90
- 200   CONTROLLION INDOMENSOR NOTICE   COURTING FRONT FROM THE TOTAL FROM THE THE TOTAL FROM TH	350	Semiskilled labour assistance in	6,664.00	Mandays	0.01	1039.60	1039.61	6927961.04



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.	·			Component (In ₹)	Component (In ₹)	Rate (In ₹)	(In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	$8 = (7 \times 3)$
	shift					7 (0 1 9)	· (* 11 o)
351	Semiskilled labour assistance in General	8,000.00	Mandays	0.01	1039.60	1039.61	8316880.00
352	Extra working hour for semi- skilled wor	4,827.00	Hours	0.01	185.84	185.85	897097.95
353	Extra working hour for skilled worker	2,411.00	Hours	0.01	218.62	218.63	527116.93
354	Painting of ICM of CH- A	1.00	Each	6800.00	13985.51	20785.51	20785.51
355	Painting of ICM of CH-B	3.00	Each	8500.00	15733.70	24233.70	72701.10
356	Painting of WRM	1.00	Each	21175.00	27974.99	49149.99	49149.99
357	Painting of ECL Crane	1.00	Each	8500.00	27977.36	36477.36	36477.36
358	Painting of Mukand, Armsell & Sika Crane	1.00	Each	7900.00	24319.84	32219.84	32219.84
359	Painting of other eqpts	1,595.00	Square Meter	142.25	84.74	226.99	362049.05
360	Red oxide painting of inside FCE shell (	1.00	Each	4425.00	4451.35	8876.35	8876.35
361	Numbering & Letter writing Sz: 1 "	1.00	Each	0.25	4.81	5.06	5.06
362	Numbering & Letter writing Sz: 2 "	1.00	Each	0.25	5.49	5.74	5.74
363	Numbering & Letter writing Sz: 3 "	1.00	Each	1.00	11.00	12.00	12.00
364	Numbering & Letter writing Sz: 4 "	1.00	Each	1.00	12.38	13.38	13.38
365	Repair of Sow Mould (C.I.):	1.00	Each	204.86	2034.68	2239.54	2239.54
366	Assistance for welding/cutting (skilled)	3,600.00	Mandays	0.01	1221.53	1221.54	4397544.00
367	Semi-skilled labour assistance in shift(	4,147.00	Mandays	0.01	1039.60	1039.61	4311262.67
368	Semi-skilled labour assistance in Genera	5,167.00	Mandays	0.01	1039.60	1039.61	5371664.87
369	Labour assistance for roll turning(Semi	667.00	Mandays	0.01	1039.60	1039.61	693419.87
370	Extra working Hour for skilled worker fo	1,055.00	Hours	0.01	218.62	218.63	230654.65
371	Extra working Hour for Semi-skilled work	2,075.00	Hours	0.01	185.84	185.85	385638.75
372	Replacement of mould	664.00	Each	0.01	61.41	61.42	40782.88
373	Replacement of Roller, Bush Brg of Casti	1.00	SET	0.01	1049.02	1049.03	1049.03
374	Replacement of entire casting chain, bot	3.00	SET	512.15	21743.03	22255.18	66765.54
375	Removal of moulds for metal cleaning and	65.00	SET	0.01	609.42	609.43	39612.95
376	Replacement of chain of cooling conv	10.00	Each	0.01	2193.98	2193.99	21939.90
377	Repair and replacement of window glass o	1.00	Each	0.01	582.53	582.54	582.54
378	Cleaning of water spraying tray & strain	61.00	Each	0.01	52.94	52.95	3229.95
379	Replacement of chain of cooling conv	10.00	Each	0.01	1950.20	1950.21	19502.10
380	Repair and replacement of window glass o	1.00	SET	0.01	14495.33	14495.34	14495.34



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.		_,		Component (In ₹)	Component (In ₹)	Rate (In ₹)	(In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	$8 = (7 \times 3)$
381	Cleaning of water spraying tray & strain	1.00	SET	51.22	1526.00	1577.22	1577.22
382	Replacement of chain of layer conveyor -	1.00	SET	0.01	3900.45	3900.46	3900.46
383	Replacement of robotic stacker (replacem	1.00	Each	0.01	932.08	932.09	932.09
384	Repair of flap of robotic stacker -	1.00	SET	0.01	2925.31	2925.32	2925.32
385	Replacement of stack table	1,746.00	Each	0.01	21.15	21.16	36945.36
386	Replacement of wire rope of stack table.	1.00	Each	0.01	1165.59	1165.60	1165.60
387	Replacement of sprocket, brg.,chain of s	1.00	Each	102.43	1526.00	1628.43	1628.43
388	Mould bolts tightening -	1.00	Each	0.01	1483.75	1483.76	1483.76
389	Casting wheel replacement -	8.00	Each	0.01	2437.76	2437.77	19502.16
390	Stack manipulator bucket repair	1.00	Each	0.01	1483.75	1483.76	1483.76
391	Replacement of Casting Wheel shaft/Beari	3.00	Each	0.01	2225.64	2225.65	6676.95
392	Tilting launder positioning and alignmen	1.00	Each	0.01	1483.75	1483.76	1483.76
393	Casting conveyor non-drive end bearing r	3.00	SET	0.01	3623.80	3623.81	10871.43
394	Casting conveyor non-drive end shaft/spr	1.00	Each	0.01	4831.75	4831.76	4831.76
395	Casting conveyor rail replacement:	1.00	Meter	240.20	392.04	632.24	632.24
396	Casting conveyor non-drive end /drive en	3.00	SET	0.01	466.01	466.02	1398.06
397	Casting conveyor drive end shaft/sprocke	1.00	SET	0.01	6994.30	6994.31	6994.31
398	Casting conveyor drive end gearbox/beari	1.00	SET	64.99	8984.83	9049.82	9049.82
399	Ingot receiving device drive shaft repla	1.00	Each	0.01	2626.59	2626.60	2626.60
400	Ingot receivin device ingot guide replac	1.00	Each	60.52	2543.34	2603.86	2603.86
401	Cooling / Layer /Stack conveyor rail rep	75.00	Meter	60.52	625.27	685.79	51434.25
402	Cooling / Layer /Transfer arm/Turning de	1.00	Each	0.01	2097.79	2097.80	2097.80
403	Cooling / Layer Conveyor sprocket/shaft	8.00	Each	143.87	4069.36	4213.23	33705.84
404	Robotic stacker gearbox replacement:	1.00	Each	0.01	6612.69	6612.70	6612.70
405	Turning device shaft/bearing sprocket re	1.00	Each	0.01	3900.45	3900.46	3900.46
406	Casting Conveyor roller greasing (480 rol	1.00	Each	0.01	1864.17	1864.18	1864.18
407	Replacement of Robotic stacker arm(front	1.00	Each	0.01	3369.28	3369.29	3369.29
408	Casting Wheel handling chain pulley repa	1.00	Each	0.01	582.53	582.54	582.54
409	Repair and replacement of bed	389.00	Each	22.37	328.32	350.69	136418.41



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.				Component (In ₹)	Component (In ₹)	Rate (In ₹)	(In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	8 = (7 x 3)
	plate(each					7 (0 / 0)	G (7 // G)
410	Replacement and/or repair of hammer moun	1.00	Each	0.01	1398.52	1398.53	1398.53
411	Replacement and/or repair of cooling con	3.00	Each	0.01	1483.75	1483.76	4451.28
412	Replacement of strapping table.	1.00	Each	0.01	874.05	874.06	874.06
413	Robotic skimmer arm assembly replacement	1.00	Each	0.01	1112.81	1112.82	1112.82
414	Repair / replacement of shaft, sprocket:	1.00	Each	0.01	5594.98	5594.99	5594.99
415	Replacement of chain of door drive:-	1.00	Each	0.01	927.32	927.33	927.33
416	Cleaning/ replacement of nozzle of burne	287.00	Each	0.01	349.50	349.51	100309.37
417	Liner replacement:-	17.00	Each	143.87	1017.33	1161.20	19740.40
418	Furnace door seal replacement (One door)	1.00	Each	0.01	2564.33	2564.34	2564.34
419	Greasing of all grease points of one Fur	1.00	Each	0.01	466.01	466.02	466.02
420	Damper plate removal/fixing after repair	1.00	Each	306.39	4069.36	4375.75	4375.75
421	Replacement of L.T. wheel assembly:-	1.00	Each	102.43	5594.99	5697.42	5697.42
422	Replacement of C.T. wheel assembly:-	1.00	Each	32.50	2797.48	2829.98	2829.98
423	Replacement of guide wheel of hoist cros	1.00	Each	0.01	3729.97	3729.98	3729.98
424	Replacement of guide wheel of cabin trol	1.00	Each	32.50	2436.79	2469.29	2469.29
425	Replacement of guide wheel of hoist:-	1.00	Each	0.01	1020.07	1020.08	1020.08
426	Replacement of wire rope:-	1.00	Each	0.01	3729.97	3729.98	3729.98
427	Tightening of rail mountings with rail a	1.00	Meter	0.01	58.22	58.23	58.23
428	PHE cleaning:-	1.00	Each	0.01	2797.46	2797.47	2797.47
429	Cleaning/ replacement of box filter per	1.00	Each	0.01	640.78	640.79	640.79
430	Cleaning/ replacement of HFO box filter:	1.00	Each	0.01	699.39	699.40	699.40
431	Servicing of gate valves(6 to 12 inches)	29.00	Each	0.01	762.97	762.98	22126.42
432	Servicing of gate valves(below 6 inches)	3.00	Each	0.01	508.63	508.64	1525.92
433	Cooling tower fan gearbox replacement	1.00	Each	0.01	3709.45	3709.46	3709.46
434	HFO day tank pump replacement	25.00	Each	0.01	1483.75	1483.76	37094.00
435	Operation of utility equipment in cast h	2,093.00	Mandays	0.01	2034.65	2034.66	4258543.38
436	Replacement of caster roll assembly:-	1.00	SET	0.01	9325.75	9325.76	9325.76
437	Caster roll bearing, chock assembly	1.00	SET	0.01	5828.57	5828.58	5828.58



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.				Component (In ₹)	Component (In ₹)	Rate (In ₹)	(In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	8 = (7 x 3)
,	repl		-		J	7 - (3 7 0)	0 - (1 X 0)
438	Shrink fitting of caster rolls:	1.00	Each	0.01	14305.94	14305.95	14305.95
439	Packing of caster rolls(per pair):	1.00	Each	1840.45	2882.33	4722.78	4722.78
440	Strip Castor roll loading on the trailor	1.00	Each	0.01	349.65	349.66	349.66
441	Edge trimmer trimmed scrap disposal guid	1.00	Each	0.01	466.21	466.22	466.22
442	Fixed tool replacement:	10.00	Each	0.01	1864.98	1864.99	18649.90
443	Movable tool replacement:	10.00	Each	0.01	1864.98	1864.99	18649.90
444	Tool drive gearbox replacement:	8.00	Each	0.01	2246.17	2246.18	17969.44
445	Guide positioning:	3.00	Each	0.01	1483.75	1483.76	4451.28
446	Lifting chain /sprocket repairing:	1.00 3.00	Each	0.01	762.97	762.98	762.98
447 448	Lifting hoist overhauling:  Laddle skimmer wheel and bearing	10.00	Each Each	0.01 0.01	2225.64 1483.75	2225.65 1483.76	6676.95 14837.60
440	checkin	10.00	Eacii	0.01	1403.73	1403.70	14037.00
449	Chip channel removal and fixing	1.00	Each	28.02	1462.07	1490.09	1490.09
450	Briquetting press cyclone pipe removal a	1.00	Each	0.01	762.97	762.98	762.98
451	Tie rod replacement of press cylinder	1.00	NO	0.01	5086.68	5086.69	5086.69
452	Replacement of Press cylinder of SBP	1.00	NO	0.01	6104.01	6104.02	6104.02
453	Casting conveyor chain replacement	1.00	NO	140.10	4069.36	4209.46	4209.46
454	Casting conveyor g/b replacement	1.00	NO	0.01	5935.12	5935.13	5935.13
455	Casting conveyor DE/NDE sprocket replace	1.00	NO	0.01	9409.37	9409.38	9409.38
456	Tundish level adjustment g/b replace	1.00	NO	0.01	1483.75	1483.76	1483.76
457	Secondary cooling water pipe removal & r	1.00	NO	0.01	1017.31	1017.32	1017.32
458	Backwash filter cleaning	17.00	NO	0.01	2797.46	2797.47	47556.99
459	Saw entry/saw exit/ shuttle/exit roller	1.00	NO	0.01	2097.79	2097.80	2097.80
460	Saw carriage star guiding car replacemen	1.00	NO	0.01	2797.46	2797.47	2797.47
461	Saw blade drive shaft replacement	1.00	NO	0.01	6104.01	6104.02	6104.02
462	Saw car drive shaft replacement	1.00	NO	0.01	3136.43	3136.44	3136.44
463 464	Saw car wheel replacement Water removal blower/ chips	1.00	NO NO	0.01	2967.55 1483.75	2967.56 1483.76	2967.56 1483.76
465	removal blow All roller table gearbox replacement	1.00	NO	0.01	1271.66	1271.67	1271.67
466	Stacker wheel replacement	1.00	NO	0.01	2967.55	2967.56	2967.56
467	Stacker alignment	1.00	NO	0.01	1854.69	1854.70	1854.70
468	Accumulator roller table roller/ bearing	1.00	NO	0.01	762.97	762.98	762.98
469	Briquetting press PU hose replacement	1.00	NO	0.01	1112.81	1112.82	1112.82
470	Casting wheel all mounting bolts tighten	70.00	SET	0.01	254.30	254.31	17801.70
471	Stack manipulator hoist assy or	3.00	NO	0.01	8138.69	8138.70	24416.10



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.				Component (In ₹)	Component (In ₹)	Rate (In ₹)	(In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	$8 = (7 \times 3)$
	rope dru					•	
472	Stack manipulator bucket replacement	5.00	NO	0.01	2097.79	2097.80	10489.00
473	Stack manipulator LT rail mounting bolts	1.00	Meter	0.01	76.27	76.28	76.28
474	Stack table hoist assy replacement	1.00	SET	0.01	7797.75	7797.76	7797.76
475	Stacker balancing cylinder replacement	3.00	NO	0.01	2097.79	2097.80	6293.40
476	Robotic skimmer positioning for gearbox	1.00	NO	0.01	1176.14	1176.15	1176.15
477	Secondary cooling conveyor cooling water	1.00	SET	301.59	9747.23	10048.82	10048.82
478	HFO booster pump replacement	1.00	NO	0.01	1568.20	1568.21	1568.21
479	Transportation of material from steel ya	13.00	Metric Tonne	0.01	2965.97	2965.98	38557.74
480	Transportation of material from steel ya	53.00	Metric Tonne	0.01	2965.97	2965.98	157196.94
481	Replacement of NDE sprocket assembly of	3.00	NO	0.01	1864.98	1864.99	5594.97
482	Melting/Holding furnace roof grating rep	3.00	SET	391.05	15006.77	15397.82	46193.46
483	Replacement of SMCD guide of Melting/Hol	8.00	NO	0.01	2797.46	2797.47	22379.76
484	Replacement of SMCD guide roller of Melt	15.00	NO	0.01	932.46	932.47	13987.05
485	Painting of 45T Melting/Holding furnace	1.00	NO	38125.00	71203.29	109328.29	109328.29
486	Replacement of casting conveyor clutch a	17.00	NO	0.01	1864.98	1864.99	31704.83
487	Replacement of casting chain gear box	1.00	NO	0.01	3369.28	3369.29	3369.29
488	Casting chain rollers greasing	32.00	SET	0.01	2097.79	2097.80	67129.60
489	Replacement of de watering pump of pipe	41.00	NO	0.01	1398.52	1398.53	57339.73
490	Replacement of Hydraulic pump of Furnace	5.00	NO	0.01	1048.87	1048.88	5244.40
491	Cooling manifold water spray nozzles set	127.00	SET	0.01	3559.49	3559.50	452056.50
492	Mould groove cleaner bearing replacement	101.00	NO	0.01	1048.87	1048.88	105936.88
493	Coiler Reel mounting bolts tightness che	173.00	NO	0.01	1048.87	1048.88	181456.24
494	Coiler Reel flange carriage sliding bra	167.00	NO	0.01	1398.71	1398.72	233586.24
495	Complete overhauling of casting water pu	1.00	NO	0.01	7459.97	7459.98	7459.98
496	Replacement of skimming tool/mixing tool	200.00	NO	0.01	1017.31	1017.32	203464.00
497	Replacement of V-belts for more than 30	96.00	SET	0.01	699.23	699.24	67127.04
498	Replacement of V-belts for upto 30	22.00	SET	0.01	466.01	466.02	10252.44



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SI.	Item Description	Qty.	UoM	Material	Service	Total unit	Amount
No.	·	-		Component (In ₹)	Component (In ₹)	Rate (In ₹)	(In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	$8 = (7 \times 3)$
	KW dr	-	-			7 (6 / 6)	<i>σ</i> ( <i>i ii o</i> )
499	Chain lubrication (LMCD & SMCD) of each	167.00	SET	0.01	466.01	466.02	77825.34
500	Launder Cover removal & fitting	13.00	SET	0.01	699.05	699.06	9087.78
501	Casting Wheel Sprocket Assy. Dismantling	1.00	NO	0.01	1398.52	1398.53	1398.53
502	Removal & fitting of Overflow Tray	29.00	NO	0.01	232.99	233.00	6757.00
503	Dismantling and erection of Casting Conv	1.00	NO	0.01	11696.65	11696.66	11696.66
504	Repair & replacement of Cooling Conveyor	13.00	NO	0.01	466.01	466.02	6058.26
505	Repair of Cooling Conveyor / Layer Conve	3.00	NO	0.01	466.01	466.02	1398.06
506	Stack Conveyor-III Chain Lubrication	17.00	SET	0.01	466.01	466.02	7922.34
507	Casting Conveyor Drain Pipe removal & fi	44.00	NO	0.01	232.99	233.00	10252.00
508	Casting Conveyor Chain Tension adjustmen	3.00	NO	0.01	232.99	233.00	699.00
509	Furnace Tilting Hose replacement	5.00	NO	0.01	984.95	984.96	4924.80
510	SMCD & LMCD Cylinder checking & Mounting	13.00	SET	0.01	466.01	466.02	6058.26
511	APU replacement	5.00	NO	0.01	232.99	233.00	1165.00
512	Cleaning of Inclined Conveyor of Dross P	1.00	NO	0.01	1313.28	1313.29	1313.29
513	Cleaning of Screw Conveyor of De dusting	3.00	NO	0.01	1313.28	1313.29	3939.87
514	Ladle Skimming Rope replacement & positi	1.00	NO	0.01	1398.52	1398.53	1398.53
515	Oil replacement in Emulsion Pump	315.00	NO	0.01	232.99	233.00	73395.00
516	Emulsion Filter-bed checking & Sprocket	63.00	NO	0.01	699.23	699.24	44052.12
517	Auto-shear Roller removal & fitting	3.00	NO	0.01	466.01	466.02	1398.06
518	Auto-shear Pinch Roller Shaft / Bearing	10.00	NO	0.01	932.08	932.09	9320.90
519	Emulsion Filter-bed Gear Box replacement	1.00	NO	0.01	466.01	466.02	466.02
520	H.F. Rack & Gear Box mounting Bolt check	144.00	SET	0.01	466.01	466.02	67106.88
521	Bogie Wheel / Mobile Cooler Wheel lubric	192.00	SET	0.01	466.01	466.02	89475.84
522	H.F. Door positioning / Door Seal repair	10.00	NO	0.01	1048.87	1048.88	10488.80
523	R.C. Fan Mounting Bolt tightness	75.00	NO	0.01	466.01	466.02	34951.50
524	Cutting M/C Pusher Cylinder & Bracket Bo	19.00	NO	0.01	466.01	466.02	8854.38
525	Cutting M/C all structures Mounting Bolt	15.00	NO	0.01	699.05	699.06	10485.90
526	Cutting M/C Scrap Conveyor Chain repair	127.00	NO	0.01	741.47	741.48	94167.96
527	Cutting M/C mixed Filter cleaning	25.00	SET	0.01	699.05	699.06	17476.50



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SI. No.	Item Description	Qty.	UoM	Material Component (In ₹)	Service Component (In ₹)	Total unit Rate (In ₹)	Amount (In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	$8 = (7 \times 3)$
528	(chips Homo FCE-1 bogie shear pin replacement.	29.00	NO	0.01	1112.21	1112.22	32254.38
529	CT Guide Wheel / LT Guide Wheel checking	123.00	SET	0.01	1048.87	1048.88	129012.24
530	Extra working Hour beyond Shift / G-Shif	1,211.00	Hours	0.01	152.54	152.55	184738.05
531	Casting conveyor primary gearbox replace	1.00	NO	0.01	2967.55	2967.56	2967.56
532	Robotic stacker primary gearbox replacem	1.00	NO	0.01	2967.55	2967.56	2967.56
533	Replacement of butterfly valve with Pneu	1.00	NO	0.01	1650.38	1650.39	1650.39
534	Replacement of Pneumatic actuator in CH-	1.00	NO	0.01	565.27	565.28	565.28
535	T-ICM Plate Heat exchanger replacement	1.00	NO	0.01	1237.78	1237.79	1237.79
536	T-ICM Briquetting Press Hydraulic Pump r	1.00	NO	0.01	1650.38	1650.39	1650.39
537	Ingot Receiving Station PM as per checkl	13.00	NO	0.01	2336.97	2336.98	30380.74
538	Transfer device, rejection Device, Turni	13.00	NO	0.01	2336.97	2336.98	30380.74
539	Cooling, Layering & Stack Conveyor, Stac	13.00	NO	0.01	2336.97	2336.98	30380.74
540	Ingot receiving station arm assembly rep	1.00	NO	0.01	825.18	825.19	825.19
541	Robotic stacker Horizontal / vertical /	1.00	NO	0.01	778.98	778.99	778.99
542	All points greasing in ICM / T-ICM or Me	13.00	NO	0.01	1038.17	1038.18	13496.34
543	Stack Conveyor drive shaft & Gearbox rep	1.00	NO	0.01	3255.28	3255.29	3255.29
544	SMCD drive g/b gear coupling replacement	1.00	NO	0.01	4155.59	4155.60	4155.60
545	Replacement of SMCD Plummer block and be	1.00	NO	0.01	3391.73	3391.74	3391.74
546	Gear coupling replacement of EOT Cranes	1.00	NO	0.01	1650.38	1650.39	1650.39
547	Replacement of Hoist Gear Box of 25/5 or	1.00	NO	0.01	14912.76	14912.77	14912.77
548	Replacement of TICM casting coveyor inte	1.00	NO	0.01	565.27	565.28	565.28
549	Replacement of TICM V-launder pneumatic	1.00	NO	0.01	423.94	423.95	423.95
550	Replacement of Stack Conveyor & Bundle c	3.00	NO	0.01	5195.21	5195.22	15585.66
551	Tundish Hydraulic cylinder replacement	1.00	NO	0.01	847.91	847.92	847.92
552	Carousal drive wheel/gearbox replacement	1.00	NO	0.01	3116.69	3116.70	3116.70



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SI. No.	Item Description	Qty.	UoM	Material Component (In ₹)	Service Component (In ₹)	Total unit Rate (In ₹)	Amount (In ₹) (Excluding GST)
1	2	3	4	5	6	7 = (5 + 6)	8 = (7 x 3)
553	Carousal guide / support wheel replaceme	1.00	NO	0.01	825.18	825.19	825.19
554	Demoulder vaccum pump replacement	1.00	NO	0.01	1650.38	1650.39	1650.39
555	Demoulder vaccum seal replacement	3.00	NO	0.01	618.88	618.89	1856.67
556	Walking Beam Raising / Indexing hydrauli	1.00	NO	0.01	1650.38	1650.39	1650.39
557	Mist extractor Blower Assembly replaceme	1.00	NO	0.01	1237.78	1237.79	1237.79
558	Reject Conveyor Lifting hydraulic cylind	1.00	NO	0.01	565.27	565.28	565.28
559	Reject Conveyor Transfer hydraulic cylin	1.00	NO	0.01	825.18	825.19	825.19
560	reject conveyor chain replacement	1.00	NO	0.01	2170.18	2170.19	2170.19
561	reject conveyor / exit Conveyor D.E. Sha	1.00	NO	0.01	3391.73	3391.74	3391.74
562	Reject / Exit Conveyor drive Gearbox rep	1.00	NO	0.01	1168.48	1168.49	1168.49
563	Reject / Exit conveyor N.D.E. Sprocket	1.00	NO	0.01	1038.89	1038.90	1038.90
564	Reject / Exit Conveyor rail replacement	32.00	Meter	0.01	695.22	695.23	22247.36
565	Exit conveyor chain replacement	1.00	NO	0.01	2441.46	2441.47	2441.47
566	Mould Pre heating LDO Combustion Blower	1.00	NO	0.01	1237.78	1237.79	1237.79
567	Mould Pre heating LDO Burner Cleaning	7.00	NO	0.01	259.52	259.53	1816.71
568	Mould Pre Heating Exhaust blower assembl	1.00	NO	0.01	1650.38	1650.39	1650.39
569	Thermocouple Raising cylinder replacemen	1.00	NO	0.01	1237.78	1237.79	1237.79
	Total Amount [Excluding GST @ 18%] (In ₹) :						
	GST @ 18% (In ₹):						
Total Amount [Including GST @ 18%] (In ₹):							6,81,11,192.76

#### Note:-

- (i) Total estimated value is Rs. 6,81,11,192.76 (including GST @ 18%).
- (ii) Bidders have to quote their price in price bid format (Annexure-B4 i.e. MS-EXCEL format as available in the GeM Portal) in the form of overall "EXCESS" or "DISCOUNT" in percentage over total estimated amount for this work. The overall excess/discount percentage quoted by the bidder in the online price bid format shall be applicable over the Rates & Amounts for each & every items of QUANTITY & RATE SCHEDULE.



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# **ANNEXURE-B5**

# Minimum Wages of Contract Labours W.E.F. 01/Oct/2024

SL	CATEGORY	MINIMUM RATES OF WAGES PAYABLE INCLUSIVE OF WAGES FOR							
NO		WEEKLY OFF, VDA & CANTEEN SUBSIDY							
		MINIMUM WAGE RATES	ADDITIONAL	CANTEEN					
		(INCLUSIVE OF WAGES	ELEMENT	SUBSIDY	TOTAL IN Rs				
		FOR WEEKLY OFF & VDA)	IN Rs.	IN Rs	TOTAL IN RS				
		IN Rs.							
1	UNSKILLED	526.00	55.00	30.00	611.00				
	WORKER								
2	SEMI SKILLED	655.00	55.00	30.00	740.00				
	WORKER								
3	SKILLED WORKER	783.00	55.00	30.00	868.00				
4	HIGHLY SKILLED	912.00	55.00	30.00	997.00				
	WORKER								



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# ADDITIONAL PPE/SAFETY REQUIRMENT SPECIFIC FOR THE JOB OTHER THAN PPE MATRIX AND SAFETY REQUIRMENT SPECIFIED at Page 31,32,33

Area: Cast House (Mechanical)										
SI. No.	PPEs requirement									
1	Industrial Safety Shoes with 4" ankle height as per IS 15298 Part 2-2002 or its equivalent.									
2	Safety Helmet as per IS 2925:1984,material HDPE									
3	Safety Goggles as per IS 5983 or its equivalent.									
4	Cotton / Leather Hand Gloves									
5	Dust / Mist Respirator									
6	Full body harness as per IS 3521 or its equivalent									

#### Note:

- 1. The PPEs issued must confirm to latest IS/DGMS approved or its equivalent standard.
- 2. In case of damage of any PPE of any PPE of workmen the same shall be replaced by the contractor irrespective of the time of use.
- 3. Frequency of issue:

SI. No.	ltem	Frequency of issue
1	Industrial Safety Shoe	1 pair per year.
2	Safety Helmet	1 No per 2 yrs.
3	Safety Goggles	1 No per year
4	Nose Mask	4 Nos. per month
5	Cotton Gloves	3 pairs per month

# **Declaration by the Bidder (Contractor)**

I do hereby agree to provide the ISI/CE marked PPEs as required to ensure safe working conditions in consultation with NALCO's Safety Dept. to the workers to be engaged by me while working inside the plant. I also agree to follow the "Safety Code for Contractors" issued by Safety dept, Smelter, NALCO.

(Signature of bidder)



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# PART-C

Formats for contract execution

SMLT/T&C/S02/OMC-5937/NIT/5254

From: \_\_\_\_\_

Subject: Mechanical Maintenance Contract for Cast House, Smelter Plant.

Email: \_\_\_\_\_

(Seal of the Company)

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**ANNEXURE-C 1** 

# FORWARDING LETTER AND UNDERTAKING

	der Inviting Authority onal Aluminium Company Ltd.
Sub:	Letter of Undertaking.
1.	Having carefully examined all the Tender Documents under reference no
2.	We here by confirm that we have downloaded the complete set of tender documents along with the set of enclosures hosted in <a href="www.gem.gov.in">www.gem.gov.in</a> website. We confirm that the bid document has not been edited or modified by us. In case, it is observed by NALCO that the bid document has been edited or modified, we agree for the rejection of the bid by NALCO.
3.	We undertake, if our tender is accepted, to commence the work from the effective date of contract and to carry out work as stipulated in the contract
4.	We have submitted the Earnest Money Deposit amount through DD/BC/PO/BG as instructed by you.
5.	We agree to abide by this Tender initially for a period as mentioned at point -7 of F-02 form as validity of offer from the date of opening of Tender and it shall remain binding on us and may be accepted at any time before the expiry of that period
6.	Further we agree to the Pre-Contract Integrity Pact which is part of this tender and has signed the Pre Contract Integrity Pact as at Annexure-C21 duly filled up for further necessary action at your end.
7.	Should this Tender be accepted, we hereby agree to abide by and fulfill all Terms and Conditions of Tender Document as accepted by us and in default thereof, to forfeit and pay to NALCO such sums of money as stipulated in conditions contained in Tender Documents. We understand that NALCO is not bound to accept the lowest or any Tenders received and NALCO reserves the right to reject any or all tender without any liability.
8.	This Tender together with written "Acceptance" thereof, shall constitute a binding CONTRACT between NALCO and us, till a formal contract is executed.
	Dateday of Signature
	(NAME IN BLOCK LETTERS)
	(To be signed by authorized person.)
	Fax:, Mob:



Subject: Mechanical Maintenance Contract for Cast House, Smelter Plant.

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# **ANNEXURE-C2**

# **MANDATORY INFORMATION OF THE BIDDER**

All Fields are Mandatory. Enclose Certificate/documentary evidence for fields marked with *.
Authorized Signatory *
Legal Name of Firm as per PAN *
Trade Name of Firm as per GST *
Postal address of the firm:
House No. / Plot No :
Street Name :
City:
State: Pin Code : Country:
* GeM Portal Login ID:
Phone No. :
Valid Email ID. :
Gender: Male / Female / Other
Category : General / SC / ST
Type * Micro / Small/ Medium / Ancilary Micro/Small/MediumAncilaryYes/No
EPF No.: ESI No.:
PAN No. :
GSTN No :
Bank Name * Br.Name Br.Place Br.Place
Bank A/c No (enclose cancelled cheque)*

Date: \_\_\_\_\_ (Signature and official seal of the Proprietor / Authorized Person)



Subject: Mechanical Maintenance Contract for Cast House, Smelter Plant.

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### **ANNEXURE-C3**

# EXCEPTION / DEVIATION STATEMENT TO THE TENDER TERMS & CONDITIONS In case of no deviation please write 'No Deviation' in the space below:

SI.	Reference	of Tender Doo	cument	Subject	Deviation / Exception
No	Page No.	Clause No.	Para No.	-	•

SMLT/T&C/S02/OMC-5937/NIT/5254

Subject: Mechanical Maintenance for Cast House, Smelter Plant.

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**ANNEXURE-C4** 

#### -: DECLARATION BY THE BIDDER :-

\_ representing the bidder, do declare on behalf of the

firm as hereunder:

That, I am the PROPRIETOR of the bidder's firm. I undertake to submit proof of ownership as and when demanded by NALCO.

OR

That I am the authorized signatory to the tender documents holding valid Power of attorney. Certified copy of the valid power of Attorney is enclosed with the offer.

NOTE: Strike out whichever is not applicable.

- That, we do not have any FINANCIAL/PROFESSIONAL stake in any of the other bidders (a) participating in this tender:
- (b) That, this firm has not been blacklisted/debarred/banned in any unit of NALCO/Other PSUs / GOVT of India/ State Govts/ Quasi Govt. organizations.
- That, we are not in any arbitration/legal cases with NALCO and no cases are pending in court (c) of law.
- That, the proprietor/partners/directors/ employees of the firm have never been a part of any (d) blacklisted/debarred/banned firms or company in any unit of NALCO/Other PSUs / GOVT of India/ State Govts/ Quasi Govt. organizations.
- (e) That, we have never been prosecuted by any statutory authority
- That, any change in the constitution of the firm shall be made with prior clearance from (f) NALCO.
- That, we have studied all the clauses/sub-clauses terms and conditions of the tender documents (g) including GCC and our offer fully comply with the requirements spelt out in the tender
- (h) We undertake to abide by and comply with all the safety and environmental regulations in force in NALCO during the execution of work.
- (i) We undertake to abide by and comply with all the applicable provisions of laws governing contract workers engaged by you for this work.
- We undertake to receive payment through E-payment mode. (j)
- (k) The Annexure-19 and Annexure-20 regarding relatives working in NALCO are filled up and enclosed.
- (I) The Annexure-C8 regarding present commitment of the tenderer are also properly filled up and enclosed. -Not applicable for this tender.
- (m) That we have quoted the rates in figures as well as words.
- We undertake that we do not have any unauthorized structure / construction inside Nalco (n) Nagar Township or Plant. We also undertake to remove any / all such structures, if detected by Nalco later on in compliance of GCC terms and conditions.
- (o) We declare that all supporting documents of the offer submitted are attested by a Gazetted officer / Notary public.
- I/we declare that the document down loaded by me/my company is/are not tampered in any (p) form.
- We undertake that my workers shall use electronic Punch cards at the Plant gates at the time (q) of entry and exit if introduced by NALCO. Failing which he shall not be allowed into the Plant.

I further declare that all above statements are true. If at any time during pre-ordering/post ordering stage of the contract, it is found otherwise, action as deemed fit by NALCO including 'rejection of my offer"/ 'banning/blacklisting' me/my firm / my company etc. may be taken. The same will be binding on me / firm / company represented by me. I also hear by authorize and request any bank, person, firm, corporation, Govt. Officers etc. to furnish pertinent information as deemed necessary and as requested by Nalco to verify this statement or regarding my/our competency and general reputation.

Date:	Signature Authorized Person With seal



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**ANNEXURE-C5** 

# **Undertaking on Downloaded tender documents**

We here by confirm that, we have downloaded the complete set of tender documents along with the set of enclosures hosted in Central Public Procurement Portal website, <a href="www.gem.gov.in">www.gem.gov.in</a>. We confirm that the bid document has not been edited or modified by us and all pages have been submitted. It is confirmed that we have quoted as per the original NIT unless otherwise specifically mentioned as deviation in the deviation sheet.

Suppression of this information in any form if detected at any stage will be disqualification and will lead to rejection of the offer or termination of the contract as the case may be.

Date:	Signature Authorized Person With seal



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**ANNEXURE-C6** 

PQC – Technical

# **Detailed Work Order and Execution Statistics**

SI. No.			Work description  W.O Period. (From Dt To dt)  W.O value (In Rs.)  Value (in Rs.)		Final Executed Value (in Rs.)	Completion date.	Page Ref. for attachmen t.		
1	2	3	4	5	6	7	8		

<sup>\*</sup>Period for 6 months or more will be treated as One Year and less than 6 months will be ignored.

Signature of the Bidder



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**ANNEXURE-C7** 

# PQC – Financial Details of Turnover / Net worth

#### NAME OF TENDERER

# (A) - TURNOVER (Profit & Loss Account)

SI. No.	Financial Year	Turnover in Rs Lakh	Document placed at Page No & File No
1	Last year		
2	1st Previous Year to Last Year		
3	2nd Previous Year to Last Year		

# (B) - NETWORTH (Balance sheet)

5	SI. No.	Financial Year	Mention whether Net worth is Positive/Negative	Document placed at Page No & File No			
1	1	Last year	Positive/Negative				

Signature & Seal of bidder.



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**ANNEXURE-C8** 

# **DETAILS OF PRESENT COMMITMENTS OF THE TENDERER**

AS ON - / /2025 (\*) -NOT APPLICABLE FOR THIS TENDER
(Last day of Month Previous to Bid Due Date)

Name of Work: -Tender Reference No.: -\_\_\_\_\_, age \_\_\_\_\_ years, son of \_\_\_\_\_ do hereby solemnly I/We \_\_\_\_ affirm and declare as follows for on behalf of Firm \_\_\_\_ Full postal Description Value of contract Date of Scheduled Compl **Expected** Amount of Remarks No. Address of client etion of work commence Completio date of Balance work & Name of in % as ment of n period completion during the period of Next 12 Officer-in-Charge work on date Months from the with telex / Telephone No. date of Not applicable for this vert dest declaration 9 1 10 It is certified that the above particulars furnished are true and correct. If any information given is found to be misleading at a later date NALCO will have the authority to take necessary action as per provision of the contract and as per laid down procedure of the Company. Signature of the bidder Name of the Bidder\_\_\_\_

**Company Seal** 



SMLT/T&C/S02/OMC-5937/NIT/5254

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#### **ANNEXURE-C9**

#### **TAX INVOICE**

[See Rule 46 of the Central Goods and Services Tax Rules, 2017]

**Details of Supplier** ORIGINAL FOR RECIPIENT

Name DUPLICATE FOR SUPPLIER OF SERVICE

Address Date :

Inv Serial No.

GSTIN/Unique ID Service PO Ref. :

**Details of Recipient** 

**Details of Consignee (Shipped to)** 

(Billed to)

Name Name

Address of delivery

State State

State Code State Code

GSTIN/Unique ID GSTIN/Unique ID

Place of supply: Name of State:

Sr.	Description of Goods	HSN Code /			Rate		Discou	Taxa ble	CG	ST	SGS /UTG		IG	ST	CE	SS
No.	/ Services	SAC	Qty.	Unit	(per item)	Total	nt	Value	Rate	Amt	Rate	Amt	Rate	Amt	Rate	Amt
	Freight		I		I											
	Insurance															
	Packing and	d Forwarding	Charge	S												
	Total Invoice Value (In figure)															
	Total Invoice Value (IT figure)															
	Amount of Tax subject to Reverse Charges															

#### E.&.O.E

Electronic Reference Number

Name of the Signatory Designation / Status

Signature

#### Note:

- 1. Payment of GST is subject to reflection of the party's invoice in GSTR 2A/Anx-2 (GST new return) of NALCO.
- 2. In case of Supply of service, the tax invoice shall be as follows: "ORIGINAL FOR RECIPIENT", "DUPLICATE FOR SUPPLIER".
- 3. The tax invoice can be signed with digital signature also.
- 4. In case of unregistered recipient where the value of the taxable supply is less than INR 50,000/-, name and address of the recipient and the address of delivery, along with the name of the State and its code shall be recorded in the invoice if he requests for the same.
- 5. Where an invoice is required to be issued under section 31(3)(f) of the CGST Act, a registered person may issue a consolidated invoice at the end of a month for supplies covered under section 9(4), the aggregate value of such supplies exceeds rupees five thousand in a day from any or all the suppliers.



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**ANNEXURE-C10** 

# Bank MANDATE FORM for e-payment (To be submitted in Duplicate)

		•	any Limited Angul, Od										
			ease of payr EFT/Intern			CO			thr	ough			
			etter No										
(Please fi	II in the i	nformatio	n in CAPIT	AL LETTE	R PLEA	SE tick w	herev	er it	is ap	plica	ble)		
			:: :										
				 ) : nt Account									
3. Pa	rticulars	of Bank		71000011	rtambor								
Bank Nar		0. 20			Branch	name							
Branch P	lace				Branch	City							
Pin Code						Branch Code							
MICR. No.													
Account t		Savings:		Current	:		Cas	h Cre	edit:				
		·	the Chequ										Щ
	rox copy	of a cheq	pearing on t ue of your b										
IFSC Cod	le.												
I h delayed d Aluminiu	nereby de or not eff m Compa	eclare that fected for any Limit	mandate shat the particular reasons of the detection of reconsidation of reconstructions.	ulars given incompleto ible. I also	above ai e or inco undertak	rrect info ke to advi	rmati ise an	ion, I y cha	sha ange	II no	t hol ie pa	ld Na rticul	itional lars of
Place: Date:				Signature	of the Pa	ırty / Aut	horize	ed Sig	ınato	ry			
Bank's St	•	ticulars fu	rnished abo	ove are corr	ect as pe	r our reco	ord.						
Date:			(Sign	ature of th	e Author	ized Offic	ial fro	om th	ne Ba	nks)			

2) One cancelled cheque of the concerned bank with signature & stamp of the bidder is to be attached with

1) RTGS / NEFT charges if any, is to borne by the party.

the bank mandate form.



and the contractor hereby agree with the owner that:-

TENDER No.: SMLT/T&C/S02/OMC-5937/NIT/5254

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# **ANNEXURE-C11**

# **INDEMINTY BOND AGAINST FREE ISSUE MATERIAL TO SELLER/CONTRACTORS**

WHERAS National Aluminium Company Limited (here in after referred to as "THE OWNER")
which expression shall unless repugnant to the context includes their legal representatives, successors
and assigns having their registered office at "NALCO BHAWAN, P/1, NAYAPALLI, BHUBANESWAR-13,
Odisha" has entered into a Contract with M/s placed a Telex of
intent (here in after referred to as the "Contractor their legal representatives,
successors and assigns")
On the terms and conditions as set out inter alia, in the owner's Contract No.
/WO/
herein after collectively referred to as the "Said Contract" which expression shall include all amendments,
modification and/or verification thereto.
AND WHERAS:
i) The owner subject to availability has agreed to supply to the contractor raw materials for the purpose
of execution of the said contract by the "Contractor" (the raw materials to be supplied by the owner to
the contractor herein after for the sake of brevity referred to as the "said materials") and pending
execution by the "Contractor" of the said contract incorporating the said materials. The said materials
shall be under the custody and charge of the contractor and shall be kept, stored, altered, worked
upon and/or fabricated at the sole risk and expense of the contract.
<ul><li>ii) As a pre-condition to the supply of the said materials by the owner to the "contractor", the owner has</li></ul>
required the contractor to furnish to the owner an Indemnity Bond in the manner and upon terms and
conditions herein after indicated.
NOW, THEREOF, in consideration of the promises aforesaid the contractor hereby irrevocably and
unconditionally undertakes to indemnity and kept indemnified the owner from and against all loss,
damage and destruction (inclusive but not limited to any or all loss of damage or destruction to or of the
said materials or any item or part thereof by theft, pilferage, fire flood, storm, tempest, lightening,
explosion, storage, chemical or physical action or reaction, bending, warping, exposure, resting, faulty,
workmanship, faulty fabrication or faulty method or technique of fabrication, strike, riot, civil commotion
or other act or omission or commission whatsoever within or beyond the control of the contractor, misuse
an misappropriation (inclusive but not limited to misuse or misappropriation by the contractor and the
contractor's servants and/or agents).
Whatsoever to or of in the said, materials or any part of item thereof from the date that the same or
relative part of the item thereof or complete fabricated work(s) incorporating the said materials and
undertake to pay to the owner forthwith on demand in writing with protest or demure the value AS
SPECIFIED BY THE OWNER of the said materials or item or part thereof ,lost damage, destroyed,
misused and /or misappropriated, as the case may be, TOGETHER WITH the owner's cost and expense
(inclusive of but not limited to handling, transportation, cartage, freight, packing and inspection
cost/expenses) up to and aggregate limited or ` (Rupees
only ) or ay penal recovery in respect of the same in the terms of the contract



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i)	The indemnity/undertaking shall be continuing Indemnity/undertaking shall remain valid and
	irrevocable for all claims, of the owner arising hereunder up to and until the midnight of
	HOWEVER, if the contract for which this indemnity/undertaking is given is not
	completed by this date, the *contractor hereby agree to extend the Indemnity/undertaking till time as
	required to fulfill the contract.

- ii) This Indemnity/undertaking shall not be determined or change of constitution or insolvency of the \* contractor but shall be in all respects and for all purpose be binding and operative until payment of all money payable the owner in terms thereof.
- iii) The mere statement of allegation made by or on behalf of the owner in any notice or demand or other writing addressed to the \* contractor as to any of the said materials or item or part thereof having been lost, damaged, destroyed, misused, or misappropriate while in the custody of the contractor and/or prior to the completion of the completion of the completed fabricated work(s) and delivery to job site thereof incorporating the said materials shall be conclusive of the fact of the said materials or item or part thereof having being supplied to the contractor and/or the loss, damaged, destruction, misused, or misappropriate thereof as the case may be, while in the custody of the contractor and/or prior to the completion of the completed fabricated work(s) and delivery to job site thereof incorporating the said materials without necessary of the part of the owner to produce any documentary proof or other evidence whatsoever in contract in support of this.
- iv) The amount sated in any notice of the demand addressed by the owner to the contractor as to the value of such said materials lost, damaged destroyed, misused or misappropriated, inclusive relative to the cost and expenses incurred by the owner in connection therewith shall be conclusive of the value of such said materials and the said cost and expense as also of the amount liable to be paid to be paid to the owner.

This indemnity Bond is supplemental and not in super session of the contractual condition	ns.		
The undersigned as full power to execute this Indemnity Bond on behalf of the contractor	under	the	power
delegated by the Board of directors of	vide	its	Board
resolution dated copy of which placed at Annexure-"A'			

SIGNED BY COMPETENT AUTHORITY

Place: - SMELTER / CPP, NALCO, ANGUL

DATE:-



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# **ANNEXURE-C12**

### PROFORMA FOR BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

WHEREAS M/s National Aluminium Company Limited (A Government of India Enterprise), having its Unit/Office at .......(UNIT/OFFICE ADDRESS ISSUING THE TENDER) (hereinafter called "The Company" which expression shall unless repugnant to the subject or context includes its legal representatives, successors and assigns) has issued Tender paper vide its Tender

Date: \_\_

(To be executed on non-judicial stamped paper of appropriate value)

	No
	repugnant to the subject or context includes their legal representatives, successors and assigns and as per terms and conditions of the said tender, the tenderer shall submit a Bank Guarantee for `(Rupees
2.	WEBank, having its branch office at IFS
	Codedo hereby undertake to
	pay the amount due and payable under this guarantee without any demur, merely on a demand from the Company stating that in the opinion of the company which is final and binding, the amount
	claimed is due because of any withdrawal of the tender or any material alteration to the tender after
	the opening of the tender by way of any loss or damage caused to or would be caused or suffered by
	the Company by reason of any breach by the said tenderers(s) of any of the terms and conditions
	contained in the said tender or failure to accept the Letter of Intent Agreement or that the amount
	covered under this Guarantee is forfeited. Any such demand made on the Bank by the Company shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However
	be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding `
_	(Rupeesonly).
3.	We undertake to pay to the Company any money so demanded not withstanding any dispute or disputes raised by the tenderer(s) in any suit or proceeding pending before any office, court or
	tribunal relating thereto our liability under this present guarantee being absolute and unequivocal.
	The payment so made by us under this bond shall be a valid discharge of our liability for payment
	there under. Our liability to pay is not dependent or conditional on the Company proceeding against
	the tenderer.
4.	The guarantee herein contained shall not be determined or affected or suspended by the liquidation
	or winding up, dissolution or change of constitution or insolvency of the said tenderer(s) but shall in
	all respect and for all purposes be binding and operative until payment of all money due or liabilities
_	under the said contract(s)/ Order(s) are fulfilled.
5.	WEBank Ltd. further agree that the guarantee herein contained shall remain in full
	force and effect during the period that would be taken for the finalization of the said tender and that it shall continue to be enforceable till the said tender is finally decided and order placed on the
	successful tenderer(s) and or till all the dues of the company under or by virtue of the said tender
	have been fully paid and its claims satisfied or discharged or till a duly authorised officer of the
	company certifies that the terms and conditions of the said tender have been fully and properly
	carried out by the said tenderer(s) and accordingly discharges the guarantee.

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t	That the Company will have full liberty without reference to us and without affecting this guarantee to postpone for any time or from time to time. The exercise of any of the power of the Company under the tender.						
(I	Notwithstanding anything contained herein before, our liability shall not exceed Rs						
8. V	Ve he prev	ious co	.Bank, lastly undertak	te not to revoke this guarantee during its currency except with by in writing. We further undertake to keep this Guarantee			
				Bank further agree that this Guarantee shall be invocable at			
	_			(Bank), Branch office at,			
				ess, PIN 75,			
h	aving B	ranch M	fail Id				
Date				Bank			
Corpo	rate Se	al of th	e Bank	By its constitutional Attorney			
				Signature of duly Authorised person			
5				On behalf of the Bank With seal & signature code			
			ssuing the BG:				
Name	)						
Addre	ess for C	Correspo	ondence:	Telephone & Fax No.			
E-ma	il:						
Note:	1	: BGs	to be furnished from a	ny of the approved banks of NALCO.			
Note	2:	BG co	nfirmation must be sei	nt to our Banker through SFMS with the followings details :			
Benef	iciary	:	NATIONAL ALUMIN	NIUM CO LTD.			
Bank	er	:	State Bank of India				
Brand	ch	:	Kandsar(Nalco Naga	r)			
A/C N	/C No : <b>00000010657908589(CPP)/ 00000010657908114(Smelter</b> )						
IFSC	Code	:	SBIN0008279				
Address of Bank : AT/P.O – Kandsar, P.S - N			AT/P.O – Kandsar, P	S - Nalco Nagar, Dist – Angul , ODISHA,, Pin - 759145			



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# ANNEXURE-C13 CONTRACT CUM PERFORMANCE BANK GUARANTEE BY SELLER/ CONTRACTOR.

(To be executed on non-judicial stamped paper of appropriate value)

В.	G. No	Date
1.	WHEREAS National Aluminium Company Limited (A Government of India Unit/Office at	ORK IS EXECUTED) ugnant to the subject or ed into a contract with( hereinafter nant to the subject or and assigns) for ditions as set out interous documents forming notude all amendments, r(s) has agreed for due
	AND WHEREAS one of the conditions of the "said contract" is that "contractor(furnish to the Company a Bank Guarantee from a bank for% (percen the "said contract" against due and faithful performance of the "said contract" is obligations and the performance guarantee obligations of the contractor(s)/selle supplies made under the "said contract."	t) of the total value of ncluding defect liability
2.	WE	nd undertake to pay the on a demand from the the the amount claimed is going any of the terms & filling the performance ared by the Company by the clusive as regards the one of the clusive as regards the conditions of the clusive as regards the conditions.
3.	We undertake to pay to the Company any money so demanded not withst	anding any dispute or

- disputes raised by the contractor(s)/Seller(s) in any suit or proceeding pending before any office, court or tribunal relating thereto our liability under this present guarantee being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under. Our liability to pay is not dependent or conditional on the Company proceeding against the Contractor(s)/Seller(s).
- 4. The guarantee herein contained shall not be determined or affected or suspended by the liquidation or winding up, dissolution or change of constitution or insolvency of the said Contractor(s)/Seller(s) but shall in all respect and for all purposes be binding and operative until payment of all money due or liabilities under the said contract(s)/Order(s) are fulfilled.

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5.	WeBank further agree that the guarantee herein contained shall remain in full force and
	effect during the period that would be taken for the performance of the said Contract(s)/Order(s) and
	that it shall continue to be enforceable till all the dues of the company under or by virtue of the said
	Contract(s)/Order(s) have been fully paid and its claims satisfied or discharged or till a duly
	authorised officer of the Company certifies that the terms and conditions of the said
	Contract(s)/Order(s) have been fully and properly carried out by the said contractor(s) and accordingly
	discharges the guarantee.

- 6. We .............Bank further agree with the Company that the company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract(s)/Order(s) or to extend the time of performance by the said Contractor(s)/Seller(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s)/Seller(s) and to forbear or enforce any of the terms and conditions relating to the said Contract(s)/Order(s) and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s)/Seller(s) or for any forbearance, act or omission on the part of the Company or any indulgence by the Company to the said Contractor(s)/Seller(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
- 7. Notwithstanding anything contained herein before, our liability shall not exceed Rs......(Rupees......only) and shall remain in force till.......Unless a demand or claim under this Guarantee is made on us within three months from the date of expiry, we shall be discharged from all the liabilities under this guarantee.
- 8. We......Bank, lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Company in writing. We further undertake to keep this Guarantee renewed from time to time at the request of Contractor(s)/Sellers(s).

9.	weBank	Turtner	agree	tnat	tnis	Guarantee	snaii	be	invocable	at
	Angul / Bhubaneswar,	(	(Bank).	Brai	nch c	office at				
	IFS Code with Address									
	having Branch Mail Id					ŕ				,

Date.......Bank
Corporate Seal of the Bank
By its constitutional Attorney
Signature of duly Authorised person
On behalf of the Bank With seal & signature code

Details of Persons Issuing the BG:
Name-----Address for Correspondence:

Address for Correspondence: ----- Telephone & Fax No.

E-mail:

Note: 1 : BGs to be furnished from any of the approved banks of NALCO.

Note: 2 : BG confirmation must be sent to our Banker through SFMS with the followings details :

Beneficiary : NATIONAL ALUMINIUM CO LTD.

Banker : State Bank of India Branch : Kandsar (Nalco Nagar)

A/C No : 00000010657908589(CPP)/ 00000010657908114(Smelter)

IFSC Code : SBIN0008279

Address of Bank: AT/P.O. - Kandsar, P.S. - Nalco Nagar, Dist. - Angul, ODISHA,, Pin - 759145

Mail id : sbi.08279@sbi.co.in



accordingly discharges the guarantee.

B. G. No.\_\_\_\_\_

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Date:\_\_

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**ANNEXURE-C14** 

#### **BANK GUARANTEE FOR SECURITY DEPOSIT**

(To be executed on non-judicial stamped paper of appropriate value)

1. In consideration of National Aluminium Company Limited (A Government of India Enterprise),

	having its UNIT/Office at (UNIT/OFFICE ADDRESS WHERE THE WORK IS
	EXECUTED) (hereinafter called "The Company" which expression shall unless repugnant to the
	subject or context includes its legal representatives, successors and assigns) having agreed to exempt
	M/s(Hereinafter called "the said Contractor(s)/ Seller(s)"), which expression
	shall unless repugnant to the subject or context includes their legal representatives, successors and
	assigns) from the demand under the terms and conditions of Contract(s)/ Order(s) No
	dt
	due fulfillment by the said contractor(s)/seller(s) of the terms and conditions contained in the said
	Contract(s)/Order(s), on production of Bank Guarantee for `
	•
_	only).
2.	WE
	and Branch Mail IDdo hereby agree and undertake to pay the
	amount due and payable under this guarantee without any demur, merely on a demand from the
	Company stating that in the opinion of the company which is final and binding, the amount claimed is
	due by way of loss or damage caused to or would be caused to or suffered by the Company by reason of
	any breach by the said Contractor(s)/seller(s) of any of the terms and conditions contained in the said
	contract(s)/orders(s) or by reasons of the said Contractor(s)/ Seller(s) failure to perform the said
	Contract(s)/ Order(s) including defect liability obligations or that the amount covered under this
	guarantee is forfeited. Any such demand made on the Bank by the Company shall be conclusive as
	regards the amount due and payable by the Bank under this guarantee. However, our liability under
	this guarantee shall be restricted to an amount not exceeding `
	(Rupeesonly).
3.	We undertake to pay to the Company any money so demanded notwithstanding any dispute or
	disputes raised by the contractor(s)/Seller(s) in any suit or proceeding pending before any office, court
	or tribunal relating thereto our liability under this present guarantee being absolute and unequivocal.
	The payment so made by us under this bond shall be valid discharge of our liability for payment there
	under. Our liability to pay is not dependent or conditional on the Company proceeding against the
	Contractor(s)/Seller(s).
1	The guarantee herein contained shall not be determined or affected or suspended by the liquidation or
т.	winding up, dissolution or change of constitution or insolvency of the said Contractor(s)/Seller(s) but
	shall in all respect and for all purposes be binding and operative until payment of all money due or
_	liabilities under the said contract(s)/ Order(s) are fulfilled.
5.	WeBank further agree that the guarantee herein contained shall remain in full force and
	effect during the period that would be taken for the performance of the said Contract(s)/ Order(s) and
	that it shall continue to be enforceable till all the dues of the company under or by virtue of the said

Contract(s)/Order(s) have been fully paid and its claims satisfied or discharged or till a duly Authorised officer of the company certifies that the terms and conditions of the said

Contract(s)/Order(s) have been fully and properly carried out by the said contractor(s)



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		ith the Company that the company shall have the fullest liberty ecting in any manner our obligations hereunder to vary any of the				
terms ar	nd conditions of the said Con	tract(s)/Order(s) or to extend the time of performance by the said				
		time or to postpone for any time or from time to time any of the				
•	, ,	against the said Contractor(s)/Seller(s) and to forbear or enforce				
,		ting to the said Contract(s)/Order(s) and we shall not be relieved uch variations, or extension being granted to the said Contractor				
	3 3	act or omissions on the part of the Company or any indulgence by				
	• •	r(s)/Seller(s) or by any such matter or thing whatsoever which				
	ğ .	uld, but for this provision, have effect of so relieving us.				
		ained herein before, our liability shall not exceed				
a demar	d or claim under this Guara	only) and shall remain in force till				
	•	abilities under this guarantee.  take not to revoke this guarantee during its currency except with				
		any in writing. We further undertake to keep this Guarantee				
		uest of Contractor(s)/ Sellers(s).				
		Bank further agree that this Guarantee shall be invocable at				
		, (Bank), Branch office at, ss, PIN 75, having				
	Mail Id	· · · · · · · · · · · · · · · · · · ·				
Date		Bank				
Corporate S	eal of the Bank	By its constitutional Attorney				
		Signature of duly Authorised person				
		On behalf of the Bank With seal & signature code				
Details of Po	ersons Issuing the BG:					
Name						
Address for	Correspondence:	Telephone & Fax No.				
E-mail:						
Note: 1	: BGs to be furnished from	any of the approved banks of NALCO.				
Note:2	ote:2 : BG confirmation must be sent to our Banker through SFMS with the followings details :					
Beneficiary	eneficiary : NATIONAL ALUMINIUM CO LTD.					
Banker	anker : State Bank of India					
Branch	ranch : Kandsar (Nalco Nagar)					
A/C No	: 00000010657908589(CPF	P)/ 0000010657908114(Smelter)				
IFSC Code	: SBIN0008279					
Address of E	ddress of Bank : AT/P.O – Kandsar, P.S - Nalco Nagar, Dist. – Angul ,ODISHA, Pin - 759145					



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**ANNEXURE-C15** 

# **BANK GUARANTEE AGAINST FREE ISSUE OF MATERIALS**

(To be executed on Non-judicial stamp paper or appropriate value)

GUARANTEE NO DATE :
1. WHEREAS National Aluminium Company Limited (hereinafter referred to as "the Company") which expression shall unless repugnant to the context includes their legal representatives, successors and assigns having their registered office at NALCO BHAWAN, P/1, NAYAPALLI, BHUBANESWAR-751 061, Odisha, and their Branch Unit/office at(UNIT/OFFICE ADDRESS), has entered into a Contract with M/s (hereinafter referred to as the Contractor which expression shall unless repugnant to the context include their legal representatives successors and assigns for the work of on the terms and conditions as set out, inter-alias, in the Company's Contract No dated: and various documents forming part thereof hereinafter collectively referred to as the "said contract" which expression shall include all amendments, modifications and/or variations thereto.
AND WHEREAS one of the conditions of the said contract is that the Company has agreed to supply to the contractor raw-materials (hereinafter referred to as the "said materials") for the purpose of execution by the contractor of the said contract and pending execution by the contractor of the said contract incorporating the said materials, the said materials shall be under the custody and charge of the contractor and shall be kept, stored, altered, worked upon and/or fabricated at the sole risk and expense of the Contractor.
<ol><li>AND WHEREAS the Company has asked the contractor for adequate security for the saic materials to be supplied to the contractor under the contract.</li></ol>
3. AND WHEREAS at the request of the contractor the Company has agreed to accept a bank guarantee from with Registered Office at (hereinafter referred to as "the surety").
4. NOW THIS GUARANTEE WITNESSETH that in consideration of the Company having at the request of contractor agreed to accept a Bank Guarantee of the Surety amounting to ` (Rupees

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5.	materials have been returned to the C	remain in force and effect up to and until the said ompany as per terms of the said contract and any to the surety on the aggregate amount payable Company, whichever is earlier.
6.	restricted to (Rupees will remain in force up to obligations under this guarantee is not compl	he liability of the surety under the guarantee is only) and this guarantee _ in the first instance. However, if the contractor's leted or fully performed within this period, the surety antee till such time as is required to fulfill such
7.		in your favour under memorandum and Articles of II power to do so under the power of Attorney k.
8.	<ol> <li>Unless a claim made on us we expiry, i.e.,, all our rights we shall be relieved, and discharged from a</li> </ol>	under the said guarantee shall be forfeited and
9.	and branch Mail ID	ch office at, IFS Code
10.	Angul / Bhubaneswar,	Code with ., PIN 75, having Branch Mail
IFSC	te SC Code: rporate Seal of the Bank	By its constitutional Attorney
		Signature of duly Authorised person
		On behalf of the Bank With seal & signature code
	ails of Persons Issuing the BG:	
Addre	ress for Correspondence:	Telephone & Fax No.
E-mai	ail:	
Note: Note: Benefi Banke Branc	e: 2 : BG confirmation must be sent to our eficiary : NATIONAL ALUMINIUM CO LTD. ker : State Bank of India	approved banks of NALCO. Banker through SFMS with the followings details :
A/C N	No : <b>00000010657908589(CPP)/ 00000010</b>	<b>657908114(Smelter)</b> IFSC Code : SBIN0008279
Addre	ress of Bank: AT/P.O - Kandsar, P.S - Nalco Nag	gar, Dist - Angul , ODISHA, Pin - 759145



B. G. No.\_\_\_\_

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**ANNEXURE-C16** 

#### **BANK GUARANTEE FOR ADVANCE PAYMENT**

(To be executed on non-judicial stamped paper of appropriate value)

1.	In consideration of National Aluminium Company Limited (A Government of India Enterprise), having its Unit/Office at (UNIT/OFFICE ADDRESS WHERE THE WORK IS EXECUTED) (hereinafter called "The Company" which expression shall unless repugnant to the subject or context includes its legal representatives, successors and assigns) having agreed to make an advance payment of Rs(Rupees
2.	WE
3.	We undertake to pay to the Company any money so demanded not withstanding any claim dispute or disputes raised by the contractor(s)/Seller(s) in any suit or proceeding pending before any office, court or tribunal relating thereto our liability under this present guarantee being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under. Our liability to pay is not dependable or conditional on the Company proceeding against

- the Contractor(s)/Seller(s).
  The guarantee herein contained shall not be determined or affected or suspended by the liquidation or winding up, dissolution or change of constitution or insolvency of the said tenderer(s) but shall in all respect and for all purposes be binding and operative until payment of all money due or liabilities under the said contract(s)/order(s) are fulfilled.
- 5. We .......Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract(s)/Order(s) and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Contract(s)/Order(s) have been fully paid and its claims satisfied or discharged or till a duly authorized officer of the Company certifies that the terms and conditions of the said Contract(s)/Order(s) have been fully and properly carried out by the said Contractor(s)/Seller(s) and accordingly discharges this guarantee.
- 6. That the Company will have fully liberty without reference to us and without affecting this guarantee to postpone for any time or from time to time the exercise of any of the power of the Company under the Contract(s)/Order(s).



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7.	(Rupeesunder this Guar	only) and shall remain	, our liability shall not exceed Rs
8.	at Angul/Bhubar	•	arantee shall be invocable at our place of business(Branch name and address
9.			agree that this Guarantee shall be invocable at
	IFS Code	eswar, with Address	(Bank), Branch office at,, PIN 75, having
Со	ite rporate Seal of the S Code:		Bank By its constitutional Attorney
		On behalf of	Signature of duly Authorised person the Bank With seal & signature code
Na Ad Te	etails of Persons is nmeldress for Correspo lephone & Fax No mail:	 ondence:	
No	ite: -		
1)	BGs to be furnish	ned from any of the approved banks	of NALCO and processed through SFMS.
2)	BG confirmation	must be sent to our Banker through	n SFMS with the followings details :
	Beneficiary	: NATIONAL ALUMINIUM CO L	ΓD.
	Banker	: State Bank of India	
	Branch	: Kandsar(Nalco Nagar)	
	A/C No	: 00000010657908589(CPP)/ 00000	010657908114(Smelter)
	IFSC Code	: SBIN0008279	
			agar, Dist. – Angul , ODISHA,, Pin – 759145
	Mail id	: sbi.08279@sbi.co.in	



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# **ANNEXURE-C17**

# **LIST OF STANDARDISED BANKS**

I. List of PSU Banks				
SI.	Name of the Bank	SI.	Name of the Bank	
No.		No.		
1.	Allahabad Bank	11.	Indian Bank	
2.	Andhra bank	12.	Oriental Bank of Commerce	
3.	Bank of Baroda	13.	Punjab and Sind Bank	
4.	Bank of India	14.	Punjab National Bank	
5.	Bank of Maharashtra	15.	State Bank of India	
6	Canara bank	16	Syndicate Bank	
7.	Central bank of India	17.	UCO Bank	
8.	Corporation Bank	18.	Union Bank of India	
9.	Dena Bank	19.	Vijaya Bank	
10.	IDBI Bank			

II. List of Private Banks				
SI.	Name of the Bank	SI.	Name of the Bank	
No.		No.		
1	HDFC Bank	9	The South Indian Bank Ltd.	
2	ICICI Bank	10	The Karur Vysya Bank Ltd.	
3	Axis Bank	11	The Karnataka Bank Ltd.	
4	Kotak Mahindra Bank Ltd.	12	IDFC Bank	
5	YES Bank	13	RBL Bank	
6	IndusInd Bank	14	The Lakshmi Vilas Bank Ltd.	
7	The Federal Bank Ltd.	15	Tamilnadu Mercantile Bank Ltd.	
8	The Jammu & Kashmir Bank Ltd.	16	City Union Bank Ltd.	

	ist of Foreign Banks	DIC	CI	Name of the Donle	DIC
SI.	Name of the Bank	BIC	SI.	Name of the Bank	BIC
No.			No.		
1	Abu Dhabi Commercial Bank Ltd.	ADCB AE AA	19	KEB Hana Bank	KOEX KR SE
2	Australia & New Zealand Banking	ANZB AU 3M	20	Krung Thai Bank Public Company	KRTH TH BK
	Group Limited			Ltd.	
3	Bank Of America NA	BOFA US 3N	21	Mashreqbank PSC	BOML AE AD
4	Bank of Bahrain and Kuwait	BBKU BH BM	22	Mizuho Bank Ltd.	MHCB JP JT
	B.S.C.				
5	Bank of Ceylon	BCEY LK LX	23	National Australia Bank Ltd.	NATA AU 33
6	Barclays Bank PLC	BARC BG 22	24	Sberbank	SABR RU MM
7	BNP Paribas	BNPA FR PP	25	Shinhan Bank	SHBK KR SE
8	Citibank N.A.	CITI US 33	26	Societe Generale	SOGE FR PP
9	Commonwealth Bank of Australia	CTBA AU 2S	27	Sonali Bank Ltd.	BSON BD DH
10	Credit Agricole Corporate &	BSUI FR PP	28	Standard Chartered Bank	SCBL GB 2L
	Investment Bank				
11	Credit Suisse AG	CRES CH ZZ	29	Sumitomo Mitsui Banking Corporation	SMBC JP JT
12	DBS Bank Ltd.	DBSS SG SG	30	The Bank of Nova Scotia	NOSC CA TT
13	Deutsche Bank AG	DEUT DE FF	31	The Bank of Tokyo-Mitsubishi UFJ,	BOTK JP JT
				Ltd.	
14	Doha Bank	DOHB QA QA	32	The Hongkong & Shanghai Banking	HSBC HK HH
				Corp. Ltd.	
15	FirstRand Bank Ltd.	FIRN ZA JJ	33	The Royal Bank of Scotland PLC	RBOS GB 2L
16	Industrial Bank of Korea	IBKO KR SE	34	United Overseas Bank Ltd.	UOVB SG SG
17	Industrial & Commercial Bank of	ICBK CN BJ	35	Westpac Banking Corporation	WPAC AU 2F
	China Limited				
18	JP Morgan Chase Bank	CHAS US 33	36	Woori Bank	HVBK KR SE



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**ANNEXURE-C18** 

# SAC CODES for Services & HSN code for supply

SI. No	vendor code	Service PO No. &Supply	Supply/Service Description	Service Accounting Code (SAC) (6 DIGIT) & HSN code (6 digit)



SMLT/T&C/S02/OMC-5937/NIT/5254

Subject: Mechanical Maintenance Contract for Cast House, Smelter Plant.

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**ANNEXURE-C19** 

# NATIONAL ALUMINIUM COMPANY LIMITED <u>SMELTER PLANT / CAPTIVE POWER PLANT DIVISION</u>

# INSTRUCTION FOR BIDDERS: FILLING UP OF FOLLWING ANNEXURES ARE MUST, WITHOUT WHICH THE OFFER IS LIABLE FOR REJECTION.

The tenderer shall carefully study the list of directors of NALCO from the website written below https://nalcoindia.com/company/nalco-leadership/board-of-directors/

and state "Yes" or "No" to questions given below:

SI. No.	Description	Write "Yes" or "No"
1.	Whether the tenderer is a relative of any of the directors of	
	NALCO?	
2.	If the tenderer is a firm, any of NALCO Directors or any of	
	their relatives is a partner in the tender's firm?	
3.	If the tenderer is a Company Registered under Company's Act	
	1956, whether any of NALCO's Directors is a member of	
	Director of the Company?	

Note: If Yes to any of the above questions, please give the name of NALCO's Director and relationship of the tender / partner / member / Director as the case may be.

SI. No.	Name	Relationship

**SIGNATURE OF THE TENDERER** 



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Subject: Mechanical	Maintenance	Contract
for Cast Hou	se, Smelter Pla	nt.

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#### **ANNEXURE-C20**

**Important**: Suppression of information shall be viewed seriously and action deemed fit would be taken including termination of the contract.

(Strike out which is not applicable)

- 1. I/We hereby declare that none of my/our relative is an employee of NALCO.
- 2. I/We hereby declare the following are the employee/s of NALCO is/are my/our relative/s.

SI.No.	Name of the employee/ P. No. / Designation/Place of Posting.	Relationship with the employee.
1		
2		
3		

(PLEASE ATTACH EXTRA SHEET, IF REQUIRED)

**SIGNATURE OF THE TENDERER** 



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**ANNEXURE-C21** 

# PRE CONTRACT INTEGRITY PACT

General
This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on day of the month of 2025, between, on one hand, the National Aluminium Company Limited (NALCO), a company registered under the Companies Act 1956 and a Government of India Enterprise, having its Registered Office at
NALCO Bhawan, P/1, Nayapalli, Bhubaneswar- 751013, Odisha, India (referred to as NALCO) acting through Shri (with designation of the Officer) (hereinafter called the "BUYER", which expression shall
mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part and M/s, Chief Executive Officer (hereinafter
called the "BIDDER / Seller" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns ) of the Second Part.
WHEREAS the BUYER proposes to procure and the BIDDER/Seller is willing to offer/has offered the stores and
WHEREAS the BIDDER is a private company / public company /Government undertaking/ partnership /registered export agency, constituted in accordance with the relevant law in the matter and the BUYER is a Company under the administrative control of the Ministry of Mines, Govt. of India. NOW THEREFORE
To avoid all forms of corruption by following a system that is fair, transparent and free from any influence / prejudiced dealings prior to during and subsequent to the currency of the contract to be entered into with a view to :-
Enabling the BUYER to obtain the desired said stores/equipment at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and
Enabling BIDDERs to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the BUYER will comment to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

#### Commitments of the BUYER

- 1.1 The BUYER undertakes that no official of the BUYER, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person or organisation or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.
- 1.2 The BUYER will, during the pre-contract stage, treat all BIDDERs alike and will provide to all BIDDERs the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERs.
- 1.3 All the officials of the BUYER will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
- 2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the BUYER with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the BUYER the proceedings under the contract would not be stalled.



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#### **Commitments of BIDDERs**

- 3. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contractor post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-
- 3.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organisation or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
- 3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Government.
- 3.3 BIDDERs shall disclose the name and address of agents and representatives and Indian BIDDERs shall disclose their foreign principals or associates.
- 3.4 BIDDERs shall disclose the payment to be made by them to agents / brokers or any other Intermediary, in connection with this bid / contract.
- 3.5 The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
- 3.6 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 3.7 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 3.8 The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.9 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable fact.
- 3.10 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
- 3.11. If the Bidder or any employee of the Bidder or any person acting on the behalf of the Bidder, either directly or indirectly, is a relative of any of the officers of the Buyer, or alternatively, if any relative of an officer of the Buyer has financial interest/stake in the Bidder's firm, the same shall be disclosed by the Bidder at the time of filing of tender. The term "relative" for this purpose would be as defined in Section 6 of the Companies Act 1956.
- 3.12. The Bidder shall not lend to or borrow any money from or enter into monetary dealingsor transactions, directly or indirectly, with any employee of the Buyer.
- 3.13. Bidder(s)/ Contractor(s) who have signed the integrity pact shall not approach the courts while representing the matter to IEMs and shall wait for their decision in the matter.



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#### 4. <u>Previous Transgression</u>

- 4.1. The Bidder declares that no previous transgression occurred in the last three years immediately before signing of this integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could Justify Bidder's exclusion from the tender process.
- 4.2. The Bidder agrees that if it makes incorrect statement on this subject, Bidder can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

#### 5. Sanctions for Violations:

- 5.1. Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle of the BUYER to take all or any one of the following actions, wherever required: -
  - (i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.
  - (ii) The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit / Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason therefore.
  - (iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER
  - (iv) To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.
  - (v) To en-cash the advance bank guarantee and performance bond / warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.
  - (vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation / rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.
  - (vii) To debar the BIDDER from participating in future bidding processes of NALCO for a minimum period of five years, which may be further extended at the discretion of the BUYER.
  - (viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.
  - (ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.
  - (x) Forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
- 5.2. The BUYER will be entitled to take all or any of the actions mentioned at para 5.1(i) to (x) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal Code 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.
- 5.3. The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the independent Monitor(s) appointed for the purposes of this Pact.



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#### 6. <u>Independent External Monitors (IEMs):</u>

- 6.1. The BUYER has a panel of Independent External Monitors (hereinafter referred to as IEMs) for this Pact in consultation with the Central Vigilance Commission as mentioned in NALCO'S NIT/NALCO's website (www.nalcoindia.com).
- The task of the IEMs shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.
- 6.3 The IEMs shall not be subject to instructions by representatives of the parties and perform their functions neutrally and independently.
- Both the parties accept that the IEMs have the right to access all the documents relating to the project / procurement including minutes of meetings.
- As soon as the IEM notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.
- The BIDDER(s) accepts that the IEM has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the IEM, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The IEM shall be under contractual obligation to treat the information and documents of the BIDDER / Subcontractor(s) with confidentiality.
- The BUYER will provide to the IEM sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the IEM the option to participate in such meetings.
- The IEM will submit a written report to the designated Authority of BUYER / Secretary in the Department / within 8 to 10 weeks from the date of reference or intimation to his by the BUYER / BIDDER and should be occasion arise, submit proposals for correcting problematic situations.

#### 7. <u>Facilitation of Investigation:</u>

In case of any allegation of violation of any provisions of this Pact or payment of commission, the IEMs shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

# 8. <u>Law and Place of Jurisdiction:</u>

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER.

### 9. Other Legal Actions:

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

# 10. <u>Validity:</u>

- 10.1 This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded. If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by CMD, NALCO.
- Should one or several provisions of this Pact turn out to be invalid, the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.



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11.	consortium members	uni, this agreement must be signed by an partners of
12.	The parties hereby sign this Integrity Pact at	on
For & o	n behalf of	For & on behalf of
BUYER		BIDDER
Name o	f the Officer: Shri T.K. Chhotray	
Designa	tion: DGM (Mech.)-Tender & Contract, Smelter	
Compar	ny: NALCO	
Official	Seal	
Witness	i.	Witness
1.		1
2		2

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**ANNEXURE-C22** 

### BEFORE THE NOTARY PUBLIC A F F I D A V I T

I ...... aged about ...... years, S/O: ..... At-...., At-......

mor	al tur	have not been convicted by a court of Law for an offence pitude in relation to business dealings during the past seven years for acceptance hereby solemnly affirm and state as follows:	Ū
		DRMATION REGARDING CURRENT LITIGATION, DEBARRING EXPELLING OF BIDE ABANDONMENT OF WORK BY THE BIDDER	D OR
1.	(a)	Is the bidder currently involved in any litigation relating to the works.	Yes/No
	(b)	If yes,: give details:	
2.	(a)	Has the bidder or any of its constituent partners been debarred/ expelled by any agency in India during the last 5 years.	Yes/No
	(b)	If yes, give details:	
3.	(a)	Has the bidder or any of its constituent partners failed to perform on any contract work in India during the last 5 years.	Yes/No
	(b)	If yes, give details:	
4.	(a)	Arbitration cases pending.	Yes/No
	(b)	If yes, give details:	
5.	(a)	Disputed incomplete works.	Yes/No
	(b)	If yes, give details:	
6.	(a)	Pending civil cases against the firm or its Proprietor/Partner(s)/Director(s) involving moral turpitude in relation to business dealings.	Yes/No
	(b)	If yes, give details:	
7.	(a)	Pending criminal cases against the firm or its Proprietor/Partner(s)/Director(s) involving moral turpitude in relation to business dealings.	Yes/No
	(b)	If yes, give details:	
8.	(a)	Punishments awarded under civil cases or criminal cases involving moral	Yes/No

#### Note:

(b)

If any information in this schedule is found to be incorrect or concealed, qualification application will be summarily be rejected.

turpitude in relation to business dealings

If yes, give details:

Signature	of the bidder
Date :	



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#### **ANNEXURE-C23**

#### AGREEMENT

CONTRACT AGREEMENT FOR THE WORK OF	• • • • • • • • • • • • • • • • • • • •
Service Purchase Order No.:	
on theth day of the month ofof the year two t	thousand between
M/s in the town of AT/PO	, DIST-
STATE, PIN here in after called the "Contractor	r" (which terms shall
unless excluded by or repugnant to the subject or context include its successors a	nd permitted assignees)
of the one part and the NATIONAL ALUMINIUM COMPANY LIMITED hereinaf	ter called the "OWNER"
(Which term shall, unless excluded by or repugnant to the subject or context inc	clude its successors and
permitted assignees) of the other part.	

#### Whereas:

- (A) The owner being desirous of having provided and executed certain works mentioned enumerated or referred to in the tender documents including Notice Inviting Tender/Letter Inviting Tender, General Conditions, Drawings, Plans, Time schedule of Completion of jobs, and other documents has called for Tender.
- (B) The Contractor has inspected the site and surroundings of the works specified in the tender documents and has satisfied himself by careful examination before submitting his tender as to the nature of the surface strata, soil, subsoil and ground, the form and nature of site and local conditions, the quantities, nature and magnitude of the work, the availability of labour and materials necessary for the execution of work, the means of access to site, the supply of power and water thereto and the accommodation he may require and has made local and independent enquiries and obtained complete information as to the matters and things referred to or implied in the tender documents or having any connection therewith, and has considered the nature and extent of all probable and possible situations, delays, hindrances or interferences to or with the executions and completion of the work to be carried out under the contract, and has examined and considered all other matters, conditions and things and probable and possible contingencies, and generally all matters incidental thereto and ancillary thereof affecting the execution and completion of the work and which might have influenced him in making his tender.
- (C) The Notice Inviting Tender/ Letter Inviting Tender, General Conditions of Contract, Special Conditions of Contract, General Obligations, Specifications, Drawings, Plans, Time Schedule of Completion of jobs, Letter of Acceptance of Tender and any statement of agreed variations with its enclosures, copies for which are hereto annexed form part of this contract though separately set out herein and are included in the expression "CONTRACT" wherever herein used.

01) Service Purchase Order No.	
--------------------------------	--

#### **AND WHEREAS:**

The owner accepted the Tender of the Contractor for the provision and the execution of the said work at the rates stated in the schedule of quantities of works and finally approved by owner (Hereinafter called the `Schedule of Rates') upon the terms and subject to the conditions of contract. Now this agreement witnesses and it is hereby agreed and declared as follows:-

01. In consideration of the payment to be made to the contractor for the work to be executed by him, the contractor hereby covenants with the owner that the contractor shall and will duly provide, execute and complete the said works and shall do and perform all other acts and things in the contract mentioned or described or which are to be implied there from or may be reasonably necessary, for the completion of the said works and at the said times and in the manner subject to the terms and conditions or stipulations mentioned in the contract.



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02. In consideration of the due provision execution and completion of the said work, the owner does hereby agree with the contractor that the owner will pay to the contractor the respective amounts for the work actually done by him and approved by the owner at the scheduled rates and such other sum payable to the contractor under provision of the such contract, payment to be made at such time and in such manner as provided for in the contract.

#### AND

03. In consideration of the due provisions execution and completion of the said work the contractor does hereby agree to pay such sums as may be due to the owner for the services rendered by the owner to the contractor such as power supply, water supply and others as set for in the said contract and such other sums as may become payable to the owner towards the controlled items of consumables materials or towards loss, damage to the owner's equipment, materials, construction plant and machinery, such payments to be made at such time and in such manner as is provided in the contract. It is specially and distinctly understood and agreed between the owner and the contractor that the contractor shall have no right, title or interest in the site made available by the owner for execution of the works or in the building, structure or works executed on the said site by the contractor or in the goods, articles, materials etc. brought on the said site (Unless the same specifically belongs to the contractor) and the contractor shall not have or deemed to have any lien whatsoever charge for unpaid bills nor will be entitled to assume or retain possession or control of the site or structures and the owner shall have an absolute and unfettered right to take full possession of the site and to remove the contractor, his servants, agents and materials belonging to the contractor and lying on the site.

The contractor shall be allowed to enter upon the site for execution of the works only as a licencee simplicitor and shall not have any claim, right, title or interest in the site or the structure erected thereon and the owner shall be entitled to terminate such license at any time without assigning any reason. The materials including sand, gravel, stone, loose earth rock etc. dug up or excavated from the said site shall unless otherwise expressly agreed under this contract, exclusively belong to the owner and the contractor shall have no right to claim over the same and such excavations and materials should be disposed off on account of the owner according to the instructions in writing issued from time to time by the Engineer-in-Charge.

In witness whereof the parties have executed these presents in the day and the year first above written.

Signed & delivered for & on behalf of Owner

(NATIONAL ALUMINIUM CO.LTD.)

PLACE: NALCO SMELTER / CPP DIVISION ANGUL. PLACE:.

Signed & delivered for & on behalf of Contractor.

(M/S.....)

IN TE	E PRESENCE OF TWO WITNES	WO WITNESSES.	
NALCO'S WITNESS.	CONTRAC	CTOR'S WITNESS.	
01)	01)		
02)	02)		

PLACE: NALCO, SMELTER / CPP



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#### **ANNEXURE-C24**

#### **COMMERCIAL QUESTIONNAIRE**

Bidder's reply/ confirmation as furnished in the Commercial Questionnaire (CQ) shall supersede the stipulations mentioned elsewhere in their offer.

SL. NO.	NALCO'S QUERY	BIDDER'S REPLY/ CONFIRMATION
1.0	Confirm that your offer is valid for 04 (Four) months from the actual date of tender opening at online portal.	
2.0	Confirm that Earnest Money Deposit (EMD) as per tender stipulations have been furnished along with bid.	
3.0	Confirm that the following documents are submitted with Part-I:	
a)	All documents as per CHECK LIST.	
b)	Master Index as enclosed with Bidding Document is submitted in unpriced part duly signed and stamped on each page.	
c)	Compliance letter for Addendum/ Amendments as a token of acceptance (Applicable, if issued).	
4.0	Confirm that Price bid has been uploaded in the CPP/GeM portal separately.	
5.0	Schedule of Price	
a)	Price must be filled in the soft copy of the SOR furnished along with the tender document. Please note that the format of the Excel file including columns of Item No., Description, Unit, Quantity, name of file or worksheet etc. are not to be edited by the tenderer.	
b)	Confirm that rate/ price has been quoted for all items of SOR.	
c)	Confirm that deviation/terms & conditions are not mentioned in the price part. In case any terms and condition is mentioned in the price part, the same shall be treated as null and void.	
6.0	Confirm your compliance to critical stipulations of bidding document as mentioned in ITB.	
7.0	Confirm that you have studied complete tender document including technical and commercial part and your offer is in accordance with the requirements of the tender document.	
8.0	Confirm your compliance to total Scope of Work mentioned in the Bidding Document.	
9.0	Confirm your acceptance for `Scope of Supply' mentioned in the tender document and confirm that all materials shall be supplied as per Standards and Specification.	
10.0	Confirm your acceptance for Time Schedule as mentioned in tender document.	
11.0	Confirm that your quoted price includes all taxes, duties as applicable for this WORK in accordance with the provision of General Conditions of Contract and Special Conditions of Contract.	
12.0	Confirm that your quoted price includes all types of insurance as per the provisions of General Conditions of Contract and Special Conditions of Contract.	
13.0	Confirm that all costs resulting from safe execution of WORK, such as safety induction, use of protective clothing, safety glasses and helmet, safety precaution taken during monsoon, or any other safety measures to be undertaken by the Contractor for execution of work are included in the quoted rates.	



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SL. NO.	NALCO'S QUERY	BIDDER'S REPLY/ CONFIRMATION
14.0	Confirm that adequate numbers of construction equipments, tools, tackles etc. have been proposed which will be sufficient to complete the work as per the time schedule.	
15.0	Confirm that you have proposed adequate project/site organization with qualified supervisory personnel having requisite experience including personnel responsible for safety, planning, stores, QA/QC etc.	
16.0	Confirm that while submitting your price, you have taken consideration of scope of supplies, scope of work and technical requirement mentioned in Bidding Document.	
17.0	Confirm that only exception and deviation indicated in the specific format shall be considered and evaluated. Deviations listed at any other places of the tender documents shall not be considered.	
18.0	Confirm that you have your own QA/QC programme for executing this work.	
19.0	Confirm that Bidder is not involved in any Litigation/ Arbitration/debarring/expelling, otherwise, if involved, please furnish information about the same.	
20.0	Confirm that the Bidder is not under liquidation, court receivership or similar proceedings.	
21.0	Confirm the following:	
a)	The planning schedule, S-curves etc., submitted by the bidder with his Bid, are indicative and shall not be basis for extra compensation in case actual needs are higher.	
b)	Detailed planning schedule developed by CONTRACTOR after contract award may be subject to fluctuations depending upon actual progress of the project and available work front.	
c)	Co-ordination and making available by Contractor of all staff, manpower, construction equipment, tools, cranes, etc. and materials as required for a timely completion of all WORK as per Owner's construction and priority schedule and in accordance with the available work front are included in the quoted rates.	
22.0	Please confirm whether you need Mobilization Advance or not.	
23.0	Please confirm that you have submitted Tender Fee in the Unpriced Part of your Bid in case Bidding Document downloaded from website. In case of non-submission of tender fee as specified, tender shall not be considered for evaluation.	Not applicable

<b>SIGNATURE OF BIDDER</b>	<b>:</b>
NAME OF BIDDER	÷
COMPANY SFAI	
CUNIPAINT SEAL	•



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#### NATIONAL ALUMINIUM COMPANY LIMITED

(A Government of India Enterprise)

## TENDER & CONTRACT DEPT., SMELTER PLANT / CAPTIVE POWER PLANT Web site: www.nalcoindia.com

**ANNEXURE-C25** 

#### **CHECKLIST FOR BIDDER.**

Following information along with the attested copy/copies of all the supporting documents as applicable, are to be submitted in the envelope of Single part/ two-part bid (Ref cl. No-25.1 of Annexure-A1).

SI	Documents description			For Single
No.	·			Part
1.	(a) EMD Amount as per NIT s	pecification.	Yes / No	Yes / No
	(b) Cost of tender document, i	f downloaded from Internet.	Yes / No	NA
2.	E.P.F. A/c CODE		Yes / No	Yes / No
3.	E.S.I. A/c CODE		Yes / No	Yes / No
4.	PAN No.		Yes / No	Yes / No
5	E MAIL ID (Annexure-C4)		Yes / No	Yes / No
6	Phone no/ Mobile no (Annexur	re-C4)	Yes / No	Yes / No
7	PAN based GST registration N	No	Yes / No	Yes / No
8.	GST No		Yes / No	Yes / No
9	Solvency Certificate from a Bank			NA
10.	Power of Attorney of the signatory / Authorized signatory nominated			)/ / NI
	by the company for the tender, if signed by other than proprietor.			Yes / No
11	Proof of ownership/partnership	o of the firm/company attached.	Yes / No	NA
12.	Offer is submitted in the	(a) Obtained from T&C Department,	Yes / No	NA
	original NIT documents	(b) Downloaded from Internet	Yes / No	NA
13.	Deviation from the NIT terms & conditions in deviation sheet only.			N.I.O.
	(Ref :-Annexure-C3)			NA
14	Signed declaration form by authorized signatory as per <b>Annexure-C4</b>			Yes / No
15	Undertaking of downloaded tender documents as per Annexure-C5			NA
16	Bank mandate for e-payment form as per Annexure-C10			Yes / No



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SI.	Documents description	For Two	For Single
No.		Part	Part
17.	Annexure-C19 & C20 regarding relatives in NALCO	Yes / No	Yes / No
18.	Annexure-C8 regarding details of commitments and information of	NA	NA
	the tenderer [Not applicable for this tender]		NA
19.	Documentary evidence in support of pre-qualifying criteria of the	Yes / No	
	NIT	Yes / No	N I A
	Work Orders listing as per (Annexure-C6)		NA
	Work Orders listing as per (Annexure-C7)		
20.	Copies of audited Balance Sheet / Profit & Loss account for the last	Yes / No	Yes / No
	three Financial Years		
21.	Copy of statutory license, if applicable	Yes / No	Yes / No
22.	List of tools & tackles	Yes / No	NA
23.	All the pages of the offer including GCC are signed by the bidder	Yes / No	Yes / No
24.	Supporting documents are attested by Gazetted Officer / Notary Public	Yes / No	Yes / No
25.	Price Bid contains no conditions in any form	Yes / No	Yes / No
26.	Pre Contract Integrity Pact (Annexure-C21)	Yes/No	NA

NB:- If any of the information is not furnished, the offer of the party shall be liable for rejection and the consideration of the offer is at the discretion of NALCO.

SIGNATURE OF TENDERER WITH SEAL



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**ANNEXURE-C26** 

#### **CHECK LIST FOR SUBMISSION OF OFFER**

Bidder is requested to fill this check list and ensure that all details/ documents have been furnished as called for in the tender document along with duly filled in, signed and stamped **checklist with Part-I bid**.

Pleas	se tick the box and ensure co	ompliance:			
1.0	<b>Bid submission Letter</b> as Submitted.	per proforma at	tached in bidding docu	ment.	
2.0	Information about Bidder as per proforma attached in bidding document. Submitted.				
3.0	•			G/BC from any scheduled bank as ked "Earnest Money Deposit".	
	Submitted in the form of DD/ BG		EMD value: R	S	
	BG No	Dated	Valid up to	Claim period up to	
	DD No	Dated	Drawn on	Valid up to	
	BC No	Dated	Drawn on	Valid up to	
4.0	Validity of Offer is up to _	Months fro	om the date of submiss	ion of offer.	
	Yes	Valid	Up to		
5.0	Annual Turnover Details as per proforma including Audited Balance Sheets including Profit and Loss Account Statement for the last 3 (Three) years.				
	Submitted.		itted for the years:		
		2			
		3			
6.0	Fresh Solvency Certificate one year from the date of o Submitted.	pening of Techno	,		
7.0	Details of Past Experienc	<b>e</b> in the proform	a enclosed in the Biddi	ng Document.	
	Submitted.				
8.0	Details of Present Commit Document. [Not applicable	•		e proforma enclosed in the Bidding	
	Submitted.				
9.0	List of minimum equipment.	ent proposed to	be deployed for the wo	ork in the proforma enclosed in the	
	Submitted.		Ref.:		



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10.0	Deployment Schedule of equipment propose Document.	ed for the work in the proforma enclosed in the Bidding
	Submitted. F	Ref
11.0	Proposed Site Organisation (as per proform	a enclosed in the Bidding Document)
	i) Submitted F	Ref
	ii) Qualification and Experience of Resident have been mentioned in the site organiza	Engineer/ Site-in-Charge and other key personnel tion chart.
	Yes	Ref
	iii) Number of Key Personnel under Organisation Chart.	different heads have been mentioned in the Site
	Yes F	Ref
	iv)Site Organization Chart includes qualificential Engineer and Safety Officer.	ed and experienced Quality Control Engineer, Planning
12.0	Yes F Deployment Schedule of Supervisory Persor the Bidding Document.	Ref nnel proposed for the work in the proforma enclosed in
	Submitted	Ref
13.0	Power of Attorney in favour of person who h	nas signed the offer in stamp paper of appropriate value.
	Submitted.	Ref
14.0	Partnership Deed in case of partnership fire	m and Articles of Association in case of limited company.
	Submitted.	
15.0	Declaration regarding relationship with clie	ent's Director
	Submitted.	
16.0	Copy of P.F & ESI code, Service Tax registr	ation certificate:
	Submitted.	
17.0	An Overall Schedule, clearly indicating all i	mportant milestone of the construction activities.
	Submitted.	Ref
18.0	Bid Compliance Statement (confirmation fo enclosed.	r no deviation stipulated in Bid) in the proforma
	Submitted. F	Ref



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Exception and Deviation Statement in the proforma enclosed.
Submitted.
All the documents submitted in requisite number of copies as mentioned in the Bidding Document and are readable/legible.
Submitted. No. of copies submitted:
Original Biding Document along with blank (un-priced) copy of Price Bid/ Schedule of Rates, corrigendum and addendum (if any).
Submitted.
All pages/ documents are stamped and signed by the authorised signatory of the bidder.
Yes.
SIGNATURE OF BIDDER:
NAME OF BIDDER:
COMPANY SEAL:



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# ANNEXURE-C27 APPENDIX FOR DOCUMENTS TO BE SUBMITTED BY BIDDER

SI. No.		Contents	File Name	Page Nos.
			(To be saved as)	
1	DD /	/ Banker's Cheque /MSME / NSIC / UAM	EMD.pdf	to
2	i)	Work Order Copy with scope of work and BOQ	Tech	to
	ii)	Completion Certificate	PQC.pdf	to
	iii)	Amendment Copy, if applicable		to
3	i)	Balance Sheet and Profit & Loss statements of last 3 financial years (Audited by C.A)	Fin PQC.pdf	to
	ii)	Bank Solvency of last financial year		to
4	i)	PF	Comm	to
	ii)	ESI	PQC.pdf	to
	iii)	PAN		to
	iv)	PAN based GSTIN		to
	v)	Power of Attorney /ownership/Certificate of Incorporation		to
	vi)	Affidavit of No Litigation (Original)		to
5	i)	Declaration of Relatives (Appendix – C19 & C20 of NIT	Forms.pdf	to
	ii)	Details of Present Commitments of the tenderer (ANNEXURE-C8 of NIT)-Not applicable for this tender		to
	iii)	Exception / Deviation statement to the tender terms & conditions (ANNEXURE-C3 of NIT)		to
	iv)	Declaration by the bidder (ANNEXURE-C4 of NIT)		to
	v)	Bank Mandate Form for e-payment (Annexure-C10 of NIT)		to
	vi)	SAC Code (Annexure-C18 of NIT)		to
	vii)	Undertaking of downloading of tender document (Annexure-C5 of NIT)		to
6	Pre-	Contract Integrity Pact (Annexure-C21 of NIT)	PCI.pdf	to

#### NOTE -

- 1. The above details must be filled up and submitted, along with the bid document.
- 2. All the above mentioned documents needs to be submitted along with the offers.
- 3. The bid submitted must have 6 files as mentioned above and must contain the contents specified against each file.

Page nos. (Ex:- pages --- to ---) must be mentioned against each file.

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Annexure-C28

#### **NO DUE CERTIFICATE**

1.	Vendor Code:	Vendor Name:			
2.	Work Order Ref with Date:				
3.	Description of Work as per Order:				
4.	Reference of User Dept:				
Co	•	do not have any due regarding Material, Tools, Equipment, Charges, Ground Rent, Hiring Charges, etc. and Compensation for			
		performance guarantee / defect liability shall continue for the eriod notwithstanding the above certificate/ agreement.			
		for National Aluminium Co. Ltd.			
	Date:	Signature. Name: Designation: Department:			
•					
	NO (	CLAIM CERTIFICATE			
1.	Vendor Code:	Vendor Name:			
2.	Work Order Ref with Date:				
3.	Description of Work as per Order:				
4.	Reference of User Dept:				
5.	Final Bill Value Claimed:				
ag	ainst the above contract except what is	any other claims on M/s. National Aluminium Company Limited already claimed in the Final Bill subject to processing/passing in ecurity Deposit/Performance guarantee.			
	for National Aluminium Co.	Ltd. for Contractor			
	Date: Signature Name: Designation: Department:	Signature Name: Seal:			

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Name Of the Work:

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**Annexure-C29** 

### **WORK COMPLETION CERTIFICATE**

2.	Work Order Reference No. & Date:			
3.	SAP Purchase Order No.			
4.	Name of the Contractor &	SAP Vendor Code:		
5.	Contract Period:	From	To	
6.	Amended Contract Period:	From	To	
7.	Contract Value (Excluding	GST) (Rs.):		
8.	Final Amended Contract V	Value (Excluding GST)	(Rs.):	
9.	Actual Value of Completed	d Work (Excluding GS	Γ) (Rs.):	
10.	Date of Actual Commencement of Work:			
11.	Date of Completion of Wo	rk:		
	ified that the above work hat the performance is satisfactors	<u>-</u>	Il respects as per terms & conditions of the contract	
(Sig	gnature of EIC/MIC)		(Signature of HOD)	
Naı	me:		Name:	
Des	Designation: Designation:			
Dep	ot.:		Dept.:	
Dat	Date: Date:			



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**Annexure-C30** 

#### Format:- (To be submitted with BID)

#### ANTI-PROFITEERING DECLARATION FORMAT

To whomsoever it may concern.

I, Mr	, Proprietor/	(other authorized
signatories) of M/s.	, hereby so	lemnly and sincerely declare
that, while giving this quotation to	o 'Nalco' against Tender No	
Dt, me/my firm/my	y company has abided by all Tax Laws	and Rules including but not
limited to Section 171 of the Cen-	tral Goods and Services Tax Act, 2017.	
I, hereby solemnly and sincerely	further declare that me/my firm/my co	mpany will continue to abide
by the said laws, including but no	ot limited to Section 171 of the Central	Goods and Services Tax Act,
2017, as applicable from time to	time during the life of the tender and	during execution of any order
placed with reference to the said	tender.	
I further declare that, me/my firm	n/my company, in furtherance and in co	ompliance to the said section,
will make commensurate reducti	ion in the basic prices w.r.t. Input Tax I	penefits and reduction in Tax
charged to 'Nalco' w.r.t. Output T	ax benefits in connection with goods an	nd/or services provided.
I further declare that the foregoin	ng is true and correct and the same is a	legal obligation and failure to
fulfil if could result in penalties ur	nder the law.	
Date:		
Place:	To be signed by the authorized	I person under the firm's seal.



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**Annexure-C31** 

#### Format:- (To be submitted at the time of release of Final Due)

#### **ANTI-PROFITEERING DECLARATION FORMAT**

To whomsoever it may concern.

I, Mr	_, Proprietor/	(other authorized
signatories) of M/s.	, hereby solemi	nly and sincerely declare
that, while executing the Order No.	Dt	, me/my firm/my
company has abided by all Tax Laws and Rules	s including but not limited to S	ection 171 of the Central
Goods and Services Tax Act, 2017.		
I further declare that, me/my firm/my company	, in furtherance and in compli	ance to the said section,
have not made profit out of reduction in Input	Tax benefits where ever app	licable and reduced Tax
charged to 'Nalco' w.r.t. Output Tax benefits in	connection with goods and/or	services provided.
I further declare that the foregoing is true and c	correct and the same is a lega	l obligation and failure to
fulfil if could result in penalties under the law.		
Date:		
Place: To be signed	by the authorized person und	er the firm's seal.



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## **GENERAL CONDITIONS OF CONTRACT (GCC)**

(Enclosed with this Tender)



# Online GeM Percentage BoQ to be filled up by the bidder

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