

**Government of India
DEPARTMENT OF ATOMIC ENERGY
NUCLEAR FUEL COMPLEX
CIVIL ENGINEERING DIVISION
Civil Maintenance Section
HYDERABAD - 500062**

NOTICE INVITING e-TENDER

TENDER NOTICE NO: M - 332/2016

NIT Details

1. On line item rate tender in two parts i.e. Part A –Techno-commercial Bid and Part B – Financial Bid are hereby invited through **e-Tendering mode** on behalf of the President of India for the following work from eligible contractors on approved list of CPWD, MES, Railways, State PWDs, Public Sector Undertakings of Central or State Governments / Central Autonomous bodies or those having adequate experience and capabilities to execute similar works of such magnitude in Department of Atomic Energy (DAE).

1. i) Name of Work : Providing water proofing treatment to the Roof terraces and Miscellaneous structural repairs in SSTP, SMP,CFFP, UOP, NUFAP and other plants at Nuclear Fuel Complex, Hyderabad.

ii) Estimated Cost : ` **Rs. 86.00 lakhs**

iii) Earnest Money : **Rs. 1,72,000/-**

Note: Earnest Money in original to be submitted preferably in the form of Fixed Deposit Receipt / Demand Draft / Bankers Cheque /Pay Order of a Scheduled Bank, issued in favour of **Pay and Accounts Officer, NFC, Hyderabad.**

A part of Earnest Money is acceptable in the form of Bank Guarantee also. In such case minimum 50 % of the Earnest Money or ` **20.00 Lakhs**, whichever is less, shall be in the form prescribed above and balance can be accepted in the form of Bank Guarantee issued by a Scheduled Bank as per Appendix 'A' of Tender Part 'A'.

iv) Cost of Tender Document : **NIL**

v) Tender Processing Fee : Rs. by **e-payment through electronic mode**
(Nonreturnable) in favour of M/s ITI Limited, New Delhi

vi) Period of completion : **18(Eighteen)** calendar months period.

vii) Dates for Request for purchase / : **From 08.03.2017 (10:00 Hrs.) to 26.03.2017**
Download of Tender Document (upto 21:00 Hrs) on website www.tenderwizard.com/
(excel / word formats) DAE. Detailed NIT is also available on website www.nfc.gov.in for view only.

- viii) Date of Pre-bid clarification : The contractors are requested to send their Pre-bid queries by email not later than **-N A-**.Pre-Bid meeting will be held **-N A-**.The Pre-Bid clarifications will be uploaded in Tenderwizard website by **-N A-**.
- ix) Last date and time of closing of online submission of tenders : 27.03.2017(21:00 Hrs)
- x) Last date for submission of original documents towards Receipt of e-payment towards Tender Processing Fee and EMD : On or before 30.03.2017(14:00 Hrs) at Dy. Chief Engineer (CED, EP & PD), NFC, Hyderabad in a sealed super scribed envelope mentioning name of work and NIT Number. Original documents should be submitted preferably in person. However documents sent by post or courier will also be considered provided the same is received within due date & time.
- xi) Date and time of online opening of Part A : 30.03.2017 (15:00 Hrs)
- xii) Date of opening of Part B of qualified bidders : Will be notified at a later date

Information, Eligibility Criteria, Conditions and Instructions Information:

2. Tender document is prepared in two parts viz. Part 'A' (Techno-commercial Bid) and Part 'B' (Financial Bid). Part 'A' consists of Techno-commercial Bid viz. Section I – Notice Inviting e-Tender (English & Hindi versions), Section II - Form of Agreement and General Rules and Directions for the guidance of Contractors, Memorandum, Section III – General Conditions of Contract, Additional conditions, Section IV - Special Instructions to Tenderers, Section V – Technical specifications, Section VI - List of Tender Drawings, Section VII – Schedule 'A' (Schedule of Materials to be supplied by Department), Appendix 'A' – Bid Security (Bank Guarantee), Appendix 'B' – Form of BG bond for performance security, Appendix 'C' – Indenture for secured advance, Appendix 'D' – Guarantee bond for waterproofing works, Appendix 'E' – Guarantee bond for anti-termite treatment, Annexure 'A' – Statement of men and machinery, Annexure 'B' – List of approved manufacturer of building materials, all corrigendum's to tender documents and Proforma of Schedules 'A' to 'F'. Part 'B' (Financial bid) consists of Schedule 'B' - Schedule of Quantities. **AERB Industrial safety control of works.**

Prospective Bidders or general public can see and download free of cost **PDF format** of the above documents from website www.tenderwizard.com/DAE.

To participate in the tender, Prospective Bidders are required to download the **excel format** of Part A Techno-commercial Bid containing Techno-commercial Sheet, Annexure A, List of similar works completed & List of works in Hand and Part B- Financial Bid containing Schedule 'B' after Login in the Home page of the website www.tenderwizard.com/DAEwiththeir **User ID / Password & Class**

III Digital Signature Certificate. Steps to download EXCEL documents are following:

- i. Click on “**UNAPPLIED**” button;
- ii. Click on “**REQUEST**” icon (blue colour),
- iii. Pay TENDER PROCESSING FEE online.
- iv. Click on “**SUBMIT**” button.
- v. Click on “**IN PROGRESS**” button.
- vi. In status column bidder will find the tender is **RECEIVED**.
- vii. Bidder will be able to download required Tender Documents by clicking “EDIT ATTACHMENT” icon for any number of times till last date of submission Prospective bidders have to fill the **excel documents** and upload the same **without renaming** it. Please refer Help Manual for submission of Tender / contact Help Desk as per NIT.

The Tender documents - Section II, III,IV&V and Construction safety manual which are part of Tender Document are available on website [www.tenderwizard.com/DAE -Downloads-NFC DOCUMENTS](http://www.tenderwizard.com/DAE-Downloads-NFC-DOCUMENTS).

A set of tender drawings (Section VI) for the mentioned works will be made available to the tenderer only for inspection in the office of Tender Inviting Authority during the mentioned tender sale period and bidders, if required can come personally to study the drawings and the same shall not be available on the web site.

All the above documents will form part of Agreement after award of work to the successful bidder.

Initial Eligibility Criteria:

3. The bidder should have the following :
 - (a) Registration in Appropriate Class of Contractors, if any
 - (b) Bank Solvency Certificate of a Nationalized Bank / Scheduled Bank for a minimum of **Rs. 34.40 Lakhs** and should not be older than one year from the date of opening of tender.
 - (c) Average Annual Financial Turnover on construction works should be at least **86.00 Lakhs**, during the immediate last 3 consecutive financial years ending **31st March 2015/2016**. This should be duly audited by a registered Chartered Accountant.
 - (d) Should not have incurred any loss in more than two years during last five years ending **31st March 2015/2016**.
 - (e) Carried out similar works during last 7 years.
 - (f) Performance Certificates.
 - (g) Construction Plant & Machinery, equipment's, accessories & other infrastructure facilities to complete the work in time.
 - (h) Required Technical Staff.
 - (i) Valid Registration Certificate issued by Department of Sales Tax, Telengana for VAT (TIN No.)
 - (j) Permanent Account Number (PAN).

The bidder should have satisfactorily completed (based on certification of performance by client of the works)

3 (Three) similar completed work value not less than 40% of estimated cost i.e
Rs. 34.40 **Lakhs** or

2 (Two) similar completed work value not less than 60% of estimated cost i.e
Rs 51.60 **Lakhs** or

1 (One) similar completed work value not less than 80% of estimated cost i.e Rs 68.80
Lakhs during the last 7 (Seven) years ending on the last day of the month previous to the

one in which the tenders are invited and if the eligible similar works are not carried out in Central Government / State Government / Public Sector Undertaking of Central or State Governments / Central Autonomous bodies, then TDS certificates should be produced by bidder for the same.

4. For the purpose, 'cost of work' shall mean gross value of the completed work including the cost of materials supplied by the Govt./Client, but excluding those supplied free of cost. For the purpose of clause Similar Works means **"Water proofing and structural Repair works"** **The similar works should have been executed in India.**

5. The value of executed works shall be brought to the current costing level by enhancing the actual value of work at simple rate of 7 % per annum, calculated from the date of completion to last date for Request for purchase / Download of Tender Document

Special Conditions to Bidders::

- (a) Contractors / Registered Dealers / Manufacturers / authorized applicators who produces manufacturers quality assurance guarantee certificate and their authorization letter from the manufacturers are eligible to undertake the works directly, being these works involves construction chemical treatments.
- (b) They must have experience in execution of specialized structural repairs, shortcrete treatment, water proofing treatment to the External wall & Terrace, Grouting, Polysulphide Sealant treatments and polymer concreting, polymer mortar treatment etc., must produce relevant experience certificates from competent authorities.
- (c) Guarantee and to be executed by the contractors for all Terraces water proofing treatment for their adequacy and rectification of all defects for 5 (five) years reckoned from the date after the maintenance period prescribed in the contract.

6. Bidder should be a registered firm in India.

7. After opening of Part 'A' of tender Dy. Chief Engineer shall constitute an inspection team which will visit selected worksites of ongoing/completed works of the tenderers to evaluate the capability of the tenderers based on the following:

- a) Financial capability and their turnover during the last 5 years.
- b) Technical capabilities of the company in the light of subject work.
- c) Nature of works executed by the tenderer during last 7 years.
- d) Organizational structure of the company.
- e) Necessary Resource required by company to carry out the subject work.
- f) Time & quality consciousness.
- g) Tendency of the company with regard to making extraneous claims and disputes.
- h) Site planning ability.
- i) Tendency of the company to award the work on back to back / subletting.

8. As per the security procedure in force in NFC, Hyderabad, the successful bidder shall be vetted

by the Security Section of NFC before award of the work.

9. No modifications in the tender shall be allowed after opening Part 'A'.
10. Tenders with any condition including conditional rebate shall be rejected. However, tenders with unconditional rebate will be accepted.
11. If any information furnished by the applicant is found to be incorrect at a later stage, they shall be liable to be debarred from tendering / taking up works in NFC in future forever. Also if such a violation comes to the notice of Department before start of work, the Engineer-in-charge shall be free to forfeit the entire amount of EMD and Performance Guarantee.
12. The time allowed for carrying out the work will be reckoned from the 15th day after date of written order to commence the work or from the first day of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.
13. Tender will be kept valid for **180 (One Hundred Eighty) days** from the Last date of closing of online submission of tenders.
14. In case the last date of receipt of original document towards Tender Processing Fee & EMD and opening of tender are declared as holiday, the respective date shall be treated as postponed to the next working day, correspondingly.
15. Original Demand Draft/Bankers Cheque/Pay Order / Fixed Deposit Receipt / Bank Guarantee, if any of a Scheduled Bank towards Earnest Money Deposit as applicable and receipt of e-payment done through electronic mode towards Tender Processing fee shall be submitted at aforementioned place, date and time otherwise Tenders are liable to be rejected and will not be processed further.
- 16. Cheques for Earnest Money Deposit will not be accepted.**
17. The contractor whose tender is accepted will be required to furnish by way of security deposit for the due fulfillment of his contract, such sum as will amount to 2.5% of the work orders value. In addition, the contractor shall be required to deposit an amount equal to 5% of the work order value of the contract as Performance guarantee before commencement of the work but not later than stipulated date of commencement. Performance guarantee of 5% can also be accepted in the form of Bank guarantees (in case Performance guarantee exceeds ` 1.00 Lakhs), fixed deposit receipts of Scheduled Bank or in the form of Government Securities.
18. The Security Deposit will be collected by deductions @ 2.5 % of the gross amount of the running bill of the contractors till the total security deposit recovered will amount to 2.5% of the work order value of work. The Security deposit will also be accepted in the form of Governments Securities, Fixed deposit Receipts of Scheduled Bank and Nationalized Bank. These shall be endorsed in favour of the Pay and Accounts Officer, NFC, Hyderabad. Earnest Money Deposit of successful bidder shall be returned back / refunded on receipt of Performance guarantee , however in case Performance Security guarantee is in the form of Bank Guarantee, Earnest Money Deposit will be released subsequent to confirmation of verification of Bank Guarantee from the issuing Bank.
19. If the successful tenderer, fails to furnish the prescribed performance guarantee on or before stipulated dates of commencement, the department (NFC) shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely.
20. The acceptance of tender shall rest with department which does not bind itself to accept the lowest tender and reserves to itself the authority to reject any or all of the tenders received, without assigning any reason. All tenders in which any of the prescribed conditions are not fulfilled or incomplete in any respect are liable to be rejected.

21. Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable for rejection.
22. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-In-charge shall be communicated to the Engineer-In-charge.
23. The department reserves the right to accept the whole or only part of the tender and the tenderer shall be bound to perform the same at the rates quoted.
24. i) This work comes under Works Contract. Works Contract Tax / VAT as applicable shall be deducted from each bill paid to the contractor.
 - ii) Sales Tax or any other Tax on material in respect of this contract shall be payable by the contractor and Government will not entertain any claim whatsoever in this respect.
 - iii) Contractor should be registered under Service Tax and Service Tax as applicable as per the extent order on the subject on the above work shall be paid by the contractor to concerned Department and same will be reimbursed by the Department after satisfying that it has been actually and genuinely paid by the contractor. The bidder should not consider Service Tax in his rates.
 - iv) Labour welfare cess @1% of gross value of work done shall be recovered from each bill paid to the contractor.
 - v) Income tax as applicable shall be deducted from each bill paid to the contractor.
 - vi) Contractor should be registered under EPF & ESIC and as per law, contractor shall pay EPF & ESIC of contract workers to concerned Department and it will be reimbursed to him by the Department after satisfying that it has been actually and genuinely paid by the contractor. The bidder should not consider EPF & ESIC in his rates.
 - vii) Any other taxes /cess as per Government directives shall be deducted from each bill paid to the contractor, from time to time.
25. If any tenderer withdraws his tender within the validity period and before award of work whichever is earlier or make any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall without prejudice to any right or remedy, be at liberty to forfeit 50 % (Fifty Percent) of the Earnest Money absolutely. Further, the tenderer shall not be allowed to participate in the re-tendering process of the work.
26. After award of work to the successful bidder, the contractor shall submit time schedule & cash flow statement for approval of Competent Authority which will form part of Agreement.
27. **The Successful bidder whose tender is accepted will be required to obtain Police Verification Certificate (PVC) issued by Special Branch of Police at his own cost for all his Staff i.e. Engineers, Supervisors and workmen to work inside NFC and should quote accordingly. The PVC will be valid for three years.**

In case of receipt of any adverse charter and antecedent remarks/ notification against the Contractor / Company/ firm/proprietor and/ or his contract personnel, consequent to the security vetting, NFC reserves absolute right to terminate the contract forthwith without assigning

reason/ show cause notice. Under the circumstance the Contractor will have no right to claim good any losses/liability that may be incurred as consequence to the above action initiated by NFC, Hyderabad, NFC also reserves the right to forfeit in part/full performance guarantee and/ or security deposit in possession of the Government for failure on the part of the contractor to abide / adhere to the Security instruction issued by DAE/ NFC from time to time.

Instructions:

28. The contractor should be registered with www.tenderwizard.com/DAE. Those contractors not registered on the website mentioned above, are required to get registered. If needed, they can be imparted training for online bidding process as per details available on the website.
29. The intending bidder must have valid class-III digital signature for Request for purchase / Download of Tender Document (excel / word formats).
30. The bid can only be submitted/uploaded after providing details of Fixed Deposit Receipts and or Bank Guarantee of any Scheduled Bank towards Earnest Money Deposit and other documents as specified.
31. Tenders will be received online up to time & date as mentioned above. Part A will be opened on the time & date as mentioned above. The receipt of Tender Processing Fee and EMD will be checked first. If found in order, Part A will be opened. After opening of Part A, for evaluation, the contractor's ongoing / completed work sites & offices will be visited and their Techno-commercial Bid related documents shall be evaluated and accordingly tenderers will be qualified / disqualified by the Competent Authority. The Part 'B' (Financial Bid) of the qualified tenderers shall then be opened at notified date and time. Date of opening of Part 'B' (Financial Bid) will be intimated to all bidders by email
32. On opening date, the contractor can login and see the status of Bids after opening.
33. Contractor must ensure to quote rate of each item. The column meant for quoting rate in figures appears in YELLOW colour and the moment rate is entered, it turns SKY BLUE. In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO).
34. List of Documents to be scanned from original & uploaded within the period of bid submission by bidder:
 - i. Financial Turn Over certified by CA.
 - ii. Profit & Loss statement certified by CA.
 - iii. Latest Bank Solvency Certificate.
 - iv. List of Construction Plants and Machinery
 - v. List of Technical Staff
 - vi. Certificates:
 - a. Registration certificate, if any
 - b. Certificates of Work Experience / Performance Certificates
 - c. Certificate of Registration for Sales Tax / VAT / WCT
 - d. TIN Registration Certificate
 - e. PAN (Permanent Account Number) Registration
 - vii. FDR/DD/PO/BC of any Scheduled Bank against **EMD**.

- viii. Bank Guarantee of any Scheduled Bank against part of EMD, **if any.**
- ix. Undertaking that the eligible similar work(s) have not been executed through another contractor on back to back basis.
- x. Undertaking as per Part A: Section II & Clause 11 of General Conditions of Contract

Note : During technical evaluation missing documents ,if any, can be asked by inspection committee for submission.

35. The Bidder is required to fill the following:

- a) Part - 'A'(Techno-commercial Bid)
- b) Manpower & Machinery proposed for the work (Annexure 'A')
- c) List of similar works completed during last seven years
- d) List of works in hand.
- e) Schedule - 'B'(Financial Bid)

Notes:

1. Registered contractors can only purchase/download & submit/upload tenders after paying requisite fees.
2. Interested agencies may visit website **www.tenderwizard.com/DAE** for registration.
3. Contact for assistance/ clarifications (040) 27184202 / 271843020 / 27184378.
Fax: (040) 27122532 during office hours.

4. Contact for assistance for registration and participation in e-Tendering:

a) Shri Vijaya Kumar @ cell No: 07207042074 email-twhelpdesk694@gmail.com or

b) Ms **Sharada @ cell No. 09686115310 daehelpdesk@gmail.com** or Shri Rudresh, cell No. +91-9969458639, email: rudresh.tenderwizad@gmail.com

In case difference between wordings of English and Hindi version of NIT, the English version will prevail.

Signature of
Dy. Chief Engineer (CED, EP & PD)
Civil Engineering Division
Nuclear Fuel Complex
For and on behalf of President of India

Providing water proofing treatment to the Roof terraces and miscellaneous structural repairs in SSTP, SMP, CFFP, UOP, NUFAP and other at Nuclear Fuel Complex, Hyderabad.

SCHEDULE OF QUANTITIES

Item No.	Qty	Description of Items	Unit	Rate in Rupees	Amount in Rupees
01	2400.00	Removing the existing bitumen based water proofing treatment from roof terraces at all heights above plinth level including cleaning the bitumastic primer using suitable solution thoroughly without any trace, cleaning all loose particles, screeds, scaffolding etc., conveying the debris and stacking neatly at a place upto a lead of 100 metres as directed.	SQM		
02	65.00	Dismantling very carefully the existing plastered brick masonry along with water proofing treatment at all heights above plinth level using chisel including necessary scaffolding, disposing the debris within a lead of 100 metres making good the damages if any done to the adjoining portions without any extra cost etc., complete all as directed.	CUM		
03	200.00	Dismantling very carefully the existing Mangalore tiles laid on the inclined roof terraces at all heights above plinth level including dismantling of bedding mortar, necessary scaffolding, stacking the useful tiles and disposing the debris within a lead of 100 m etc. complete all as directed.	SQM		
04	45.00	Demolishing very carefully the	CUM		

		existing reinforced cement concrete by chiseling/using cutting machine or concrete breakers at all depths and heights below and above plinth level including cutting the reinforcements and stacking the useful reinforcements upto a lead of 100 metres and disposing the debris within a lead of 100 metres, making good damages if any done to adjoining portions etc., complete.			
05	135.00	Removing the debris stacked outside the site of work consisting of tarfelt, construction debris etc., loading carting / transporting to the dumping areas, upto a lead of 2.0 Km, unloading, leveling, dressing etc., complete as directed. (Truck/stack measurements shall be taken and deduction @ 30% shall be made for voids).	CUM		
06	20.00	Providing cement concrete M-20 screed mixed with water proofing compound Conplast WP 90 of M/s. Fosroc / Conproof LW200 of M/s Armstrong or its approved equivalent as per manufacturer's specification and as approved by the Engineer-in-Charge over the roof terraces after applying a bonding coat of Polymer bonding agent NITOBOND of M/s. Fosroc / Roofbond PB or its approved equivalent mixed with cement slurry of 1 litre for 5 square metre at all heights for filling undulations / depressions and maintaining gradient towards rain water pipes for easy flow of water, using 10 mm maximum size graded stone aggregates, mixing in mechanical mixture, laid to required levels,	CUM		

		slopes and thickness, compacting, finishing, necessary curing etc., complete as specified and directed by Engineer in charge.			
07	5.00	Providing Brick work in CM 1:4 mixed with approved water proofing compound using approved quality bricks at all heights above plinth level including scaffolding if necessary raking out joints, curing etc., complete as per specifications and as directed.	CUM		
7A	15.00	Brick work using approved quality light weight cement Block of size 600 x 200 x 100 mm of Aerocom or as specified at all heights above plinth level in superstructure and ranking out joints above ground level, curing etc., complete as per specifications and as directed for using cement mortat 1:4 / Cement based adhesive as directed by Engineer-in-charge.	CUM		
08	200.00	Providing brick work of 115 mm thick in cement mortar 1:4 mixed with approved water proofing compound using approved quality bricks of all heights and depths above and below plinth level including scaffolding, raking out joints, curing etc. complete as directed	SQM		
09	80.0	Remaking the existing Expansion Joint horizontally over roof or vertically comprising: a) Chipping removing the existing treatment and cleaning the surfaces, (B) Repairing and making good the damaged edges of the joint with Polymer modified mortar, (C) Supplying and fixing/filling the expansion joint gap with Premoulded	RM		

		<p>Bituminous mastic board of Shatilex to the full depth except the top 50 mm, (D) Providing and fixing 30 mm thick expansive baker rod by leaving 25 mm depth at the top and fixing the masking tape, (E) Supply and application of one coat of Poly Sulphide primer on the sides of the groove, (F) Providing and filling the Expansion joint to the top 25 mm depth with Two part Poly Sulphide compound, (G) Covering the expansion joint including brick wall with 18 G Aluminium sheet, (H) Closing the expansion joint at bottom with Aluminium flats of 100 mm x 2 mm with required screws, nails, drilling holes, finishing, making good the surface, necessary curing etc., complete all as directed as per manufacturers' specifications and as per the instructions of Engineer-in-Charge, Closing the expansion joint at bottom with Aluminium flats of 100 mm x 2 mm with required screws, nails, drilling holes, finishing, making good the surface, necessary curing etc., complete all as directed as per manufacturers' specifications and as per the instructions of Engineer-in-Charge.</p>			
10	135.00	<p>Repairing the existing Expansion Joint by providing and filling with polysulphide sealant filler only 25mm x 15mm thick in existing expansion joints including removing the old damaged sealant, scaffolding complete in the slab and walls as directed by Engineer-in-charge</p>	RM		
11	600.00	<p>Providing Polymer modified Cement</p>	SQM		

	<p>based waterproofing treatment to the thoroughly cleaned roof terraces consisting of</p> <ul style="list-style-type: none">a) Identifying the areas of leakage by approved means,b) Pressure grouting the area of leakage with cement slurry admixed with expansive grouting additive Conbex 100 of M/s. Fosroc / Rapidstrong of M/s Armstrong or its approved equivalent at a minimum one grout point per 2 Sq.m slab area.c) Exposing, cleaning and filling cracks observed in RCC slab with polymer modified mortar compound/ PU sealent.d) Cutting 'V' grooves along concrete and masonry junctions and filling the same with single part Polyurethane sealent,e) Providing and application of one coat of XYPEX / Roofex crystalline liquid water proofing treatment to the concrete surface at a coverage of 1 litre per 4 Sq.m slab area,f) Providing cement concrete screed as mentioned in item No.6 above,g) Applying 2 (two) coats of acrylic modified cementitious coating Brush bond of M/s. Fosroc / Roofbond PB of M/s. Armstrong or it's approved equivalent,h) Continue the treatment along the inner surfaces of parapet wall up to a height of 300 mm, applying a bonding coat of polymer bonding agent Nitobond AR of M/s. Fosroc / Roofbond of M/s Armstrong or it's approved equivalent mixed with cement slurry over the treated surface,			
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		<p>i) Plastering the entire treated surfaces with 20 mm cement mortar of 1:3 mix admixed with expansive polymer additive Conplast 421 IC of M/s. Fosroc / Conproof 1 of M/s Armstrong or it's approved equivalent,</p> <p>j) Necessary curing with ponding water, testing treatment for water tightness after Polymerization and plastering, providing false markings of 300 x 300 mm, lowering and disposing the debris if any etc., all as per approved manufacturer's specifications and as directed by Engineer in Charge.</p>			
12	5400.00	<p>Providing water proofing treatment to the roof terraces with cold applied, Acrylic Elastomeric cellulose fibre reinforced membrane coating - ROOFBOND FRC over one coat of crystallization coating system Pidilite / Armstrong / Fosroc / Cica in the following sequence:</p> <p>a) Cleaning the surfaces from dirt, dust and other contaminations .</p> <p>b) Pre wetting the surface of slab and application of one coat of crystallization coating system Xypex / Roofex @ 0.25 lt. / Sq.m.</p> <p>c) Applying two coats of high solid, cold applied, Acrylic Elastomeric liquid membrane coating as primer coat at 1:1 dilution @ 250 ml/sq.m/coat and 1st coat at 20% dilution @ 450 ml/sq.m/coat.</p> <p>d) Laying Fiber mesh on the surface.</p> <p>e) Over the Fiber mesh, Application of two coats of high solid, cold applied, Acrylic</p>	SQM		

		Elastomeric liquid membrane coating at 20% dilution @ 450 ml/sq.m/coat, all as per approved manufacturer's specifications and as directed by Engineer in Charge.			
13	210.00	<p>Providing cement based waterproofing treatment to the sunken floor of water closets, bath rooms, nahanis from inside at all heights above plinth level giving injections to the concrete surface as required with cements and Roofcrete AR 576 or approved euivalent acrylic based water proofing compound solution to fill up al inherent holes, voids, honey-combs, etc., in the concrete, applying waterproof plaster of about 25 mm thick for the floor area of the depression and about 18 mm on the side walls in two layers of the depression and continue the vertical trement if necessary on the walls above proposed floor finish with making surface suitable and even to receive tiles, testing the treatment for water tightness by impounding water for 7 days etc., complete. (1) If due to location of rain water pipes the average thickness of trement exceeds 110 mm for easyflow of water the extra brickbat coba will be paid as extra item and the rate for the same to be got approved from the Department before execution (2) The waterproofing treatment is to be guaranteed for bone-dry condition for a period of 10 years in the prescrideb proforma (3) The measurement for payment shall be</p>	SQM		

		the entire area of terrace covered by the treatment measured between bick / concrete parapets without plaster and the area of vatas calculated by taking the length of vatas and height above the finished level of the terrace.			
14	350.00	Providing cement based waterproofing treatment to the inside surface of tanks by giving injections with Crystalline admixture Xypex / Roofex GP or equivalent to concrete bottom slab and walls as required with cement and treating the floor and walls with waterproof motar as per specifications of specialised waterproofing , agencies, finishing smooth with trowal in cement colour and testing of water tank by filling up with water as per specifications etc., the thickness of treatment on the floor will be about 50mm and on the walls about 20mm. Note: The water proofing treatment is to be GUARANTEED for bone dry condition for a period of 10 YEARS , the measurement for payment shll be the actual area covered by the treatment, the rate shall be inclusive of testing of tank fora water tightness.	SQM		
15	400.00	Providing specialized WATER PROOFING TREATMENT to the Bottom floor and walls (Internal surface) of the Tanks, Basement floors as per the following sequence complete and as directed by the Engineer-in-charge. A) Identifying the areas of leakage/damage by approved means B) Pressure grouting the area by	SQM		

		<p>nozzle grouting with 140 PSI grout pump with cement slurry and mixing with specialized Crystallization compound of M/s Fosroc / Armstrong / PMCC or equivalent approved make. A minimum of one grout point per 2 sq.m floor area .</p> <p>C) Cutting 'V' grooves along the cracks observed in RCC walls, cleaning thoroughly the grooves and filling the same with PU / Epoxy sealant of approved make</p> <p>D) Providing and application of one coat of SBR Latex based Acrylic polymer bonding agent of Armstrong/PMCC or equivalent approved make mixed with cement as per manufacturers specifications.</p> <p>E) Laying of Polymer cement mortar of average thickness of 12mm with neat finish in 1:4 ratio mixed with Acrylic polymer modified reinstatement mortar of Armstrong / PMCC or any other approved equivalent make as per the manufacturers recommendations .</p> <p>G) Application of food neutral epoxy compound of Armstrong/PMCC or any other approved equivalent make in two coats for the floor and walls.</p>			
16	300.00	<p>Repairing the leaky RCC Roof gutters as per the following procedure:</p> <p>a. Cleaning the surface from dirt, dust and other contamination including removing all the loose concrete.</p> <p>b. Grouting the RCC slabs with 140 PSI grout pump with cement slurry mixing with Free flow, Non shrink grout additive of approved make</p>	SQM		

		<p>until rejection at suitable intervals as approved</p> <p>c. Exposing, Cleaning and sealing the cracks in the slab if any with proper Acrylic / PU sealants.</p> <p>d. Acrylic Polymer Elastomeric Liquid membrane water proofing treatment to the gutters, slabs with High solid, cold applied Acrylic Elastomeric Liquid membrane coatings as per manufacturer's recommendations manufactured by Pidilite / BASF / Armstrong / Fosroc/Cica.All as per manufacturer's specifications and directed by Engineer-in-Charge.</p>			
17		<p>Providing Acrylic Polymer cement mortar plastering to the damaged external walls in 1:3 cement mortar admixed with Acrylic polymer modified reinstatement mortaring Roofcrete AR 576 or approved equivalent by Pidilite / Armstrong / Fosroc at 2 liter per bag of 50 Kg cement of an average thickness of 20 mm with neat finish including chipping and cleaning the existing damaged plastered surfaces, application of one coat of Acrylic Polymer bonding agent - Roofbond PB or approved equivalent by Pidilite / Armstrong / Cica / Fosroc at all heights above plinth level including required M S Scaffolding all as per manufacturers' specifications, curing and as directed by Engineer-in-Charge.</p>			
A	720.00	To the external walls	SQM		
B	1100.00	Over the existing Roof / Slab	SQM		
18	900.00	Filling the cracks / gap between RCC columns / beams and brick	RM		

		masonry walls as per the following method: (a) making "V" groove , (b) cleaning of the surface. (C) Filling acrylic cementations mortar in the groove area upto to 50% of the depth as a back up support and strengthening of the area. (d) Filling the groove with one part polyurethane sealant using Roof seal or approved equivalent by Pidilite / Armstrong/ Cica / Fosroc.			
19		Removing carefully the existing MS / PVC/ WOODEN, doors/ windows along with frame from masonry including cutting opening in walls and taking out lugs, hold fasts etc., transporting and stacking the removed frames at the location as directed by the Engineer-in-charge cleaning , disposing the debris upto a lead of 50m etc., complete.			
A	20.00	Of area 3 sqm and below	Each		
B	20.00	Of area beyond 3 sqm	Each		
20	480.00	Chipping off the existing concrete surfaces of structural columns, beams, ceiling, walls, pedestals etc. including removing off deteriorated and loose particles of concrete with wooden mallets, until to achieve sound substrate, cleaning the rust and other contamination from exposed reinforcement as directed by Engineer-in-charge.	SQM		
21	160.00	Application of single component corrosion preventive coating for exposed reinforcement and steel structures and bridging the cracks upto 0.5 mm by forming a flexible film which resists U.V.Rays, Acids, Salts, Oxidizing agents, moisture, fungus etc, using Roofguard AC or	Lit		

		approved equivalent by Pidilite / Armstrong / STP / Fosroc as per manufactures' instructions and as directed by Engineer-in-charge.			
22	160.00	Application of rubber based latex bonding agent to be mixed with cement using Power bond SBR or approved equivalent by Pidilite / Armstrong / STP / Fosroc as per manufactures' instructions and as directed by Engineer-in-charge.	Lit		
23	2400.00	Application of two component structural grade polymer modified high strength mortar for restoration of distracted structures of concrete using Roofcrete AR approved equivalent by Pidilite / Armstrong / STP / Fosroc / as per manufactures' instructions and as directed by Engineer-in-charge.	Kg		
24	120.00	Application of one coat of curing compound on the freshly repaired surfaces of approved quality by Pidilite / Armstrong / STP / Fosroc as per manufactures' instructions and as directed by Engineer-in-charge.	Lit		
25	25.00	Making required size of opening in RCC rain water gutter slab to suit 110 mm / 160 mm OD rain water pipes at all elevation and finishing the holes with cement mortar 1:1 after fixing rain water down take pipes including required scaffolding, curing the joints etc., complete as directed by Engineer-in-Charge.	Each		
26		Providing and fixing PVC rain water down take pipes with necessary slip on flanges of following dia (Finolex or approved equivalent) conforming to IS: 4985			

		to with stand 6 Kg/Sq.cm pressure including necessary accessories fixed against wall, column with Anchor fasteners, bolts and teak wood packing pieces, clamps, jointing the pipes with solvent cement testing etc. complete.			
A	60.00	110mm O / D	RM		
B	110.00	160mm O / D	RM		
27	10.00	Providing and fixing 100 mm n. b. G.I. Pipe sleeves medium variety (Class 'B') conforming to IS:1239 for sleeves and rain water spouts to drain out rain water in to gutters including cutting of pipes as required, bending and embedding in masonry / concrete with cement concrete 1:2:4 including painting with a coat of bitumastic paint on embedded portion and two coats of synthetic enamel paint over a coat of approved primer on exposed portion etc., complete as directed.	RM		
			Grand Total Rs.		

NOTE: (1) Contractors / Registered Dealers / Manufacturers / authorized applicators who produces manufacturers quality assurance guarantee certificate and their authorization letter from the manufacturers are eligible to undertake the works directly, being these works involves construction chemical treatments.

(2) They must have experience in execution of specialized structural repairs, shortcrete treatment, water proofing treatment to the External wall & Terrace, Grouting, Polysulphide Sealant treatments and polymer concreting, polymer mortar treatment etc., must produce relevant experience certificates from competent authorities.

(3) Guarantee and to be executed by the contractors for all Terraces water proofing treatment for their adequacy and rectification of all defects for 5 (five) years reckoned from the date after the maintenance period prescribed in the contract.