



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 07

Ref: PSER:SCT: RKL-C1755:TCN-07

Date: 10-08-2016

Sub	Tender Change Notice (TCN) - 07	
Job	Main Plant Civil & Structural work including Misc Building. Road work, Levelling & Grading, Fire Fighting, Cooling Tower (IDCT), Boundary wall and Misc Foundations/ Structures at 1x250 MW Rourkela PP-II Expansion, Odisha.	
Ref	1.0	TENDER NO. PSER:SCT: RKL-C1755:16.
	2.0	BHEL's NIT, vide reference no PSER:SCT: RKL-C1755:5080, Dated 18-06-2016.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT: RKL-C1755:TCN-01, Dated 30-06-2016
	4.0	BHEL's TCN-02, vide reference no PSER:SCT: RKL-C1755:TCN-02, Dated 05-07-2016
	5.0	BHEL's TCN-03, vide reference no PSER:SCT: RKL-C1755:TCN-03, Dated 25-07-2016
	6.0	BHEL's TCN-04, vide reference no PSER:SCT: RKL-C1755:TCN-04, Dated 29-07-2016
	7.0	BHEL's TCN-05, vide reference no PSER:SCT: RKL-C1755:TCN-05, Dated 01-08-2016
	8.0	BHEL's TCN-06, vide reference no PSER:SCT: RKL-C1755:TCN-06, Dated 06-08-2016
	9.0	All other pertinent issues till date.

With reference to above, following points/documents, relevant to tender, may please be noted and complied with while submitting the offer.

1. Revised Pre-Qualification criteria attached herewith at **Annexure-1A**, superseding the PQ criteria issued along with NIT (Annexure-1)
2. Clarification is attached vide **Annexure-A to TCN-07**.
3. Revision/ Modification to TCC clauses is attached vide **Annexure-B to TCN-07**.
4. Revised BOQ cum price schedule, **VOLUME-III-PRICE SCHEDULE, REV-04** is attached **superseding VOLUME-III PRICE SCHEDULE, REV-03** issued earlier. Bidder shall quote as per this revised Volume-III, Rev-04 only. Bidders are also requested to submit a declaration in techno-commercial offer that they have submitted their price bid as per **REVISED price schedule** format (**VOLUME-III- PRICE SCHEDULE, REV-04**).
Any other document uploaded in the price section other than Price schedule issued alongwith Tender/TCN shall not be taken into cognizance.
(For uploading Revised/Latest price schedule format in E-procurement Portal, contact Mjunction.)
5. Bidders are request to note that "AHP" job stands deleted from the scope of the contractor (refer Annexure-B)
6. Revised 'No deviation certificate' as per enclosed **Annexure-2**. Bidder shall submit no deviation certificate as per enclosed format only.
7. All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

SR.ENGR (SCT)

Encl : As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SECTOR-II, SALT LAKE CITY, KOLKATA - 700 091

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PRE QUALIFYING CRITERIA

JOB	MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC BUILDING. ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT), BOUNDARY WALL AND MISC FOUNDATIONS/ STRUCTURES AT 1X250 MW ROURKELA PP-II EXPANSION, ODISHA.
TENDER NO	PSER:SCT: RKL-C1755:16

SL NO	CRITERIA
1.0	<p>BIDDERS SHOULD HAVE AVERAGE ANNUAL TURNOVER OF MINIMUM RS 31 CRORES DURING THE LAST 3 (THREE) FINANCIAL YEARS, ENDING ON 31-03-2015 AND SHOULD HAVE POSITIVE NET WORTH AS ON 31-03-2015.</p> <p>BIDDER MUST HAVE EARNED PROFIT IN ANY ONE OF THE LAST THREE FINANCIAL YEARS ENDING ON 31-03-2015. AUDITED BALANCE SHEET AND PROFIT & LOSS ACCOUNT OF THE COMPANY FOR LAST 3 (THREE) FINANCIAL YEARS, ENDING ON 31-03-2015 NEED TO BE SUBMITTED IN SUPPORT OF ABOVE.</p> <p>IN CASE AUDITED BALANCE SHEET AND PROFIT AND LOSS ACCOUNT HAS NOT BEEN SUBMITTED FOR ALL THREE YEARS INDICATED ABOVE THEN THE APPLICABLE FINANCIAL AUDITED STATEMENTS SUBMITTED BY THE BIDDERS AGAINST THE REQUISITE THREE YEARS WILL BE AVERAGED FOR THREE YEARS.</p> <p>IF FINANCIAL STATEMENTS ARE NOT REQUIRED TO BE AUDITED STATUTORILY, THEN INSTEAD OF AUDITED FINANCIAL STATEMENTS, FINANCIAL STATEMENTS ARE REQUIRED TO BE CERTIFIED BY CHARTERED ACCOUNTANT.</p>
2.1	<p>BIDDER SHOULD HAVE EXECUTED 'CIVIL' OR 'STRUCTURAL' OR 'CIVIL & STRUCTURAL' WORKS IN ANY INDUSTRIAL/ POWER PROJECT DURING THE LAST 7 (SEVEN) YEARS, ENDING ON THE LATEST DATE OF BID SUBMISSION, VALUE OF WHICH SHOULD NOT BE LESS THAN EITHER OF THE FOLLOWING :</p> <p>A) 1 (SINGLE) WORK OF VALUE NOT LESS THAN Rs. 82 CRORE OR B) 2 (TWO) WORKS OF VALUE NOT LESS THAN Rs. 51 CRORE EACH OR C) 3 (THREE) WORKS OF VALUE NOT LESS THAN Rs. 41 CRORE EACH</p> <p>RELEVANT DOCUMENT IN SUPPORT OF ABOVE SHALL BE SUBMITTED.</p>
2.2	<p>BIDDER SHOULD HAVE 'EXECUTED' THE FOLLOWING JOB IN ANY POWER/ INDUSTRIAL PROJECT(S) DURING LAST 7 (SEVEN) YEARS, ENDING ON THE LATEST DUE DATE OF SUBMISSION OF OFFER.</p> <p>RELEVANT DOCUMENT IN SUPPORT OF ABOVE SHALL BE SUBMITTED.</p>
2.2.1	23550 CUM OF CONCRETE WITHIN A PERIOD OF TWELVE CONSECUTIVE MONTHS IN ONE OR CUMULATIVE OF TWO CONCURRENTLY RUNNING CONTRACTS
2.2.2	COMPLETION & HANDOVER OF STG DECK OF ONE UNIT OF ATLEAST 100 MW OR ABOVE FOR MECHANICAL ERECTION
2.2.3	3000 MT OF STRUCTURAL FABRICATION & ERECTION WITHIN A PERIOD OF TWELVE CONSECUTIVE MONTHS IN ONE OR CUMULATIVE OF TWO CONCURRENTLY RUNNING CONTRACTS
2.2.4	COMPLETION OF FABRICATION & ERECTION OF MILL BUNKER STRUCTURE INCLUDING FABRICATION OF BUNKER SHELL OF ATLEAST ONE UNIT OF 100 MW OR ABOVE
3.0	<p>BIDDER SHOULD HAVE VALID PAN.</p> <p>RELEVANT DOCUMENT IN SUPPORT OF ABOVE SHALL BE SUBMITTED.</p>
4.0	IN CASE OF CONSORTIUM BIDDING, THE FOLLOWING POINTS SHALL BE COMPLIED.

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Annexure-1A to TCN-07

	RELEVANT SUPPORTING DOCUMENT SHALL BE SUBMITTED
4.1	NO. OF PARTNERS INCLUDING PRIME BIDDER SHALL NOT BE MORE THAN 2
4.2	PRIME BIDDER ALONG WITH CONSORTIUM PARTNER SHALL ENTER INTO AGREEMENT.
4.3	PRIME BIDDER SHOULD COMPLY WITH CRITERIA UNDER SL NO 1.0, 2.1, 2.2.1 & 2.2.2 ABOVE
4.4	EITHER PRIME BIDDER OR CONSORTIUM PARTNER SHALL COMPLY WITH BALANCE CRITERIA AT SL. NO. 2.2.3 AND 2.2.4 IN ANY COMBINATION.
4.5	PRIME BIDDER AND CONSORTIUM PARTNER EACH SHALL COMPLY WITH CRITERIA UNDER SL NO 3.0.
4.6	IN CASE OF CONSORTIUM BIDDING, PRIME BIDDER SHALL BE RESPONSIBLE FOR OVERALL EXECUTION OF THE CONTRACT
4.7	PRIME BIDDER SHALL COMPLY WITH ALL OTHER PRE-QUALIFYING CRITERIA FOR THE TENDER UNLESS OTHERWISE SPECIFIED
GENERAL	
1.0	'EXECUTED' MEANS BIDDER SHOULD HAVE ACHIEVED THE CRITERIA SPECIFIED ABOVE EVEN IF THE CONTRACT HAS NOT BEEN COMPLETED OR CLOSED.
2.0	BIDDER SHOULD FURNISH INFORMATION REGARDING PROJECTS IN HAND, CURRENT LITIGATION, ORDERS REGARDING EXCLUSION/ EXPULSION OR BLACK LISTING.
3.0	AFTER SATISFACTORY FULFILLMENT OF ALL THE ABOVE CRITERIA, OFFER SHALL BE CONSIDERED FOR FURTHER EVALUATION AS PER NIT AND ALL OTHER TERMS OF THE TENDER.
4.1	IN CASE OF CONSORTIUM BIDDING, CONSORTIUM BIDDER SHALL DEPOSIT SECURITY DEPOSIT OF 2 % OF TOTAL CONTRACT PRICE IN ADDITION TO SECURITY DEPOSIT TO BE SUBMITTED BY PRIME BIDDER FOR THE TOTAL CONTRACT PRICE.
4.2	PERFORMANCE SHALL BE EVALUATED FOR PRIME BIDDER AND THE CONSORTIUM PARTNER FOR THEIR RESPECTIVE SCOPE OF WORK. AFTER EXECUTION OF WORK, THE WORK EXPERIENCE SHALL BE ASSIGNED TO THE PRIME BIDDER AND THE CONSORTIUM PARTNER FOR THEIR RESPECTIVE SCOPE OF WORK.
4.3	IN CASE THE CONSORTIUM PARTNER BACKS OUT, ANOTHER CONSORTIUM PARTNER MEETING THE AFORESAID PERTINENT QUALIFYING REQUIREMENTS, HAS TO BE ENGAGED BY PRIME BIDDER AND IF NOT, THE RESPECTIVE WORK WILL BE WITHDRAWN AND EXECUTED AT THE RISK & COST BASIS OF THE PRIME BIDDER.
4.4	IN CASE PRIME BIDDER WITHDRAWS, THE WHOLE CONTRACT SHALL BE CONSIDERED CANCELLED AND SHORT CLOSED.
4.5	CONSIDERATION OF OFFER WILL BE SUBJECT TO CUSTOMER'S APPROVAL OF BIDDER (IN CASE OF SOLE BIDDING) OR PRIME BIDDER ALONG CONSORTIUM PARTNER (IN CASE OF CONSORTIUM BIDDING)
4.6	<p>PRIME BIDDER WHO HAVE NOT INDIVIDUALLY EXECUTED THE COMPLETE WORK INVOLVING ABOVE AREAS (I.E. 2.2.1, 2.2.2, 2.2.3 & 2.2.4) BUT HAVE EXECUTED THE COMPLETE WORKS INVOLVING ABOVE AREAS (I.E. 2.2.1, 2.2.2, 2.2.3 & 2.2.4) ALONGWITH SAME CONSORTIUM PARTNER /ASSOCIATE, UNDER DIRECT ORDER OF BHEL, FOLLOWING SHALL BE APPLICABLE FOR CONSIDERING THE PRIME BIDDER QUALIFIED AS STANDALONE BIDDER (I.E. WITHOUT CONSORTIUM) FOR PRESENT JOB:</p> <p>BIDDER SHOULD HAVE EXECUTED AT LEAST TWO SIMILAR JOBS IN CONSORTIUM WITH SAME CONSORTIUM PARTNER/ASSOCIATE FOR THE ABOVE AREAS (I.E. 2.2.1, 2.2.2, 2.2.3 & 2.2.4) IN WHICH HE HAS DONE AT LEAST ONE AREA (OUT OF 2.2.1, 2.2.2, 2.2.3 & 2.2.4) INDEPENDENTLY.</p> <p>BIDDER TO SUBMIT CONFIRMATION FROM PURCHASER/ END USER ABOUT ACTIVE INVOLVEMENT OF PRIME BIDDER TOWARDS SUCCESSFUL/ SATISFACTORY EXECUTION OF THE COMPLETE WORK.</p>
4.7	STANDALONE BIDDER CANNOT BECOME PRIME BIDDER OR A CONSORTIUM BIDDER IN A CONSORTIUM BIDDING. PRIME BIDDER SHALL NEITHER BE A CONSORTIUM PARTNER TO OTHER PRIME BIDDER NOR TAKE ANY OTHER CONSORTIUM PARTNER. HOWEVER, CONSORTIUM PARTNER MAY ENTER INTO CONSORTIUM AGREEMENT WITH OTHER PRIME BIDDER. IN CASE OF NON-COMPLIANCE, CONSORTIUM BIDS OF SUCH PRIME BIDDER WILL BE REJECTED.

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ANNEXURE-A TO TCN-07**JOB:MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC BUILDING. ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT), BOUNDARY WALL AND MISC FOUNDATIONS/ STRUCTURES AT 1X250 MW ROURKELA PP-II EXPANSION, ODISHA.****TENDER NO. PSER:SCT: RKL-C1755:16.****CLARIFICATION OF BIDDER'S QUERY**

SL NO	REFERENCE CLAUSE OF TENDER DOCUMENT	EXISTING PROVISION	BIDDER'S QUERY	BHEL'S CLARIFICATION
1	ST A1845 of BOQ/Rate Schedule	--	Technical specification of 3 tier racking system	Providing and fixing in position of slotted hole structural steel 3 (three) tier racks having steel plated planks all complete with cold formed mild steel and synthetic enamel painting. The height of rack shall be 8.5m. The rack shall be made considering minimum load of 200kg/sqm each tier. The minimum thickness of slotted hole vertical post shall be 4mm and plate for planks shall be minimum 16 gauge. Proper arrangement to avoid toppling/instability of racks to be made. All work to be carried out after preparation and approval of design, drawing etc. from owner/consultant and BHEL. The work to be carried out complete as per specification, drawings and as directed by engineer - in - charge. Total base area of rack = 300 sqm.

ANNEXURE-B TO TCN-07

JOB: MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC BUILDING, ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT), BOUNDARY WALL AND MISC FOUNDATIONS/ STRUCTURES AT 1X250 MW ROURKELA PP-II EXPANSION, ODISHA.

TENDER NO. PSER:SCT: RKL-C1755:16.

Revision of clauses of TCC/Vol-1F

Sl. No.	Clause No. of TCC-VOL-IF	Existing clause	Revised clause
1	5TH POINT OF CLAUSE NO 3.1.1 UNDER 3.0	Civil, structural and architectural works of AHP { includes air washer building, RCC main silos, ash slurry pump house & mcc room, . Ash conveying compressor house & mcc room, hcsd pump house cum utility building, ash water underground sump, ash slurry sump, ash slurry & ash water pipeline & supports upto dyke-d, hcsd pipeline & supports upto ash dyke e, ash dyke- e and misc.structure/foundations) for 1x250 MW NSPCL RourkelaPP-II expansion,Odisha.	DELETED
2	14.1.3	<p>The bidder will have to install 3 nos PCs (multimedia PC work station Pentium- Core-i5-650, 3.2 GHZ or above, 500 GB HDD, 4 GB RAM, 100/1000 MBPS LAN card) of HCL/ COMPAQ/ ZENITH or equivalent make with window 8 or higher, 64 bit (with roll back to 32 bit O/S and required software like MS Office 2010 or higher, AutoCAD 2014 or higher, PageMaker (7.0 etc), ADOBE PDF CREATOR with one no laser jet printer compatible for A3 size printing (ink/ cartridge for which to be supplied as and when required), two no. laser jet printer compatible for A4 size printing (ink/ cartridge for which to be supplied as and when required) with power backup at places, as per instruction of BHEL for exclusive use of BHEL.</p> <p>These computers/ printers shall remain contractor's property and they will be allowed to take out the same after completion of contract period. The contractor shall provide data / information etc in prescribed formats for periodical updating of the progress reports, material management reports, updating of network pertaining to the contractor's scope of work etc.</p> <p>The contractor shall also provide 3 (three) nos computer operators and 3 (three) numbers service staff for miscellaneous service for BHEL's use at site/ Kolkata for reconciliation, progress review & day-to-day planning purpose, documentation etc. These facilities are to be provided within 30 days from LOI date till completion of scheduled contract period .</p> <p>If contractor fails to provide computer / printer / personnel as per requirement, for a continuous period of fifteen days or more, BHEL shall have the right to deduct the amount as per following rates on prorata basis, from contractor's RA bill or any other dues.</p>	<p>The bidder will have to install 3 nos PCs (multimedia PC work station Pentium- Core-i5-650, 3.2 GHZ or above, 500 GB HDD, 4 GB RAM, 100/1000 MBPS LAN card) of HCL/ COMPAQ/ ZENITH or equivalent make with window 8 or higher, 64 bit (with roll back to 32 bit O/S and required software like MS Office 2010 or higher, AutoCAD 2014 or higher, PageMaker (7.0 etc), ADOBE PDF CREATOR with one no laser jet printer compatible for A3 size printing (ink/ cartridge for which to be supplied as and when required), two no. laser jet printer compatible for A4 size printing (ink/ cartridge for which to be supplied as and when required) with power backup at places, as per instruction of BHEL for exclusive use of BHEL.</p> <p>These computers/ printers shall remain contractor's property and they will be allowed to take out the same after completion of contract period. The contractor shall provide data / information etc in prescribed formats for periodical updating of the progress reports, material management reports, updating of network pertaining to the contractor's scope of work etc.</p> <p>The contractor shall also provide 3 (three) nos computer operators and 3 (three) numbers service staff for miscellaneous service for BHEL's use at site/ Kolkata for reconciliation, progress review & day-to-day planning purpose, documentation etc. These facilities are to be provided within 30 days from LOI date till completion of scheduled contract period .</p> <p>The contractor shall also responsible to deposit the PF,ESI etc as per Govt. rules on behalf of their supplied supporting staff (computer operators and service staff) and documents proof will be produced to BHEL for verification.</p> <p>If contractor fails to provide computer / printer / personnel as per requirement, for a continuous period of fifteen days or more, BHEL shall have the right to deduct the amount as per following rates on prorata basis, from contractor's RA bill or any other dues.</p>

VOLUME-III PRICE SCHEDULE, REV-04		
JOB: MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC BUILDING, ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT), BOUNDARY WALL AND MISC FOUNDATIONS/ STRUCTURES AT 1X250 MW ROURKELA PP-II EXPANSION, ODISHA.		
TENDER NO : PSER:SCT: RKL-C1755:16.		
SL NO	PREAMBLE	Remarks
1	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully before filling in rates for various items. Clauses under this preamble shall be read in conjunction with Volume-1A, 1B, 1C, 1D, 1E, 1F, II and other tender sections (as applicable as per NIT) and shall have precedence over any contrary statement mentioned anywhere in this document. The tenderer shall sign & stamp all the pages of the tender document as a token of their acceptance. Submission of unfilled formats with sign & stamp shall be construed as acceptance of the contents of the same.	
2	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. Drawings enclosed with the tender are only preliminary and for guidance/tender purposes giving some idea of the work involved. The work is to be executed as per terms & conditions of the tender and actual drawings/documents, which shall be furnished during execution.	
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.	
4	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, taxes(except service tax), transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule.	
5	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within plus/minus thirty percent (+/- 30 %) of the awarded price as per LOI .	
6	Prior written approval of BHEL shall be sought by the contractor in case quantity variation of any item crosses +50% (plus fifty percent) limit during execution and approval to be obtained before execution of further quantity for this item.	
7	In case Sealed /Paper Price Bids are opened for finalisation of the tender, for any Item Rate/BOQ based service contract, possibility of variation of quantity/ addition/deletion of items can not be ruled out. Under such circumstances, after execution of work, if it is observed that standing as L-1 is changed based on actual quantity executed, the bidder shall give suitable rebate to maintain your standing as L-1. Since this aspect can be assessed at the end of execution, necessary adjustment will be effected at the end of execution in final bill. This condition shall not be applicable where the tender is finalised through Reverse Auction.	
8	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and/ or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order. The rates of unit rate/optional items shall remain valid till execution of the order, if the job/work is awarded to the bidder.	NOT APPLICABLE
9	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing, clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same. However, if separate rate for such item is available in the rate schedule, the same shall be considered.	
10	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.	
11	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.	
12	The tenderer shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site before submission of his bid/offer. No claim whatsoever due to lack of knowledge of site conditions shall be entertained after award of the work.	
13	No splitting of the job is envisaged unless the same is specifically indicated in the TCC/Vol-1F. Decision of BHEL in this regard shall be final and binding to the bidders.	
14	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/ altered by them. Also putting any comments instead of rates/price in the designated column of the rate schedule shall make the offer liable for rejection.	
15	Bidders to note that for Civil & Structural packages, against a particular item against a ST No. appearing in more than one schedule of the BOQ, same rate must be quoted in all schedules for that particular items with same descriptions. If by error, different rates are quoted in different schedules for same ST No. (i.e. item with same description), then the higher of the rates shall be considered for evaluation but awarding shall be done with the lower rate, if the bidder becomes L-1. The same modality shall be applicable for other item rate service contracts where item with same description is repeated in different schedules.	NOT APPLICABLE
16	For Lumpsum Service Contract : The items/components indicated in the tender is indicative and may vary to any extent. No compensation shall be payable in case of any variation in the items/components listed in the bill of quantities if the executed weight remains within the variation limit. However, in case of deletion of any item or addition of new items over and above the items listed or variation of existing quantity beyond variation limit specified, adjustment (i.e. Payment or recovery as the case may be) shall be done on pro-rata basis based on the Rate per MT worked out from the quoted lump-sum Price and the total weight of components listed /indicated in price schedule plus 15% weight variation limit.	
17	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.	
18	In case of tender for Civil and/or Structural works, if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of CPWD/PWD/DSR schedule as prescribed in the tender/BOQ cum Rate Schedule. PVC/escalation is not payable for these Non-scheduled items.	
19	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor. No idling charge whatsoever (either for labour or any other resources) is payable by BHEL for any reason whatsoever.	
20	Size and weights of various items are mentioned in the attached BOQ cum rate/price schedule for reference purpose only & these shall not be taken into consideration for quoting/calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate column, taking unit as mentioned in the quantity column. Rates shall be filled in both figures and words. Amount shall be calculated based upon these rates multiplied by the mentioned quantity for the respective items.	
21	Bidder's GRAND Total price will be considered for evaluation unless stated otherwise.	
22	In case of BOP packages, if Bidder does not quote/indicate the price for freight charges against indicated rate schedule, the same shall be considered as 2% of basic price and adjusted with the total quoted price against each item keeping the total quoted price unaltered.	NOT APPLICABLE

**VOLUME-III
PRICE SCHEDULE, REV-04**

JOB: MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC BUILDING. ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT), BOUNDARY WALL AND MISC FOUNDATIONS/ STRUCTURES AT 1X250 MW ROURKELA PP-II EXPANSION, ODISHA.

TENDER NO : PSER:SCT: RKL-C1755:16.

SCH-1-GRAND TOTAL PRICE

SL.NO	DESCRIPTION OF WORK	PRICE SCHEDULE REF	TOTAL PRICE (INR)
A	SCHEDULE ITEM		
1.0	TOTAL PRICE OF SCH-2-PART-1-SERVICE (MAIN PLANT CIVIL & STRUCTURAL WORK, ROAD WORK, LEVELLING & GRADING, COOLING TOWER ETC.-SERVICE).	SCH-2-PART-1-SERVICE	
2.0	TOTAL PRICE OF SCH-3-PART-2-SUPPLY (MAIN PLANT CIVIL & STRUCTURAL WORK, ROAD WORK, LEVELLING & GRADING, COOLING TOWER ETC.-SUPPLY).	SCH-3-PART-2-SUPPLY	
3.0	GRAND TOTAL PRICE (1.0+2.0)		
B	NON-SCHEDULE ITEM Quote % above or % below or at par for items not covered as above of this schedule. The rate shall be derived from Delhi schedule of rate 2014.		
1a)	Rate of complete item		_____ % above / _____ % below / At par DSR 2014
1b)	Rate of supply of material at site only		_____ % above / _____ % below / At par DSR 2014
1c)	Rate for execution complete excluding supply of materials.		_____ % above / _____ % below / At par DSR 2014
NOTE			
1.0	Bidder shall quote total price for total price of SCH-2-PART-1 (Service part) and SCH-3-PART-2 (Supply part) only at sl no 1.0, & 2.0 above respectively. All other amounts/ rates of each item of works in respective schedules/ parts will be derived based on allocated percentages. As such, any uncalled figure/ amount noted at any other place/ schedule of Volume-III will not be reckoned & will stand null & void.		
2.0	Bidder to note that grand total price at sl no 3.0 above shall be considered for evaluation. However order shall be issued separately for supply and service part . As such grand total price should be complete in all respect for the full scope defined and considering all terms and conditions of the tender/TCN..		
3.0	Bidder to note that SCH-2 covers service of respective items, unless specified otherwise in the description of items.		
4.0	Bidder to note that SCH-3 covers supply of respective items, unless specified otherwise in the description of items.		

**VOLUME-III
PRICE SCHEDULE, REV-04**

**JOB: MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC BUILDING. ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT),
BOUNDARY WALL AND MISC FOUNDATIONS/ STRUCTURES AT 1X250 MW ROURKELA PP-II EXPANSION, ODISHA.**

TENDER NO : PSER:SCT: RKL-C1755:16.

SCH-1-GRAND TOTAL PRICE

5.0	Bidder's quoted total price of SCH-2, & SCH-3 at sl no 1.0 & 2.0 above respectively shall be apportioned into amount of various items of works based on allocated percentages against respective item, in respective schedules/ parts. As such, bidder shall not indicate/ quote any amount/ rate in these schedules/ parts and any amount/ rate quoted against any item shall not be taken into cognizance/ account and offer may be liable for rejection.
6.0	Based on the itemwise percentage allocations, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items & its quantity after rounded off to upto 9 decimal places will be taken into account. However, RA bill payment shall be done after rounding off the gross amount to two decimal points.
7.0	Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per SI No.5 above.
8.0	Successful bidder shall draw a schedule of quantities of various items of work of SCH-3 and obtain BHEL's approval/ clearance in writing before procurement, supply, etc.
9.0	Any item as per scope of work, if not included in the price quoted above and shown separately will not be taken cognizance of and the offer shall be liable for rejection.
10.0	Price format shall not be changed by bidder in any case and it may lead to cancellation of their offer.

**VOLUME-III
PRICE SCHEDULE, REV-04**

JOB: MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC BUILDING. ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT), BOUNDARY WALL AND MISC FOUNDATIONS/ STRUCTURES AT 1X250 MW ROURKELA PP-II EXPANSION, ODISHA.

TENDER NO : PSER:SCT: RKL-C1755:16.

SCH-2-PART-1-SERVICE

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
	Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.			
100	EARTH WORK			
	Earth work In excavation, backfilling and disposal including necessary men/women, materials, equipment, loading, transportation, unloading, dewatering etc as per specification, drawing and as directed by engineer- in-charge for the following.			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
101	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading/levelling of disposed materials etc all complete for following depths below ground level.			
a	Depth from ground level but not exceeding 2 m	CUM	140000	0.016107962
b	Depth exceeding 2 m but not exceeding 4 m	CUM	79200	0.010049304
c	Depth exceeding 4 m but not exceeding 6 m	CUM	14000	0.001957042
d	Depth exceeding 6 m but not exceeding 8 m	CUM	500	0.000076884
e	Depth exceeding 8 m but not exceeding 10 m	CUM	500	0.000084411
f	Depth exceeding 10 m but not exceeding 15 m	CUM	500	0.000093013
102	Extra over ST No. 101 for dewatering of ground water by well point method as per IS 9759.	CUM	200	0.000011183
103	Earth work in excavation in soft rock (rock without any recovery of excavated materials in the form of hard stone/boulder) including weathered rock which can be excavated by means of crow bar, pick axe, pneumatic rock breaker attachment with excavator machine etc but does not require chiselling or blasting including setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading / levelling of disposed materials etc all complete for following depths below ground level.			
c	Depth exceeding 4 m but not exceeding 6 m	CUM	11200	0.002902444
d	Depth exceeding 6 m but not exceeding 8 m	CUM	1200	0.000366462
e	Depth exceeding 8 m but not exceeding 10 m	CUM	1000	0.000359149
f	Depth exceeding 10 m but not exceeding 15 m	CUM	1000	0.000394634

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
106	Earth work in excavation in hard rock requiring chiselling including wedging, line drilling, pre shearing etc as required, setting out, levelling, deawtering (wherever required), dressing the sides & bottom, all lifts, stacking/disposal of surplus excavated material within a lead upto 500m, spreading / levelling of disposed materials etc all complete for following depths below ground level.			
d	Depth exceeding 6 m but not exceeding 8 m	CUM	500	0.000347160
e	Depth exceeding 8 m but not exceeding 10 m	CUM	500	0.000443023
f	Depth exceeding 10 m but not exceeding 15 m	CUM	500	0.000444098
107	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials from compulsorily excavated soil available within a lead upto 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	5000	0.000500014
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	5000	0.000446249
A107	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade in well compacted layers of 150 mm thicknessand using/with selected materials from compulsorily excavated soil available within a lead upto 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	120000	0.013161646
Aa	Each layer compacted so as to achieve at least 97% maximum dry density as per IS-2720 (Part-VIII)	CUM	3000	0.000329041
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	20000	0.001957042

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
108	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials directly from excavation and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	2500	0.000250007
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	5000	0.000446249
A108	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade in well compacted layers of 150 mm thickness and using/with selected materials directly from excavation and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	40000	0.004000108
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	5000	0.000446249
109	Extra over ST No. 101 and 103 to 107 for carriage of excavated earth/selected materials for every 1 km or part thereof beyond an initial lead of 500m.	CUM	35000	0.000940886
111	Providing and filling sand upto any depth under floors, around foundations, plinths etc. in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.	CUM	3000	0.002035539
200	CONCRETE WORKS			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
	Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating and curing, (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)			
201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as filling course at any depth below finished floor level, under and around foundations/floors, mass fill etc.	CUM	1700	0.003937526
202	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors at any depth below finished floor level etc.	CUM	6100	0.015440632
204	Concrete under floors, paving, plinth protection, pipe encasing etc complete with 20 mm nominal size graded aggregate at any depth below finished floor level for the following grades.			
b	M20 Grade	CUM	1200	0.003153634
205	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc at any level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
a	M25 Grade	CUM	29500	0.085647477
b	M30 Grade	CUM	2500	0.009497569

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
206	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at any level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
a	M25 Grade	CUM	8500	0.026624913
b	M30 Grade	CUM	1500	0.005335628
A207	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works of grade M-35 Grade in machine foundations for TG, ID/FD/PA fans, BFP, Coal mills at all elevations below/above finished floor level (except TG deck and top decks supported over vibration isolation system) including addition of suitable plasticizer conforming to IS 9103(latest) to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate in concrete all complete as per specification & drawing.	CUM	2000	0.008279794

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
208	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 of grades mentioned below for reinforced concrete works using graded aggregate in top decks of all machine foundations supported on vibration isolation system (excluding supply and installation of vibration system) and top deck of TG foundation at all levels including addition of suitable plastisizers conforming to IS9103 to achieve a slump more than 125 mm in concrete as per manufacturers recommendation, preparation of scheme for concreting, getting it approved by engineer, labour, materials, equipment, handling, batching, transporting, mixing, pumping, placing, leveling, vibrating, compacting, curing, testing, cleaning and rendering the exposed surface with cement sand mortar to give a smooth and even surface, maintaining and submitting records of concreting, petrographic examination and potential reactivity of aggregate etc. all complete as per specification, drawing and instructions of engineer, including UPV testing as directed by engineer in charge, rectification of the defects in concreting observed by ultra-sonic pulse velocity (UPV) testing by cement/epoxy grout etc, but excluding formwork, staging, reinforcement, embeddments and temperature control of concrete. Payment terms - a) After casting 75% ; b) After receipt of ultrasonic test report - 25%.			
b	M35 grade (with 20mm nominal size graded stone aggregate)	CUM	700	0.002737601
209	Extra over St. No. 205 to 208 for controlling of temperature of fresh concrete to less than 23 degree centigrade using ice, including all related arrangements for Providing, storing and mixing of ice with water, cooling of aggregates etc. All complete as per specification, drawing and instruction of engineer in charge.	CUM	2500	0.000957015
210	Extra over ST Nos. 205 to 207 for conducting UPV test for concrete at all levels including all equipments, making necessary arrangements, staging, submission of report etc. all complete as directed by engineer in charge and as per specification.	CUM	900	0.001026802
A211	Providing and encasing of structural steel member with concrete using nominal aggregate size of 12.5mm down. Encased member shall be wrapped with welded wire mesh/chicken wire mesh with proper lap etc. complete as per specification for the following grades.			
b	M25 grade	CUM	1500	0.005227561

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
212	Screed concrete conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at any level or thickness, drains etc complete as per following.			
a	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume)	CUM	100	0.000302266
b	1:1.5:3 (1 part cement, 1.5 part sand, 3 parts of aggregate by volume)	CUM	350	0.001532515
213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent precast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.			
a	M 25 grade	CUM	100	0.000573134
A213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works (Except boundary wall) like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent precast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.			
a	M 20 grade	CUM	50	0.000169359
b	M 25 grade	CUM	200	0.000745181
c	M 30 grade	CUM	200	0.000819807

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
B213	Providing and laying Precast Reinforced concrete wall panels, copings, architectural features etc. as per approved design and drawing submitted by bidder with design Mix cement concrete of grade M30 as per IS:456 & IS 10262-2009 using graded aggregate for Concrete in precast boundary-wall works. The work shall include cost of formwork/moulds , provision of suitable grooves/key for interlocking of panels after erection, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting for all leads, erection with required T&P without damage, setting in position with cement sand mortar (1:3), filling the gaps with cement sand mortar (1:3) , etc all complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing.			
a	M 25 grade	CUM	100	0.000439582
b	M 30 grade	CUM	7000	0.031673975
C213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in perforated / withoutperforation precast RCC slabs for cover over drain/trench etc including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent preacast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for M30 grades.	CUM	100	0.000439582
214	Providing and laying Design Mix cement concrete as per IS:456, IS 3370 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in water retaining/conveying structures including addition of suitable plastisizer cum waterproofing cement additives confirming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate for following grades.			
a	M 25 grade	CUM	100	0.000303019
b	M 30 grade	CUM	7000	0.026156621

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
215	Dismantling concrete work for all types of structures at all levels including stacking of servicable material to a lead of 500 m and disposal of unservicable material upto a lead of 2 km, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.			
a	Plain cement concrete of all grades	CUM	50	0.000029947
b	Reinforced cement concrete of all grades	CUM	50	0.000043227
A215	Rebate over ST No. 215b for taking into account the deemed cost of all serviceable material including reinforcement steel which bidder will be getting out of it by taking them outside plant for bidder's purpose instead of stacking to a lead of 500m inside plant.			
a	Plain cement concrete of all grades	CUM	20	0.000006000
b	Reinforced cement concrete of all grades	CUM	20	0.000008645
216	Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	CUDM	500	0.000731203
217	Extra over and above St No 216 for cutting of reinforcement, all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	300	0.000079680
218	Cutting Reinforced concrete with mechanised tools like Core drilling machine etc. for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer in charge.	CUDM	100	0.000010430
220	Providing & laying Plum cement concrete 1:3:6 with 75% graded metal of maximum size 40 mm and 25%plums of maximum size 150 mm.	CUM	50	0.000128874

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
221	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in sloped surface of canal lining or channel cast in alternate panels with provision of expansion gap/construction joints at any level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete, compaction with special equipments, etc all complete as per specification & drawing for the following.			
b	M25 Grade	CUM	50	0.000209683
300	FORM WORKS			
	Providing, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering complete including pockets etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.			
301	Fairface form work with good quality water proof ply wood of required thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	SQM	90000	0.032904115
302	Fairface form work with good quality water proof ply wood of required thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights.	SQM	50000	0.021613488
A302	Fairface form work with good quality water proof ply wood of required thickness and smooth surface having high quality shuttering finish with tolerance of +/- 5mm above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights.	SQM	4700	0.002031668
303	Fairface Formwork with good quality water proof ply wood of required thickness and smooth surface for TG superstructure (above base raft level) including preparation of scheme, designing, submission and approval of staging drawing with sufficient props, braces and ties at every tier of height of approx. 4m for all heights.	SQM	400	0.000630125

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A303	Fairface formwork with good quality water proof ply wood of required thickness and smooth surface for BFP decks supported on vibration isolation system resting on steel framing at approx. 14.5 M including preparation of scheme, designing, submission and approval of staging drawing with necessary removable steel framing for supporting the formwork, sufficient props, braces and ties etc. all complete.	SQM	200	0.000315062
304	Providing, fixing and removing formwork in block-outs/pockets and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.			
a	Upto 150 mm depth	Each	100	0.000033227
b	Pockets of depths more than 150mm and upto 300 mm depth	Each	100	0.000046453
c	Pockets of depths more than 300mm and upto 600 mm depth	Each	100	0.000079787
d	Pockets of depths more than 600mm and upto 1000 mm depth	Each	100	0.000159574
e	Pockets of depths more than 1000mm and upto 1500 mm depth	Each	100	0.000226028
A306	Fixing and allignment of formwork for fan stack (curved and inclined surfaces) for eleveltion from 10.0m-16.0m (approx.). Formwork only shall be supplied by BHEL. All other scaffolding, staging, tying ,nailing,bolting ,caulking, transportation of formwork from site store, de-shuttering, returning the formwork back to store etc. shall included in cost.	SQM	4000	0.002924810
400	REINFORCEMENT			
401	Transporting, straightening, cutting, bending, placing in position at any level, binding of mild steel reinforcements conforming to grade 1 of IS:432 (part 1 or grade IS-2062) in concrete including cost of reinforcement and binding wire, labour, scaffolding, transportation to & from stores etc. all complete as per specifications & drawings.	MT	35	0.000612893
402	Transporting, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500 HYSD confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. (STEEL WILL BE SUPPLIED BY BHEL FREE OF COST AS PER TCC)	MT	6200	0.037761021

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A402	Straightening, stretching, placing in position as per drawing, cutting after casting of concrete etc. of uncoated stress relieved strands (diameter, length, ply and number as per drawing) of minimum 0.2 percent proof load of 32460 N confirming to IS:6006 in precast wall panels, columns etc. complete all as per specifications, drawings and as directed by Engineer.	MT	15	0.000301218
500	WATER PROOFING WORKS			
	Water proofing works including all labour, material, equipment, transportation, handling, curing, sampling, testing etc at any level as per specification, drawings and as directed by engineer - in - charge. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)			
A501	Providing and laying underbed screed concrete mix (M-15 grade) grading having minimum 25mm thickness at the lowest point of the slope laid over RCC slab including preparation of surface, batching, mixing, leveling etc. all complete.	SQM	12000	0.001174225
B501	Providing and laying grading plaster with cement mortar 1:4 (1 cement : 4 sand) over screed concrete and average thickness of 15 mm including preparation of surface, batching, mixing, leveling etc. all complete.	SQM	14700	0.003129762
A502	Providing and applying over-deck insulation of minimum 75 mm thick Extruded Polyurethane foam with minimum density 18 kg/Cu.m. above water proofing with mortar and Joints sealed with adhesive tape over roof and above it White glazed tile chips shall be provided for roofing over under bed of cement mortar(1:4)/ concrete(1:2:4) including all workmanship, topping spreading white cement slurry at an average rate of 2.5 kg/sq m(unless noted otherwise)jointing and joint filling with white cement slurry (unless noted otherwise) ,laying to plumb and water level in desired pattern ,casting in panels . Cost shall include making of fillets, cleaning & preparation of surface, expansion joints at suitable intervals etc all complete. (water proofing to be paid separately)	SQM	400	0.000227103

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A506	Providing and applying PU based water proofing treatment with one coat of polyurethane or any other equivalent material based primer with an application rate of minimum 6 sq.m per litre and two successive liquid coatings of high solids content urethane pre-polymers laid over reinforcing layer of polyscrim cloth or non woven geotextile or equivalent material based finish coats as per relevant IS/ASTM standards to form an elastomeric membrane with overall dry film thickness 1.5 mm subject to minimum 500 gm/sqm/coat application rate. Item includes surface preparation, polyscrim cloth /fabric for edges, joints & vulnerable points etc all complete as per specifications and directions of engineer in charge.	SQM	12000	0.004516251
507	Providing and laying wearing course consisting of 25mm thick plain cement concrete of grade M15 (1:2:4) with graded aggregate of 12.5mm size cast in panels of maximum size 1.2mx1.2m and reinforced with 0.56 mm dia. galvanised chicken wire mesh and sealing of joints (in grooves of 6mm X 6mm) using silicon /elastomeric compound etc all complete.	SQM	12000	0.003225894
A507	Providing and laying of 20 mm thick 1:4 cement mortar with chicken wire mesh over finished surface of elastomeric membrane etc. all complete as per specifications and direction of engineering incharge.	SQM	12000	0.003303315
508	Providing and laying cement concrete chequered flooring tiles of 22 mm thickness and size 250x250 mm / 300x300 mm conforming to IS 13801 with 8 mm thick 1:4 cement mortar over the top most layer of roofing treatment in pathway and entire equipment area with fine joints including sealing of joints (silicon/elastomeric sealant) etc all complete. (Water proofing paid elsewhere)	SQM	6000	0.003419447
A508	Providing and laying pressed cement concrete tiles of 20 mm thickness and size 250x250 mm / 300x300 mm with 8 mm thick 1:4 cement mortar over the top most layer of roofing treatment in with fine joints including sealing of joints (silicon/elastomeric sealant) etc all complete. (Water proofing paid elsewhere)	SQM	7000	0.003613001

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
509	Providing and applying two coats of bitumen grade 85/25 as per IS 702 (@ 1.7kg/sqm)with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces exposed to soil / ash including surface preparation etc. all complete.	SQM	6500	0.002187694
A509	Providing and applying three coats of bitumen grade 85/25 as per IS 702 (@ 1.7kg/sqm / coat, in three coats and it should be heated to about 120 degree celsius before application) with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces exposed to soil / water/ ash including surface preparation etc. all complete. The bitumen coating shall be applied over one coat of suitable primer followed by minimum 3 coats of bitumen paint conforming to IS 9862 to achieve a DFT of 150 micron of bitumen coat. (Cost of primer included in this item).	SQM	15000	0.002225867
B509	Providing and applying two coats of hot bitumen (20/30) over a coat of primer in foundation, wall, column etc on concrete surfaces exposed to soil / ash including surface preparation, primer etc. all complete.	SQM	30000	0.004838840
512	Anti termite chemical treatment of soil with Chloropyrifos emulsifiable concentrates (1%) conforming to IS :8944 all complete.	SQM	3000	0.000596790
A515	Providing and applying Moisture Compatible Corrosion Resistant Coating System or its equivalent in all surfaces in direct contact with water/ water spray/moist air upto and including Fan Deck slab level including basin slab, inner faces of cladding walls, all faces of cell partition wall, all faces of columns, all faces of beams (both cast in situ and precast), bottom surface of fandeck slab for counter flow tower and both surface of fandeck slab for cross flow tower, inner face of fanstack, all faces of hot water basin (for cross flow tower) etc. of cooling tower as per specification and approval of engineer-in-charge.	SQM	20000	0.006989436
A516	Providing and applying acrylic based polymer modified cementitious composite coating to internal/external concrete surfaces on over/underground structures of approved make, specification and as per manufacturer's recommendation.	SQM	500	0.000268287
600	JOINT AND FILLERS			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
	Joints & fillers including all labour, material, equipment, transportation, handling etc at any level as per specification, drawings and as directed by engineer - in - charge.			
601	Providing & installation of bitumen impregnated fibre board conforming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete.			
a	12 mm wide joints.	SQM	1000	0.000551628
b	20 mm wide joints.	SQM	100	0.000079787
c	25 mm wide joints	SQM	5000	0.005521655
d	50 mm wide joints	SQM	100	0.000138391
602	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves:			
a	12mm X 25mm	RM	4000	0.001638754
b	20mmX25mm	RM	200	0.000114713
c	25mmX25mm	RM	3000	0.002458131
d	50mmX25mm	RM	200	0.000307105
603	Providing and filling in position hot applied bitumin sealing compund (Grade A) conforming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.			
b	12mm X 25mm	RM	200	0.000055700
605	Providing and sealing of joints with premium grade silicon sealant (Silpruf of GE silicon or approved equivalent) including cleaning of joints, raking out groove, joint filler tapes, application of primer, curing, scaffolding etc. all complete as per manufacturer's recommendation for following size groove:			
a	25mmX25mm	RM	1000	0.000598941
b	50mmX25mm	RM	200	0.000172908
606	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following:			
c	150 mm wide and 6 mm thick	RM	2500	0.001830695

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
d	230 mm wide and 6 mm thick	RM	3500	0.003025888
607	Providing and fixing copper water stops in joints of deep underground structure all complete for the following:			
a	150 mm wide and 8 mm thick	RM	200	0.000172908
700	MS EMBEDMENTS			
	Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.			
A701	Transporting, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting etc.The surface shall be prepared by Manual Cleaning and provided with Primer Coat of Chlorinated Rubber based Zinc Phosphate Primer of Minimum 50 Micron Dry Film Thickness (DFT). etc. all complete.	MT	50	0.000879471
A702	Same as above with BHEL supplied material free of cost including loading, transportation, unloading, etc. all complete from BHEL store to plant site.The surface shall be prepared by Manual Cleaning and provided with Primer Coat of Chlorinated Rubber based Zinc Phosphate Primer of Minimum 50 Micron Dry Film Thickness (DFT). etc. all complete.	MT	100	0.001861771
703	Fixing of embedments, inserts, pipe sleeves, angle pieces, anchor bolts of various diameters, plates of dimensions as required etc. including scaffolding, setting in position, transportation from BHEL site stores to work spot etc. all complete.	MT	50	0.000698137
704	Erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete.	MT	50	0.000879471
705	Transporting,Erecting and installing following items in concrete/ brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.			
a	MS pipes of all diameters	Quintal	10	0.000030829

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
b	PVC pipes / conduits of all diameters	Quintal	100	0.000378935
d	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide:			
i	Upto 250 kg	Each	100	0.000013334
ii	Beyond 250 Kg and upto 500 kg	Each	200	0.000039786
iii	Beyond 500 Kg and upto 750 kg	Each	200	0.000066453
e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:			
i	Upto 250 kg	Each	100	0.000013334
ii	Beyond 250 Kg and upto 500 kg	Each	200	0.000039786
iii	Beyond 500 Kg and upto 750 kg	Each	200	0.000066453
706	Placing, locking and releasing of Vibration Isolation spring modules over the foundation at all elevations including Providing all assistance under the supervision of the supplier, transportation from BHEL store, necessary staging, platforms, leveling, alignment etc. all complete.	Each	45	0.000064299
800	GROUTING			
	Grouting including all labour, material, equipment, roughening surface, cleaning, ramming, curing etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.			
801	Providing & grouting with cement slurry mix of approved ratio using pressure pump for water retaining concrete structures as per approved procedure including cost of nipples/ nozzles, cement, admixture, curing, pressure pumps, slurry agitator etc. all complete. Cost shall include fixing of nipples at minimum 500 mm centre to centre spacing, cutting of nipples after completing of grouting, making good of the nipple hole with appropriate non-shrink cement paste, water tightness test etc. all complete wherever specified in the drawing. (BHEL will supply cement free of cost as per TCC)	SQM	100	0.000055001

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
802	Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc. with mix 1:1 (1 cement :1 sand) using non shrink admixture etc. all Complete.(BHEL will supply cement free of cost as per TCC)	CUM	20	0.000319170
803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with mix 1:1:2 (1 cement : 1 coarse sand : 2 aggregate of 6 mm down graded stonechips) using non shrink admixture. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).(BHEL will supply cement free of cost as per TCC)	CUM	50	0.000531896
804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with ConbextraGP-1 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	20	0.000744687
805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GP-2 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	20	0.000744687
900	900 DOORS, WINDOWS, VENTILATORS, LOUVERS			
	Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material, equipments, transportation, handling, preparation of working drawings etc. at any level as per specification, drawings and as directed by engineer - in - charge.			
901	Providing and fixing wooden frame conforming to IS 4021 made of best quality seasoned CP teakwood free from large or loose knots, cracks or other defects including sand paper smoothing, hold fasts, beading, primer and finish painting / polishing etc. all complete with proper wood joinery, accurately set to required lines or levels and rigidly secured in place. (Finish painting / polishing paid separately)	CUM	5	0.000295309

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
902	Providing and fixing teakwood frame panel door shutter as per IS 1003 with 35 mm x 150 mm vertical rail & 35mm x 125 mm horizontal rail and 12 mm thick interlocked panels of teakwood with proper wood joinery including beading, preparation of working drawings,godrej or equivalent make mortice lock with handels on both sides,approved ISI mark anodised fittings like door stopper,300mm long tower bolts,16x300mm long aldrops ,125mm long handles on both sides etc. butt hinges, sliding bolt ,knobs, (all fitting shall be anodised aluminium color dyed), screws, primer and finish painting / polishing etc. all complete. (Finish painting / polishing paid separately)	SQM	10	0.000059840
903	Transporting, fitting and fixing solid core flush door shutter as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldehyde synthetic resin, partical board core conforming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings. godrej or equivalent make mortice lock with handels on both sides,approved ISI mark anodised fittings like door stopper, 300mm long tower bolts,16x300mm long aldrops,125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color dyed), finish flat oil paint confirming to IS: 137 over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge. with commercial faces and teak wood edges. (Finish painting paid separately)	SQM	200	0.000346246
A904	Providing and fixing single or double steel door shutters with 35mm(minimum) thk flush design shutter comprising of two outer sheets of 1.2 mm steel sheets rigidly connected and reinforced inside with continuous vertical 1.0 mm stiffeners, spot welded in position at not more than 150mm on centres, side ,top & bottom edges of shutters shall be reinforced by continuous pressed steel channel with minimum 1.2 mm, including void filled with mineral wool (density as per specification), all fittings, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete.	SQM	300	0.002170381

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A906	<p>Fixing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 2mm wall thickness as per IS:1285, IS:733 and anodized and electro color coating of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be clear float glass of 6mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately)</p>	SQM	150	0.000168392
B906	<p>Fixing of anodised tubular aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent. The door frame shall be of 101.4mm x 44.6mm and shutter of 50mm tubular extrusions, 3mm thick. The opening arrangement shall be single action or double action as shown in drawing with spring hinges in floor. The glazing shall be 5.5mm thick plain glass panes fixed with necessary gaskets and aluminium beading strip. The door shall be provided with one security lock. The shutters shall be provided with 1.6mm thick 300x150mm push plates and 1.6mm thick 300mm wide kick plate of anodised aluminium for full width of door inside and outside. The door frames shall be polished and anodized with approved colour. The average thickness of anodic coating shall not be less than 15 microns as per IS: 1868. Door frame shall be provided with approved anchors @ 90 cm c/c maximum for fixing. (Glazing shall be paid separately)</p>	SQM	150	0.000159037

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A907	Transporting and fixing fire proof steel doors (single or double shutter) with panic devices shall be 35mm thk flush design comprising of two outer sheets of 1.2 mm steel sheets rigidly connected and reinforced inside with continuous vertical 1.0 mm stiffeners, spot welded in position at not more than 150mm on centers , side ,top & bottom edges of shutters shall be reinforced by continuous pressed steel channel with minimum 1.2 mm, including all fittings, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and as per specification. Minimum ratings shall be 2 Hrs.	SQM	100	0.000450442
908	Transporting and fixing of steel windows/ventilator with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision.including all fittings, metal beadings, hold fasts, shop and final painting ,glazing etc. all complete. (Glazing shall be paid separately)			
a	openable type	SQM	100	0.000098390
b	fixed type	SQM	100	0.000094304

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A909	Transporting and fixing anodised (Electro colour dyed) aluminium work with 15 micron coating thickness of Jindal, Hindalco or other equivalent approved make for door panels, grill, door frames, windows, ventilators, partitions, railing etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-metallc protection etc.including preperation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/panelling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stainless steel screws, providing and fixing hinges/pivots, and making provision for fixing of fitting wherever required including cost of PVC/neoprene gasket, all complete as per drawing, specification and instructions of engineer in charge (Glazing and panelling shall be paid seperately).Weight of aluminium section only shall be measure.	Kg	21000	0.003048470
910	Transporting and fixing of aluminium composite panel(ACP) of following thickness with PVDF or polyester coating for interior partition of approved shade ,color etc all complete as per specification including all fixing accessories like washer, nut, bolt clip, base frame etc. (Cost of all fixing accessories, base frame arrangement included in this item)			0.000000000
b	4mm	SQM	1000	0.002349526
c	5mm	SQM	400	0.001149709
911	Fixing of door closers as per IS 3564 ,of approved make & quality all complete of following type :			0.000000000
a	Over head hydraulic door closures	Each	100	0.000054195
b	Floor mounted Hydraulic door closers	Each	50	0.000046130

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
912	Fixing pressed steel frames fabricated from 16 gauge M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars ,paintings etc all complete as per specifications.	Kg	5000	0.000193554
A912	Fixing pressed steel frames for partition fabricated from minimum 2.0mm galvanized steel sheet pressed to form a profile of nominal size 60mm x 70 mm & fixed to the supporting construction by means of M 10 X 120 or bigger steel bolts at 300mm from the edges & every 500mm c/c etc all complete as per specifications.The frames shall be finished with etch primer for scratch resistance and powder coated of approved shade & colour as per specifications	Kg	300	0.000011613
913	Transporting and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.(partly coiled and lath/full lath).			
a	Hand Operated	SQM	50	0.000055217
b	Mechanically Operated	SQM	200	0.000272696
c	Electrically operated	SQM	200	0.000558510
914	Transporting and fixing in position PVC doors(25 thk double skin) of sintex or equivalent make including door frame ,all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	50	0.000047044
A914	Transporting and fixing in position solid core FRP doors including door frame,all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	100	0.000103551

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
915	Transporting and fixing of glazing of first grade class in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete.			
b	4 mm thick clear float glass	SQM	1800	0.000609694
d	6 mm thick wired glass	SQM	300	0.000125810
h	6 mm thick clear toughened safety glass	SQM	700	0.000386139
i	Two nos. 6 mm thick clear toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)	SQM	200	0.000204952
j	Two nos. 6 mm thick tinted toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)	SQM	100	0.000104734
k	One outer 6mm thick tinted heat-reflecting type float glass and one inner 6mm thick plain float glass hermetically sealed and seperated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).	SQM	100	0.000096777
Ae	2mm thick fire and UV resistant Polycarbonate sheet	SQM	200	0.000398936
Ak	One outer 6mm thick heat-reflecting type toughened glass and one inner 6mm thick clear toughened glass hermetically sealed and seperated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).	SQM	100	0.000119681
Am	2 mm thick polycarbonate sheet with profile matching with metal sheeting	SQM	100	0.000199468
An	6 mm thick reflective toughened glass	SQM	300	0.000418721
Ao	One outer 6mm thick toughened, fire resistant plane glass and one inner 6mm thick fire resistant, tinted glass hermetically sealed and seperated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).	SQM	100	0.000119681
916	Providing and fixing weather stripping of approved make and quality to doors as per instructions of engineer in charge and specification complete.	RM	100	0.000033227
917	Providing and fixing 12 mm thick BWP particle board, decorative veneer (prelaminated) on both sides, as panels in aluminium framed door shutter, fixed with necessary snap-on-beading etc. all complete (excluding aluminium works).	SQM	100	0.000226028
918	Providing and fixing steel louvered window with ISMC 100 frame all round including verticals with 18G pressed steel louvers, painting etc. all complete.	SQM	100	0.000264093

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
919	Providing and fixing 1 mm thk. MS sheet sliding shutters with frame and diagonal braces of 50X50X6 angle iron, 3 mm MS gusset plates at junction and corners, 25 mm dia pulley, 50X50X6 angle and T-iron guide at the top and bottom respectively including painting etc. all complete.	SQM	100	0.000410226
920	Providing & fixing Roof skylight structure for atrium with 6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges for sky light for approved shape like dome, pyramidal etc. Joints are properly sealed with sealent, screws with pvc cap, self tapping screws, epdm rubber gasket.etc all complete as per detailed drawing and specification.	SQM	600	0.002258126
A920	Providing & fixing Roof skylight structure for atrium with 4mm embossed clear translucent polycarbonate IR sheet both side UV coated minimum 55% light transmission, solar control, approved make, texture and shade, fixed to powder coated aluminium section with 60mm width top and bottom with EPDM rubber gasket , sealed open edges for sky light for approved shape like dome, pyramidal etc. Joints are properly sealed with sealent, screws with pvc cap, self tapping screws, epdm rubber gasket.etc all complete as per detailed drawing and specification.	SQM	600	0.003143311
A921	Providing and applying minimum 250 micron DFT epoxy based Finish painting / polishing in desired shades on all wooden doors / windows / ventilators / partitions including thinners etc. all complete.	SQM	100	0.000043012
A922	Providing and fixing automatic closing sliding glass doors with fittings, fixtures including all necessary arrangement including sensor, motor, frames, finishes etc. all complete.	EACH	10	0.000048388

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A923	Providing and fixing 120 minutes Fire Rated Fully Glazed non load bearing fixed partition with valid fire test certificate from national or international lab as per specification. The Partition Frame shall be manufactured from minimum 2.0mm galvanized steel sheet pressed to form a profile of nominal size 60mm x 70 mm & fixed to the supporting construction by means of M 10 X 120 or bigger steel bolts at 300mm from the edges & every 500mm c/c. The frame shall be finished with etch primer for scratch resistance and shall be powder coated of approved shade and color. The glass panels shall be minimum 11mm thick, 120 minute fire rated, with 15 minute full insulation non wired toughened glass having a sound reduction of greater than 37dB, light transmission of 87% and compliant to class 1B1category of impact resistance as per EN 12600. Shop drawings for the item with all construction and anchoring details along with fire rating test reports shall be got approved from Engineer-in-charge before execution.	SQM	100	0.000914218
A924	Providing, fabricating and fixing Single sheet steel door of 18 gauge mild steel with suitable stiffeners hot dip galvanized or seal spray zinc coated as per BS:5493 (for a very long period of maintenance of more than 20 years) . The galvanization shall not be less than 610 gm / sq.m as per IS : 4759. The door shall be provided with all fitting, fixture, locking arrangement etc as per specification.	MT	2	0.000137208
A925	Providing and applying fire resistant transparent paint (as per IS:162) over french polish/flat oil paint (minimum 2 coats) on wood surface made from best quality shelac, denatured spirit and other suitable alcohol soluble ingredients and made by a well known approved manufacturer as per IS:348/(flat oil paint IS:137) including required base preparation etc. all complete as per specification	SQM	150	0.000052421
1000	BRICKWORK			
	Brickwork masonry including all labour, material, equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge. (CEMENT FOR BRICK WORK AND MANUFACTURE OF FLY ASH BRICKS IF MANUFACTURE AT PROJECT PREMISES WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1001	Providing brick work in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.			
a	Using fly ash Cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	CUM	600	0.002039668
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	50	0.000220866
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
a	Using fly ash Cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	CUM	4900	0.021971562
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	250	0.001120998
A1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 345mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
a	Using fly ash Cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	CUM	300	0.001405199
1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls, chambers etc. in thickness 115mm at all heights, places and position above or below plinth/graded level including Providing two nos. 6 mm diameter MS bars at every third layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification.			
a	Using fly ash Cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	SQM	500	0.000314632
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	SQM	100	0.000074873
A1003	Providing Light Weight Aerated Concrete Panel of thickness 200mm to 300mm in walls at all heights, places and position above or below plinth/graded level including jointing, scaffolding etc complete as per specification.	CUM	150	0.000137584

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1004	Providing brick soling including spreading of earth, ramming, watering including 25mm thick cushion of sand complete but excluding excavation and disposal of surplus earth (excavation and disposal of surplus earth shall be measured under applicable item). Using brick on edge.			
a	Using fly ash Cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	SQM	50	0.000041238
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	SQM	50	0.000041238
1005	Providing brick soling including spreading of earth, ramming, watering including 25mm thick cushion of sand complete but excluding excavation and disposal of surplus earth (excavation and disposal of surplus earth shall be measured under applicable item.)- Using flat bricks.			
a	Using fly ash Cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	SQM	50	0.000014844
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	SQM	50	0.000012242
1006	Breaking of existing brick work at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	50	0.000029947
1007	Providing and encasing of structural steel member with masonry work around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar. Encased member shall be wrapped with chicken wire mesh with 50mm lap etc. complete as per specification. (Chicken wire mesh to paid separately)	CUM	5	0.000018819
1008	Providing and laying 75 mm thick bed of dry brick aggregate including of excavation, disposal of surplus earth spreading of earth, ramming, watering etc. complete in all respects as directed by the engineer.	SQM	50	0.000009581
1009	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete.	CUM	5	0.000003661
A1010	Supply and placing in position mild steel wire fabric of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete/brickwork or at the junction of RCC & brickwork including cutting, bending, fixing etc. complete.	SQM	50	0.000020699

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1011	Filling existing brick wall/ partition wall opening at all level including making good the broken edges/surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/supporting at any level, removal of debris upto a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	50	0.000041238
1012	Providing and filling brick bats in soak pits all complete.	CUM	5	0.000004124
A1013	Providing and placing precast cement concrete solid block (size 300x200x100) of mix of M 25 grade , including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), at all height, place and position, including raking out joints, curing, scaffolding etc complete excluding plastering and painting.	CUM	200	0.000892497
1100	DAMP PROOF COURSE			
	Damp proof course including all labour, material, equipment, transportation, handling, shuttering, centering, curing etc at any level as per specification, drawings and as directed by engineer - in - charge. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)			
A1101	Providing Damp Proof Course 40mm thick 1:1.5:3 concrete (12mm and down graded aggregate) with 2% of approved admixture of water proofing compound all complete. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7Kg./sqm shall be applied one before & one after the DPC.	SQM	1200	0.000838732
1200	CEMENT MORTAR PLASTER			
	Cement mortar plaster including making grooves wherever required including all labour, material, scaffolding, curing etc at any level as per specification, drawings and as directed by engineer - in - charge. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL)			
A1201	Providing 20mm thick plaster in two layers outside the building/boundary wall or unfair face of walls in cement mortar 1:6 on walls, finished to a smooth finish including Providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete.	SQM	32800	0.008887982
A1202	Providing 15mm thick plaster inside the building/boundary wall in cement mortar 1:6 on walls finished to a smooth finish as per specification all complete.	SQM	18000	0.004354956

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1204	Providing 6mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth all complete.	SQM	6500	0.001216162
1205	Providing 12mm thick plaster in walls, drains/culverts with a paste of neat cement @ 1kg/sqm and rubbed smooth with trowel etc. all complete.	SQM	100	0.000014667
1207	Forming groove of uniform size from 12X12 mm upto 20X15 mm in plastered surface as per approved pattern, using wooden battens nailed to the under layer, including removal of wooden battens, repair of the edges of plaster panel and finishing the groove etc. complete as per specification, drawing and the instructions of engineer in charge.	RM	700	0.000046668
1208	Providing drip coarse on plastered surface at all elevations for all type of work such as chajjas, parapet, projections etc. including scaffolding, finishing etc. complete with all labour, tools and plants as per specification, drawing and instructions of engineer in charge.	RM	300	0.000020001
1209	Providing and laying encasement to box type steel beams at all levels with lath plaster 50 mm nominal thickness with cement plaster (1:4) over chicken wire mesh including all labour, materials, equipment, handling, transporting, mixing, placing, leveling, curing and cleaning, finishing the exposed surfaces etc including centering and shuttering all complete as per specification, drawing and instructions of enginner in charge (chicken wire mesh to be paid separately)	SQM	100	0.000398936
1210	Ruled pointing in masonry in CM 1:3 (1 cement and 3 fine sand) including raking out joints, curing etc. complete.	SQM	100	0.000033227
A1211	Providing 20mm thick plaster inside the water retaining structures in cement mortar 1:3 with approved quality of water proofing compound/ admixture on walls finished to a smooth finish as per specification all complete.	SQM	100	0.000027098
A1212	Providing 10mm thick plaster below roof slab of water retaining structures in cement mortar 1:3 with approved quality of water proofing compound/ admixture to a smooth finish as per specification all complete.	SQM	50	0.000012097
1300	FINISHES TO CONCRETE / PLASTERED SURFACES			
	Finishes, painting to concrete, plastered surfaces including all labour, material, equipment, surface preparation, scaffolding etc. at any level as per specification, drawings and as directed by engineer - in - charge.			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1301	Two or more coats of white wash/ colour wash as per IS 627 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	SQM	2000	0.000079572
A1303	Providing and applying two or more coats of oil bound destemper as per IS 428 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline. (Cost of primer is included in this item).	SQM	100	0.000022474
1304	Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete.	SQM	23000	0.002596844
A1304	Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete.	SQM	500	0.000056453
A1305	Providing and applying two or more coats of acrylic emulsion paint as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.(Cost of primer is included in this item)	SQM	6100	0.001370897
B1305	Providing and applying two or more coats of premium quality acrylic emulsion paint as per IS 15489 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.(Cost of primer is included in this item)	SQM	42000	0.011155140
1306	Providing and applying 2 or more coats of acid/alkali resistant paint of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, Providing and applying bitumen primer conforming to IS 158 complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, complete as per specifications.	SQM	100	0.000033227
1310	Providing and applying 3 coats of water proof cement paint of approved make and color on exterior surface at all heights including material, labour, scaffolding, curing etc including primer coat complete as per specification.	SQM	5500	0.001094116

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1311	Providing and applying resin bonded granular textured finish, for external applications shall consist of crushed stone/quartz chips of .5 mm to 2.5 mm size and of approved natural color/shade and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on cured and dried plaster surface with a dry film thickness of minimum 2 mm. The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	SQM	7800	0.005711767
1312	Providing and applying 2 mm thick plaster of paris punning on walls including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	2100	0.000237103
1313	Providing and applying ready made Epoxy Paint over areas other than steel structure with suitable pigments of approved shade as per specification and direction of Engineer. The epoxy paint shall be a two pack material and shall be resistant to water, splash, spillage & acidic environment. The epoxy paint coating shall be of 150micron thickness over epoxy primer.	SQM	100	0.000199468
A1313	Providing and applying ready made Epoxy Paint over areas other than steel structure with suitable pigments of approved shade as per specification and direction of Engineer. The epoxy paint shall be a two pack material and shall be resistant to water, splash, spillage & acidic environment. The epoxy paint coating shall be of 150micron thickness over epoxy primer.(Cost of epoxy primer is included in this item)	SQM	100	0.000224522
1400	FLOORING AND SKIRTING			
	Flooring and skirting at any level including base layer, labour, material, equipments, transportation, handling, curing, polishing etc. at any level as per specification, drawings and as directed by engineer - in - charge.(CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A1401	Providing and laying 52 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron particles in flooring. Under layer of 40mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 20mm well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume (hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturers specification) including cement slurry, rounding off edges, aluminium strips etc. all complete as per specification (Quoted item rate shall be inclusive of providing aluminium joint strips)	SQM	27000	0.016548834
A1402	Providing and laying 25 mm thick heavy duty cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates) flooring with metallic hardener pigmented topping of 12 mm thick uniform graded treated iron particles in skirting and dado complete as per specification.	SQM	200	0.000122584
1403	Providing and laying precast polished heavy duty cement concrete tiles (Carborundum topping) of size 300X300X25 thick of approved shade as per IS 1237, including cement mortar bedding of 1:3 (1 cement : 3 sand) jointed with neat cement slurry etc. all complete with pigment to match the shade of the tiles including rubbing, curing, grindig and polishing complete with laying as per IS 1443 etc. all complete for following:			
a	Laid in floors	SQM	1200	0.001356166
b	Laid in skirting	SQM	150	0.000189521
A1404	Providing and laying interlocking M35 Grade concrete blocks in paving with approved colour and pattern and underlain by 200mm thick with 63 mm and down aggregate with interstices filled with selected moorum including aggregate, sand, moorum etc all complete as per specifications and recommendations of manufacturer.			
b	75mm	SQM	300	0.000259362
c	80mm	SQM	1900	0.001695745

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1406	Providing and laying polished Kota stone 18mm to 20mm thk in flooring. Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregates by volume and brought to proper level. The kota stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	200	0.000199575
1407	Providing and laying polished Kota stone 14mm to 16mm thk in flooring. Under bed shall average 35mm thk of 1 cement : 2 sand : 4 stone aggregates by volume and brought to proper level. The kota stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	100	0.000115444
1408	Providing polished Kota stone 18mm to 20mm thk in skirting projecting 6mm from adjacent plaster including cutting brickwall upto the required depth, edging, finishing etc. all complete.	SQM	100	0.000115681
1412	Providing and laying 18-20mm thick polished Granite stone of approved color and texture in flooring with brass/ stainless steel strips. Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The granite stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	1800	0.007660852
1414	Providing and laying polished Granite stone 18-20mm thk in skirting and dado with 6mm thick projection from adjacent plaster including mortar ,cement slurry ,pigments, curing, grinding,moulding, granite polishing etc. all complete.	SQM	100	0.000465389
A1416	Providing and laying vitrified ceramic tiles of polished variety of size 600x600 from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 minimum 20mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3kg/sqm etc. all complete for following			
a	9mm to 10mm thick tiles In flooring	SQM	1000	0.001871018
b	5mm to 6mm thick tiles In skirting and dado upto specific height	SQM	200	0.000279147

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A1417	Providing and laying vitrified ceramic tiles of matt finish of size 600x600mm from reputed / approved manufacturer complete including underbed of cement mortar 1:3 minimum 20mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3kg/sqm etc. all complete for following			
b	10mm thick tiles In flooring	SQM	200	0.000294417
1419	Providing and laying granite stone slab of 20mm thickness single piece for wash basin / sink slab /facia of black or approved colour with cutting,making corners,moulding and opening etc. all complete.	SQM	50	0.000232694
1420	Providing and laying Heavy Duty dust pressed Ceramic Tiles of 7mm thick of reputed manufacturer of approved finish shade and colour including underbed of cement mortar 1:3 with neat cement slurry etc. all complete.			
b	600X600 mm	SQM	200	0.000252695
1422	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles confirming to IS:4457 in flooring/Dado and shall be laid over bitumastic lining of min 12mm thick (to be laid in layers of 6mm each). The tiles shall be applied with 6mm thick Potassium Silicate bedding mortar as per IS:4441, 4443 & 4832 and including preparation of surface, application of bitumen primer, curing etc. all complete for following thicknesses. The tiles should be abrasion resistant & durable.			
b	38mm thick	SQM	300	0.001037125
Ac	300x300x14mm thick	SQM	300	0.001129063
1423	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles confirming to IS:4457 in flooring/Dado beded and jointed with epoxy mortar all complete for following thicknesses. The tiles should be abrasion resistant & durable.			
b	38mm thick	SQM	800	0.002979005
Ac	300x300x14mm thick	SQM	500	0.001881771

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A1424	Providing & fixing chemical resistant (AR)(Acid / Alkali) bricks (75mm thick) conforming to IS:4860 in the floor of neutralization pit. Surface on which lining to be applied shall be prepared in accordance with IS:2395. Bitumen primer as per IS:158 followed by 18mm thick bituminastic layer followed by 6mm thick potassium silicate mortar bedding shall be provided before laying AR bricks. The joints between AR bricks shall be filled with acid/alkali resistant epoxy mortar upto a depth of 20 mm/ cover up any porosity that may be left in mortar. End sealing shall be done with bituminastic AR bricks shall be laid with 6mm wide & 50mm deep pointing (epoxy / furnace / CNSL) & acid curing shall be done all complete as per specification.	SQM	100	0.000465389
B1424	Providing & fixing chemical resistant (AR)(Acid / Alkali) bricks (115mm thick) conforming to IS:4860 in the wall of neutralization pit. Surface on which lining to be applied shall be prepared in accordance with IS:2395. Bitumen primer as per IS:158 followed by 18mm thick bituminastic layer followed by 6mm thick potassium silicate mortar bedding shall be provided before laying AR bricks. The joints between AR bricks shall be filled with acid/alkali resistant epoxy mortar upto a depth of 20 mm/ cover up any porosity that may be left in mortar. End sealing shall be done with bituminastic AR bricks shall be laid with 6mm wide & 50mm deep pointing (epoxy / furnace / CNSL) & acid curing shall be done all complete as per specification.	SQM	50	0.000249147
C1424	Providing & fixing chemical resistant (AR)(Acid / Alkali) bricks (20mm thick) conforming to IS:4860 in acid/alkali storage area ,floors,pedestals, saddles, dado etc. Surface on which lining to be applied shall be prepared in . accordance with IS:2395. Bitumen primer as per IS:158 followed by 12mm thick bituminastic layer followed by 6mm thick potassium silicate mortar bedding shall be provided before laying AR bricks. The joints between AR bricks shall be filled with acid/alkali resistant epoxy mortar upto a depth of 20 mm/ cover up any porosity that may be left in mortar. End sealing shall be done with bituminastic AR bricks shall be laid with 6mm wide & 50mm deep pointing (epoxy / furnace / CNSL) & acid curing shall be done all complete as per specification.	SQM	50	0.000146241

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1425	Providing and laying polished Marble slabs (Aranga white or equivalent approved shade/color /design) 20 mm thk in staircase landing/skirting and corridors over minimum 20 mm thick underbed of 1 cement : 2 sand : 4 stone aggregates by volume mixed with sufficient water to form a stiff workable mass. The marble slabs shall be laid over under-bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including moulded marbel nosing, pigments, curing, grinding, making corners, granite polishing etc. complete.	SQM	1400	0.005213259
1427	Providing and fixing glazed ceramic tiles of approved color and design of size 200x300mm / 300x300mm in dado of approved size, projecting 6mm uniformly from adjacent plaster or wall finish. The mix for underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry including pigments, curing etc all complete for following thicknesses:			
b	7mm thick	SQM	500	0.000631738
1429	Providing and fixing removable type flooring system consisting of fire resistant particle board of size 600X600X35 mm with 0.05 mm thick aluminium foil lining at bottom and with 2 mm thick anti static PVC topping including proprietary floor supporting system complete as per specification.	SQM	100	0.000864432
A1430	Providing and fixing dividing strips in joints of cast in situ floorings at various elevations, finishing, all labour, material etc. complete as per drawing, specification and instructions of engineer in charge.			
a	Glass strips 40 mm wide and minimum 6 mm thick.	RM	200	0.000022581
b	Aluminium strips 40 mm wide and minimum 3 mm thick	RM	200	0.000065808
c	Brass strips 20 mm wide and minimum 4 mm thick.	RM	200	0.000028624
d	Glass strips 50 mm wide and minimum 6 mm thick.	RM	300	0.000037420
e	Aluminium strips 50 mm wide and minimum 3 mm thick.	RM	300	0.000106777
A1432	Providing and laying 2 mm thick homogenous anti-static PVC skirting of approved color,shade all complete as per manufacturer specification.	SQM	50	0.000029571

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A1433	Providing and laying 10 mm thick x 37 mm high teak-wood lining shall be provided around the room where the floor panels meet the wall surfaces with the top of the lining matching with the finished top of floor panels of approved color, shade all complete as per manufacturer specification.	RM	100	0.000069894
1500	ROOFING / SIDE CLADDING			
	Roofing / side cladding work including all labour, material, equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at any level as per specification, drawings and as directed by engineer - in - charge.			
A1501	Transportation and fixing permanently color coated galvanised MS troughed metal sheet decking plate of approved colour and conforming to class 3 of IS 14246 over roof purlins for cast-in-situ roof slab as per relevant IS code and specification. Bare metal thickness of deck plate shall be minimum 0.8mm with minimum trough depth of 44 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab 100mm thick measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads of min 150 kg/sqm during construction between purlins as per manufacturer's recommendations/ calculations/ test certificates for approval including fixing of plates to purlins, side lapping, end lapping etc. all complete for below mentioned spans. The sheet shall be permanently coated with silicon modified polyester paint of minimum 20 micron DFT on exposed surface (facing operating floor) and minimum 7 micron on other face over epoxy primer applied as directed by engineer in charge, rectification of the defects in concreting observed by ultra-sonic pulse velocity (UPV) testing by cement/epoxy grout etc, but excluding formwork, staging, reinforcement, embedments and temperature control of concrete. Payment terms - a) After casting 75% ; b) After receipt of ultrasonic test report - 25%.elf-drilling fasteners of required size w			
a	Span Upto 1800mm	SQM	4000	0.001647356
b	Span Exceeding 1800mm and upto 2500 mm	SQM	6000	0.003206538

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1502	Providing and fixing shear connectors of mild steel studs having 16mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant IS codes and specification.	QUINTAL	50	0.002526681
A1504	Transportation and fixing External sheet of Permanent colour coated metal cladding shall be troughed (Minimum depth of trough= 28 mm & Maximum pitch of trough= 200 mm) zinc-aluminium alloy (55% Aluminium, 43.4% Zinc and 1.6% Silicon) coated, not less than 150 gm/sq m, having High Tensile sheet (Fy=550 MPa) of 0.5 mm (minimum) Base Metal Thickness including fixing to supports / rails by concealed fixing system, corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. The exposed face of the sheet shall be permanently colour coated with Polyfluro Vinyl Coating (PVF2) of minimum dry film thickness (DFT) 20 microns over minimum 5 microns of suitable primer. Inner face of the sheet shall be provided with suitable pre-coating of minimum DFT 12 microns over minimum 5 microns of suitable primer. The permanent colour coated sheet shall meet the general requirements of IS : 14246 and shall conform to class 3 for the durability.	SQM	2000	0.000690341
A1505	Transportation and fixing Inner sheet of Permanent colour coated metal cladding with troughed M.S. sheets of 0.6mm bare metal thickness having minimum yield strength 250 MPa and zinc-aluminium alloy coating not less than 150 gm/sqm total on both sides of both sheets including fixing to supports / rails by concealed fixing system, corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. The exposed surface of the sheet shall be permanently colour coated with silicon modified polyester paint of minimum dry film thickness (DFT) 20 microns over suitable primer. Other face of the sheet shall be provided with suitable pre-coating of minimum DFT 7 microns over suitable primer. The permanent colour coated sheet shall meet the general requirements of IS : 14246 and shall conform to class 3 for the durability. The sheet shall be fixed directly to side runners and Z spacers as per IS : 277. The sheet shall be fixed at the rate not more than 1500mm center to center to hold the insulation and external sheeting.	SQM	2000	0.000718299

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1506	Providing and fixing insulation of resin bonded mineral wool of 50 mm nominal thickness conforming to IS 8183 having a density of 32 kg/cum glass wool or 48 kg/cum for rock wool, for cladding/under deck insulation including application of glue and tying with lacing wire, for glass/rock wool as per manufacturer's recommendations.	SQM	1000	0.000931208
1507	Providing and fixing insulation of resin bonded mineral wool of 50 mm nominal thickness conforming to IS 8183 having a density of 32 kg/cum glass wool or 48 kg/cum for rock wool, for cladding/under deck insulation including wrapping in black polythene black supported over weld mesh 75X75X1.6 MM dia to hold in position and application of glue & tying with lacing wire, for glass/rock wool as per manufacturer's recommendation.	SQM	1000	0.001149493
1508	Providing and installing under deck insulation using minimum 0.05 mm thick aluminium foil on exposed surface followed by 0.56 mm dia and 25 mm mesh GI wire netting, fixed at various elevations with rawl plugs including clips but excluding cost of insulation.	SQM	300	0.000373236
1509	Transportation and fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured outof 2400 TEX panel rovigs incorporating minimum 0.3% ultra-violet stabilizer in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent,clear or pigmented, textured or smooth as specified.			
a	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	SQM	200	0.000069034

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1510	Transportation and fixing 1 mm thick corrugated/semicorrugated G.I. sheet in roofs, cladding of minimum galvanisation of 275 gsm total on both sides with minimum 150mm overlapping, 8 dia G.I. hook bolts or 'J' Bolts and nuts @305 mm c/c along with G.I. and bitumen washers including cutting of sheets for opening etc. all complete.	SQM	1000	0.000300008
A1511	Transportation and fixing Prefabricated sandwich panels comprising troughed profile with outer sheet of permanent Color coated (non-insulated) metal sheets troughed (Minimum depth of trough= 28 mm & Maximum pitch of trough= 200 mm) zinc-aluminium alloy (55% Aluminium, 43.4% Zinc and 1.6% Silicon) coated, not less than 150 gm/sq m, having High Tensile sheet (Fy=550 MPa) of 0.5 mm (minimum) Base Metal Thickness. The exposed face of the outer sheet shall be permanently colour coated with Polyfluro Vinyl Coating (PVF2) of minimum dry film thickness (DFT) 20 microns over minimum 5 microns of suitable primer. Inner face of the outer sheet shall be provided with suitable pre-coating of minimum DFT 12 microns over minimum 5 microns of suitable primer and inner sheet made up of slight profiled linear tray of 0.5mm BMT 340 Mpa galvanized steel of 150 gsm zinc coating (total on both sides) with RMP color coating of 25 microns on the exposed side over the primer and 12 microns on the covered side over a 5 microns primer coat. The insulation material shall be of high density CFC- free 30mm (at the valley position of the outer sheet) thick polyurethane foam insulation of density 40 – 42 Kg/m ³ sandwiched in between the two sheets. The panel should be finished with a malefemale jointing system. The panels shall be fixed to the purlins with hexa-headed self-drilling fasteners of required size with synthetic washers at the crests. Flashing and capping (top and bottom) shall be made of pre-coated Galvalume sheet in plain form but in required shape.	SQM	4000	0.001475309
1600	FALSE CEILING			
	False ceiling including all labour, material, equipment, transportation, handling, suspension system etc at any level as per specification, drawings and as directed by engineer - in - charge.			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A1601	Transportation and fixing glass fibre reinforced gypsum plaster board (GRG) ceiling (having gypsum core mixed with glass fibre) system consisting of metal supporting grid system forming panels of specified size, suspended from RCC slab/structural steel or catwalkway grid above with 4 mm (minimum) galvanised wires (rods) with special height adjustment clips, including preparation of working drawing, providing openings for AC ducts, return air grills, light fixtures etc (but excluding the cost of catwalkway grid) all complete as per drawings, specification and instructions of the engineer.			
a	12.5 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless).	SQM	200	0.000098620
1602	Transportation , fixing and laying light weight mineral fiber tile false ceiling of minimum thickness 15 mm and exposed surface semi-perforated with depth of perforation as 4 mm and humid resistance of 95% RH and fire performance of class 0/1 as per BS 476 with metal suspension grid system with galvanized Tees of section 24 X 38 mm for main runners of approved colour and make as per specification including 50mm thick mineral wool insulation (density48kg/cum) as per IS:8183 bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures. A.C. ducts etc. suitable M.S. channel (minimum MC 75 @ 1.2m) grid shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. complete with cut-outs etc.The size of tiles shall be 600 X 600 mm or 600 X 1200 mm. Required MS channel shall be measured & paid extra under respective item unit rate.	SQM	700	0.000154501

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1603	Transportation and Fixing permanently colour coated aluminium false ceiling of approved colour and Luxalon 84 C or approved equivalent with corrosion resistant aluminium alloy panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation(density 48 kg/cum) conforming to IS:8183 bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures, A.C. ducts etc all complete. Suitable M.S. channel grid with minimum MC 75 shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Materials for structural platform grid made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)	SQM	1500	0.001589905
A1606	Transportation and fixing 12.5mm thick Gypsum board plain/perforated false ceiling tiles(600x600mm) of India Gypsum or equivalent make in plan or elevation with aluminium grid, metal suspension system, anchor fastener adjustable hangers etc. including two or more coats of acrylic emulsion paint of approved colour to give an even shade with smooth finish all complete.as per architectural design and detail.metal suspension system as per ASTM C-635 shall be hot dipped M.S.galvanized (grade 180 as per is :277) nominal size of T-section shall be 24 x 38 mm or 24 x 25 mm cross runners. 24mm wide exposed flange surface shall be permanently color coated.suspension system shall be as per manufacturer's specification supported over movement platform.The work to be complete as per specifications, drawings and direction of engineer.(Materials for structural platform grid for movement made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)	SQM	700	0.000315492
A1607	Transportation ,Fixing etc. 12 mm thick calcium silicate board of 'HILUX' or equivalent with suspension system as per manufacturers details including supporting grid system, expansion fasteners for suspension arrangement , providing openings for AC ducts, return air grills, light fixtures, etc., all complete. (With concealed grid and finished flat seamless).	SQM	200	0.000068942
1700	RAIN WATER DOWN TAKE PIPES			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
	Rain water down take pipes including all labour, material, transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc at any level as per specification, drawings and as directed by engineer - in - charge.(CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)			
1702	Fixing of galvanised MS down take pipes of 100 mm dia- Medium quality as per IS:1239(part-I) / IS:3589 all complete.	RM	500	0.000169359
1703	Fixing of HCl down take pipes of 150mm dia with water tight lead joint etc. all complete.	RM	200	0.000127603
1704	Fixing of galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) all complete.	RM	500	0.000248931
1705	Fixing of UPVC down take pipes of 110mm diameter- Class 3 as per IS:4985 all complete.	RM	500	0.000095325
1706	Fixing of UPVC down take pipes of 160mm diameter- Class 3 as per IS:4985 all complete.	RM	400	0.000107487
A1709	Fixing of cast iron cement down take pipes conforming to IS:4984 as per specification of following diameters.			0.000000000
a	110 mm Dia	RM	500	0.000198853
b	160 mm Dia	RM	500	0.000242403
A1710	Fixing ,installation etc. of 450x450 KHURRAS for rain water down take pipes with 1:2:4 concrete over PVC sheet of 1000x1000x400 micron and finished with 12mm thk, cement sand plaster 1:3 etc, all complete as per specification.	Each	100	0.000080647
1800	MISCELLANEOUS WORKS			
	Miscellaneous works including all labour, material, equipment etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.(CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 300 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	7000	0.019713436
B1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 200 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	300	0.000804860
1803	Anti termite chemical treatment of soil with Chlorpyriphos/Lindane E.C. 20% with 1% concentration conforming to IS:8944 and as per IS 6313 all complete. (Plinth area of building at ground floor only shall be measured for payment)	SQM	200	0.000039786
1804	Transportation and installation of approved 25mm thick vibration damping resilient pads on/around foundation of vibrating equipment and at other locations all complete.	SQM	50	0.000029947
A1805	Providing 50mm thick premix carpet surfacing laid to slope in two layers 30mm and 20mm respectively with 12mm downgraded stone chips mixed with 80/100 grade bitumen @ 52 Kg/Cu.M including compaction etc. all complete. Tack coat of hot bitumen at the rate of 1kg/sqm shall be uniformly applied in between the layers by means of sprayers as per specification.	SQM	250	0.000104573
1806	Providing 50mm thick anti corrosive layer laid to required slope consisting of clean & well graded coarse sand mixed with A90 grade bitumen for softening point upto 45 degree Celcius or A65 grade bitumen for softening point above 45 degree celcius as per IS: 73 or its equivalent quality 8 to 10% by volume and rolled or compacted all complete.	SQM	250	0.000270975
1807	Providing and fixing G.I strips minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete.	Kg	200	0.000039786

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1808	Providing and fixing aluminium strips minimum 18 SWG thk and 300mm wide over expansion joints with minimum lap of 50mm length including brass / aluminium screws, rawl plugs etc. all complete.	Kg	200	0.000126455
1809	Providing Chemical injection grouting with pressure pump for water retaining concrete structures conforming to IS:6494, including fixing nozzles, cost of approved cement, admixture, curing etc. all complete . Payment shall be made as per the consumption of chemical grout.	Kg	50	0.000009947
1810	Transporting, laying and fixing rails and guide rails in concrete for transformer, rail track including cutting of rails, joining of rails, anchoring lugs etc all complete.	MT	35	0.001025842
1811	Providing and fixing weep holes in Drains consisting of 100 mm dia HDPE pipe sleeves with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq. opening covered with 40 mm downgraded aggregates in 300 X 300 mm sq. and 300 mm deep size all complete.	EACH	200	0.000081723
1812	Laying of earthing mats/rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc. all complete. (Excavation & Back filling shall be paid separately under respective item of earth work. Earthing mats/rods shall be supplied by BHEL free of cost)	MT	50	0.000797925
1813	Providing Earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc. all complete.	EACH	10	0.000099745
1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, concreting, reinforcement, formwork, Providing & fixing GI strips/pipes, GI wires, covers etc as per drawing & specification including associated earthwork.	EACH	10	0.000132993
1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete.	Kg	600	0.000119358
1816	Fixing PVC pressure release valve of minimum dia 90mm in water retaining structure including 160 mm dia housing pipe of minimum length 3.75 m with perforation as per IS4558, nylon jali, perforated end plug, collar, graded filter, excavation, fixing in concrete slab/wall etc. all complete.	EACH	200	0.000957510

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1817	Fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc. all complete.			
c	150 mm dia	RM	500	0.000095809
d	200 mm dia	RM	500	0.000169521
1819	Transportation and erection of stoplog gates in CW Pumps with embedments required, lifting beams, special tools & plants, spare parts for three years, machining, casting, all materials such as structural steel, cast steel, stainless steel, brass used for seals, rubber seals, gears, ball and roller bearing, branch bushings, greasing, bolts, nuts, lugs, threaded fastners etc., cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc 750 gms/sqm., following by an application of etching primer and dipping in black bitumen as per B.S. 3416, erection along with a second stage concreting to true plumb and levels, submission of drawings / fabrication drawings for engineers approval etc all complete. The leakage through rubber seal shall not be more than 5 lit/min/metre length of seal under maximum head.(only weight of structural steel including embedments shall be considered for payment purpose) (SS component shall be measured separately for payment)	MT	70	0.003226816
1820	SS component mentioned under ST No. 1819.	MT	10	0.000940348
1821	Transportation and erecting in position and testing / examining bolted and / or welded structural steel work for stationary screens made out of rolled sections and / or plates including cutting, straightening if required, edge preparation, bolting / welding of joints, cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc as 750 gms./sqm. followed by application of an etching primer and dipping in black bitumen as per BS 3416 etc all complete.	MT	60	0.002524249
1826	Supply and laying approved quality rounded pebbles / gravels of 40mm size in transformer yards.	CUM	300	0.000879701
1828	Dismantling old existing reinforced/non-reinforced brickwork/blockwork/stone masonry work in mud/lime/ cement mortar at any level including clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto1km all complete.	CUM	50	0.000029947

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
1829	Dismantling old existing plain/re-inforced concrete work at any level including clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto 1km all complete.	CUM	50	0.000049894
A1829	Rebate over ST No. 1828/ 1829 for taking into account the deemed cost of all serviceable material which bidder will be getting out of it by taking them outside plant for bidder's purpose instead of stacking at plant site.	CUM	50	0.000465443
1830	Dismantling old existing structural steel work at any level including plates, bolts, cutting rivets, welding, dismembering and stacking the dismantled materials within a lead upto 1km etc all complete.	MT	50	0.000465443
A1834	Providing and fixing aluminium angle nosing with minimum 50x25x3 angle for edge protection of RCC stairs including jigs and fixtures all complete.	MT	5	0.000188177
A1835	Anti weed chemical treatment of soil with suitable chemical etc all complete.	SQM	500	0.000188177
A1836	Providing and fixing sliding layer of bitumen paper or craft paper over the screed layer for water retaining structures to destroy the bond between the screed and the base slab concrete of the water retaining structure etc all complete.	SQM	8500	0.003199011
A1837	Supply and fixing of bar screen of 5 mm square M. S. bar at inlet point of Rain water collecting tanks with 50 mm X 50 mm opening etc all complete	SQM	10	0.000005914
A1838	Making 250mm dia bore hole up to a maximum depth of 20 m below ground level in all types of rocks including all equipments, tools & plants, lowering casing pipes, bentonite slurry, removal of casing pipes etc. complete in all types of soil.	RM	400	0.000387107
A1839	Supply & fixing 150mm dia perforated PVC pipe ISI mark 6 Kg/ cm2 with air vent at top as per the drawing & specification complete.	RM	150	0.000120971
A1840	Providing & fixing 150 dia PVC pipe ISI mark 6 Kg/cm2 as per specification.	RM	300	0.000217748
A1841	Supply & packing uniformly 6mm to 3mm size gravel in the bore hole surrounding the perforated PVC pipe.	CUM	50	0.000096777
A1842	Supply & packing uniformly downgraded 40mm size gravel at all depth in the well dug for rain water harvesting.	CUM	50	0.000091400
A1843	Supply & packing uniformly downgraded 40mm size pebbles at all depth in the well dug for rain water harvesting.	CUM	300	0.000580661
A1844	Supply & laying 300mm thick coarse sand layer at all depth in the well dug for rain water harvesting.	CUM	1100	0.001241969

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A1845	Providing 3 tier Racking System in store including installation etc. all complete as per specification. (refer clause 18.03.00, Technical Specification Section – VI, Vol – II F Bid Doc. No. : CC&M-C-347-211, Civil - Section 1 (Tech. Spec.), Page 103 of 117)	L.S.	1	0.000536359
A1846	Basin cleanig and conducting water tightness test as per IS:3370 etc. all complete as per directions of Engineer-In-Charge. Cost to include all rectification measures such as pressure injection grouting etc complete in order to pass water tightness test. Measurement shall be for each basin compartment.	EACH	2	0.001072717
A1848	Supply and Fixing of lightning arrester over structure/building in any level/any location including laying & fixing of earthing strip from earthing pit to Lighting arrester as per IS standard 3070 or any relevant IS standard	Each	8	0.000129036
2000	FENCING AND GATES			
	Fencing and gates including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc at any level as per specification, drawings and as directed by engineer - in - charge.			
A2001	Supplying and erecting in position 2.4 m high above toe wall PVC coated gavanised chain linked fencing of minimum 8 gauge (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. (Toe wall and Fence post to be paid separately)	RM	100	0.000322589

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2003	Supplying and erecting in position 2.4 m high PVC coated galvanised chain linked fencing of minimum 8 gauge (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. Concertina of height of 600 mm at top of chain link fencing shall be provided with all accessories. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts etc. all complete. (Structural post shall be separately under ST No. 2007)	RM	150	0.000201134
2006	Supplying and fixing 600mm high concertina on top of boundary wall including GI tension wires, clips, anchors, accessories etc. all complete. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners. (Structural post shall be separately under ST No. 2007)	RM	200	0.000039141
A2006	Supplying and fixing 600mm high concertina on top of boundary wall as per specification with Y shaped MS angle (maximum loop spacing of 125mm) including GI tension wires, clips, anchors, accessories, embedded plates etc. all complete. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners. All nuts, bolts, fasteners, clamping strips, clamps, clips etc. shall be galvanized(@610 gm/sq.m.).	RM	2400	0.000469690
2007	Supply and fixing of hot dip galvanised mild steel posts for fencing. Rate of zinc coating shall not be less than 710 g/m ² on steel posts.	MT	15	0.001655642

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2010	Supply, fabrication and installing in position and testing MS Gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffeners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete.	MT	3	0.000347087
A2011	Supply, fabrication and installing in position Cantilever type motorized sliding MS gate of approved size and design, erecting and fixing at main entrance including all guides, rails, alignments, control panels, switches, paintings etc all complete as per specification and as directed by Engineer. Gate latches shall be arranged for padlocking with the padlock accessible from both sides of the gate.	MT	10	0.001272652
A2012	Supply, fabrication and installing in position Motorized sliding MS gate of approved size and design, erecting and fixing at main entrance including all guides, rails, alignments, control panels, switches, paintings etc all complete as per specification and as directed by Engineer. The gate shall be operable by push button at designated areas at both the guard house and the security office in the Administration / Plant Service area, and by card reader or key switches	MT	10	0.001184978
A2013	Supply, fabrication and installing in position wicket gate of approved size and design, erecting and fixing including all fittings, fixtures, paintings etc all complete as per specification and as directed by Engineer.	MT	1	0.000118498
2100	WATER SUPPLY			
	Water supply work including men, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge.			
2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore.	EACH	50	0.000073120
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	EACH	50	0.000036614
2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality including all specials etc all complete for following sizes:			
a	25mm nominal bore.	EACH	20	0.000031915
b	50mm nominal bore.	EACH	20	0.000066496

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2104	Providing and fixing GI pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes:			0.000000000
a	15 mm nominal bore.	RM	100	0.000029248
b	20 mm nominal bore.	RM	300	0.000095809
c	25 mm nominal bore.	RM	100	0.000035915
2105	Providing and fixing GI pipes class B complete for external work with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete for following sizes:			
a	15 mm nominal bore.	RM	100	0.000031936
b	20 mm nominal bore.	RM	100	0.000034625
c	25 mm nominal bore.	RM	100	0.000038603
d	50 mm nominal bore.	RM	100	0.000059894
2106	Providing and fixing 610mmx453mmx6mm thk mirror from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws etc all complete.	EACH	20	0.000047872
A2106	Providing and fixing wall to wall mirror(5.5 mm thick float glass) with bevelled edges including all fittings in toilet from reputed mirror manufacturer. Mirror shall be mounted with CP brass screws, washers etc all complete.	SQM	25	0.000059840
2107	Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete.	EACH	25	0.000049867
A2108	Providing and fixing 25 mm diameter stainless steel towel rails (600mm X 20mm) all complete.	EACH	30	0.000009968
2109	Providing and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete.	EACH	20	0.000007312
2110	Providing and fixing C.P. soap holder mounted with C.P. screws etc all complete.	EACH	30	0.000010968
2111	Providing and fixing stainless steel / C.P. liquid soap dispenser. Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete.	EACH	30	0.000009968

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2112	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. all complete.	EACH	30	0.000009968
2113	Providing and fixing chromium plated brass shower rose with 15 or 20 mm inlet all complete.	EACH	5	0.000002323
A2113	Providing and fixing of heavy quality shower rose of chromium plated brass with flat bottom, of dia 100 mm or with uniform perforation	EACH	10	0.000004645
2114	Providing & fixing in position P.V.C. water tank of Syntex or approved equivalent including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete for following capacities. GI pipes shall be paid separately under ST No. 2105.			
a	1000 litres capacity	EACH	5	0.000066496
b	2000 litres capacity	EACH	2	0.000058513
c	5000 litres capacity	EACH	3	0.000129533
2115	Providing and fixing approved stainless steel sink with integrated drainboard as per IS:13983 of size 915x460x178mm with CI brackets, stainless steel chain with rubber plug 40mm, cp brass waste trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	5	0.000025286
2200	SANITARY WORKS			
	Sanitary work including all labour, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge.			
2201	Supply and fixing glazed vitreous china Wash Basin conforming to IS:2556 part 4 of oval shape with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, fittings, cutting and making good the walls where required etc all complete.			
a	White	EACH	10	0.000073142
b	Colored	EACH	40	0.000292567

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2202	Providing and fixing approved vitreous china laboratory sink of size 600x400x200mm conforming to IS:2556 (part-5) with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 40mm, CP brass waste and 40mm CP brass trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	2	0.000017289
2203	Providing and fixing stainless steel kitchen sink of size 610x510x200mm conforming to IS: 13983 including all fittings etc. all complete.	EACH	15	0.000089760
2204	Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, necessary C.P connections etc all complete.			
a	Floor mounted	EACH	15	0.000089760
b	Wall mounted	EACH	15	0.000089760
2205	Providing and fixing colour glazed vitreous indian type Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, necessary C.P connections etc all complete.	EACH	15	0.000079792
2206	Providing and fixing white flat back glazed vitreous china urinals of size 440x265x355 mm with photo voltaic control flushing system as per IS:2556 (part 6, section 1) with flush pipes, lead pipes, gratings, traps and necessary C.P. fittings etc. all complete.	EACH	60	0.000518659
2207	Supply, laying and jointing UPVC pipes of class 3 as per IS:4985 including bends, branches and all other necessary fittings, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following.			
a	75mm dia pipes	RM	300	0.000307105
b	110mm dia pipes	RM	500	0.000726901
c	160mm dia pipes	RM	100	0.000220006
2208	Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following.			
a	200mm dia	RM	500	0.000366139

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
b	300mm dia	RM	300	0.000393236
A2208	Providing, laying non pressure spun CI pipes with collars including jointing, testing of joints etc all complete for following.			
a	200mm dia	RM	500	0.000806473
b	300mm dia	RM	200	0.000338719
2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following.			
d	500mm dia	RM	50	0.000079196
2210	Providing, laying light duty non pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following:			
b	600mm dia	RM	50	0.000152639
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	20	0.000226307
2213	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber and water tight CI cover with 300x300mm (inside). The weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg etc all complete for following sizes:			
b	150x100mm P or S Type.	EACH	50	0.000113928
2215	Providing and fixing C.I. floor traps with C.P jalli all complete.	EACH	80	0.000079830
2216	Providing and fixing heavy duty UPVC floor traps with C.P jalli all complete.	EACH	30	0.000037904
2218	Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	EACH	15	0.001895003
2219	Providing and fixing white vitreous urinal partitions of size 675x325x85mm all complete.	EACH	20	0.000066496
A2219	Providing and fixing 18 mm thick white marble urinal partitions of size 600x1200mm all complete.	EACH	20	0.000066496
2300	STRUCTURAL STEEL			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
	Structural steel works including all labour, material, equipments, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.			
A2301	Transportation, fabrication and erection of structural steel with mild steel rolled section / built up section / combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS: 3052, mild steel rounds, monorails, stays, safety chains, ladders, MS grating etc. in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including blast cleaning of steel structures to near white metal surface(Sa 2 1/2), 2 coats of primer & touch up painting as per requirement and item No.A2302 (Cost of primer , blast cleaning and touch up painting shall be paid separately in item No.A2302) , connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating (min preheat and interpass temperature of 20o C for welding over 20 mm and upto 40 mm & 66o C for welding over 40 mm and upto 63 mm & 110o C for thickness over 63 mm & use of low hydrogen/ radiogenic electrodes), post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures, setting column bases, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), return of surplus / waste steel materials to store etc all complete. Including appointment of a seperate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL.(Item also includes submission of optimized cutting plan as per fabrication drawing and stacking of cut pieces/scrap steel as per sizes for easy retrieval for further use).(STRUCTURAL STEEL WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)	MT	1200	0.029123368

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
B2301	Erection of structural steel of mild steel/High strength steel rolled section / built up section / combination of both conforming to IS:2062, pipe sections] true to line, level, plumb & dimension, rectification if any, and assembly, installation of erection/connection bolts and application of final finish paint coat(Payment for finish paint coat & final finish paint coat shall be made separately as per Item No. B2304 & C2304) as per approved drawing, specification and approval of engineer in charge. Erection joints shall be mostly bolted with HSFG bolts/washer/nut, which will be paid separately under item BOQ. Erection bolts shall be arranged by the bidder and is not payable. the work shall be satisfactorily completed with required tightening of HSFG bolts along with DTI (DIRECT TENSION INDICATOR) washers to be supplied by the bidder(Cost of DTI washer is included in this item and not payable separately). Welding required for erection/seating shall be included in this item. The prefabricated structure shall be supplied in variable length to the maximum length of 10 meters -12 meters and all erection work on ground or at any elevation is included in this item. Payment shall be made for weight of permanent structure, HSFG nuts, bolts & splice plate, DTI washers, gusset plates, stiffeners but not for erection bolts & nuts, etc. (BHEL WILL BE PROVIDED PRE FABRICATED STEEL STRUCTURE)	MT	6800	0.075284616
A2302	Extra over ST NO. A2301 for blast cleaning of steel structures to near white metal surface(Sa 2 1/2) and two component self curing Inorganic Zinc ethyle Silicate Primer Coat (Solid by Volume Minimum 62+2% and Zinc Dust %age on dry film minimum 80%).Zinc dust pigment shall conform to ISO 3549 and Zinc dust pigment content shall be determined in accordance with ASTM D 2371. Minimum Dry Film Thickness (DFT) of primer coat shall be 60 Micron. It shall be applied over shot blast cleaned surface to near white metal finish conforming to Sa 2 ½ finish of Swedish standard SIS-05-5900 and shall have profile of 20 to 30 micron. The Primer Coat shall be applied in Shop immediately after blast cleaning by Airless spray technique. including touch-up painting etc all complete as per specification.	MT	1200	0.003944623
A2304	Providing and applying Intermediate Coat of Polyamide Cured pigmented Micaceous Iron Oxide (MIO content minimum 30%) Epoxy based Paint (Solid by Volume Minimum 62+2%) of Minimum 75 Micron DFT at shop by Airless spray technique of approved make and shade to achieve an even shade over steel sections already having primer coats including touch-up painting etc all complete as per specification.	MT	1200	0.001152289

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
B2304	Providing and applying Finish Coat of Polyamide Cured colour pigmented Epoxy based Paint (Solid by Volume Minimum 60%) of Minimum 75 Micron DFT by brush/Airless spray technique before/after erection of approved make and shade to achieve an even shade over steel sections already having intermediated coats including touch-up painting, protection, cleaning, scaffolding etc all complete as per specification.	MT	8000	0.007819566
C2304	Providing and applying Final Finish Coat of Polyurethane based colour pigmented Paint (Solid by Volume Minimum 55+2%) of Minimum 50 Micron DFT by brush/Airless spray technique after erection of approved make and shade to achieve an even shade over steel sections already having finish coats including touch-up painting, protection, cleaning, scaffolding etc all complete as per specification.	MT	8000	0.009041105
2306	Providing, laying and clamping of crane rails over the crane girder at all elevations as per IS 3443 including all fixtures, clamps, testings etc. all complete as per drawing and specification.	MT	10	0.001188204
2307	Transportation, fabrication, erection and alignment of factory made electroforged galvanised grating units with mild steel (having minimum galvanisation of 610 g/sqm) conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete. (Bolts, nuts, washers shall be paid separately under item 2310 & 2311 as applicable)	MT	150	0.004983591
2308	Transportation,, fabrication, erection and alignment of factory made galvanised welded grating units with mild steel conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection), fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	10	0.000268149

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2309	Extra over above ST NO. 2301/2307 for finishing the grating units with hot dipped galvanisation @ 610 gm/sqm over blast cleaned steel surfaces instead of painting with two coats of red oxide zinc-chromate primer all complete.	MT	15	0.000458803
2310	Transporting and fixing in position of permanent mild steel bolts (class 4.6 as per IS : 1367 and grade `C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete.	Quintal	20	0.000042038
A2311	Fixing of high strength structural bolts (of property class 8.8/10.6 and product grade `C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class `8' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete.	Quintal	250	0.001583223
2312	Dismantling of steel structure, lowering of material and carriage of the dismantled material up to field fabrication shop / projects storage including temporary dismantling, cutting, re-welding, supporting, and restoring to correct position all temporarily dismantled members, re-alignment of all adjacent connected members to their correct positions (weight of such adjacent members and temporarily dismantled members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	20	0.000164886
2313	Addition to, alterations in and/or modification of "Erection Marks" including cutting of parts, gauging of welds, cutting, grinding, fabrication, welding, drilling holes, straightening, removal of bends, raising to the required level, painting, transportation, return of unutilised steel pieces to the project store, temporarily dismantling, cutting, re-welding, supporting and restoring to correct position of all the temporarily dismantled members, realignment of adjacent connected members (weight of such temporarily dismantled and adjacent members not payable) etc all complete for the following:			
a	In erected position	MT	10	0.000103723
b	In fabrication yard	MT	10	0.000093089

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2314	Re-erection of dismantled fabricated structural steel members including carriage of modified "Erection Marks" from the field fabrication shop to erection site, lifting to required position, aligning in position, tack welding, final welding and touch up painting including temporary dismantling and re-erection of temporarily dismantled members, cutting, rewelding, supporting and restoring to the correct position of all temporarily dismantled members, re-alignment of adjacent connected members(weight of such temporarily dismantled members and adjacent members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	20	0.000275276
A2315	Fabrication and erection of minimum 6mm thick stainless steel liner of grade SS:304 on M.S. plate for inside surfaces vertical portion of bunkers including fixing with stainless steel studs, bolting (including countersunk), welding with electrode classification E308L for welding of stainless steel to stainless steel and E309 for stainless steel to mild steel etc. all complete.(STRUCTURAL STEEL WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)	MT	150	0.007401329
2317	Transportation and fixing in position PTFE type sliding bearings of reputed manufacturer, individual bearing suitable for required vertical loads as per the construction drawings and for maximum displacement of ± 50 mm including all taxes, duties, transportation, installation, drilling, bolting, erecting, aligning etc all complete for following vertical loads.			
a	20 Tons	EACH	10	0.000047998
c	40 Tons	EACH	10	0.000082696
d	50 Tons	EACH	10	0.000086509
2318	Providing and fixing flexible open ended bellow strap of neoprene of minimum thickness 2 mm and minimum width 200 mm with aluminium stripped edges as sealing below top of bunker and bottom of tripper floor to avoid the coal dust nuisance all complete.	RM	150	0.000269362
2319	Transporting, fabrication ,fixing ,polishing etc of stainless steel pipe hand railing of 38mmdia including SS Accessories ,transportation, loading/unloading etc. all complete..	MT	10	0.000605016

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A2320	Fabrication and fixing of GI pipe hand railing of 32 mm/40 mm dia (Medium Grade) with galvanised using 610 gm/sqm of zinc including transportation, loading/unloading, painting etc. all complete..	MT	40	0.001127566
2321	Conducting radiography test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	50	0.000192801
2322	Conducting ultasonic test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	50	0.000069787
2323	Conducting ultasonic test on steel plates as per ASTM-A435 or equivalent wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	SQM	50	0.000004140
2324	Conducting magnetic particle test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	50	0.000052528
2325	Conducting dye penetration test on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges etc. all complete (over and above the work already specified in the specifications.)	RM	50	0.000041238
A2326	Supplying, fabrication, erection and alignment of factory made CI grill units for catch pit including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	5	0.000403570
2400	ROAD WORKS			
	Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating, shuttering, formwork and curing (excluding cost of reinforcement), with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specification and as per direction of engineer in charge for the following(Item No 2418 & 2419).(CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)			
2401	Preparation of sub grade by excavating earth to required depth for all types of soil, dressing to camber and consolidating the base including making good the undulation etc and disposal of surplus earth within a lead upto 1 km etc. all complete.	CUM	33000	0.003300089

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2402	Supplying and filling with selected good earth of approved quality in layers not exceeding 300 mm loose thickness using borrowed soil (borrowed soil to be arranged by the bidder) and compacted so as to achieve at least 95 % maximum dry density as per IS-2720 (Part-VII) including royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete.	CUM	5000	0.002010807
2404	Providing & laying water bound macadam sub base course in layers of required thickness with crushed stone aggregates 90 to 40 mm down size, stone screening & blinding material including screening, sorting, spreading to template & consolidation with road roller including carriage, spreading & consolidation of blinding material moorum etc all complete.	CUM	10800	0.020834112
2405	Providing & laying water bound macadam base course in layers of required thickness with stone aggregate 63mm to 40mm size, stone screening and blinding material including screening sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of blinding material moorum etc all complete.	CUM	500	0.000964542
2406	Providing & Laying water bound macadam base course with stone aggregate 50mm to 20mm size stone screening & binding material including screening, sorting, spreading to template & consolidation with road roller including carriage spreading & consolidation of blinding material moorum etc all complete.	CUM	3700	0.007734403
2407	Providing & applying tack coat of low viscosity liquid bitumen of grade 80/100 confirming to IS 73, 217 or 454 as applicable @10 kg/ 10 sqm for untreated WBM surface including scraping, cleaning with compressed air etc all complete.	SQM	2000	0.000322589
2409	Providing, mixing & laying of bituminous macadam course of specified thickness using bitumen of grade 60/70 conforming to IS 73, aggregates and binder material including hot mixing, hot laying, rolling etc all complete for the following.			
a	75mm compacted thickness	SQM	2000	0.001447351

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2410	Providing, mixing & laying 20 mm compacted thick premix carpet in a single course composed of suitable small size aggregate premixed with bituminous binder using medium setting grade bitumen on a prepared base including mixing, applying, rolling etc all complete.	SQM	2000	0.000967768
2411	Providing and applying liquid seal coat comprising of an application of a layer of bituminous binder using medium setting grade bitumen at the rate of 9.8kg/10sqm followed by a cover of stone chips at the rate of 0.09 cum/10sqm including rolling etc all complete.	SQM	2000	0.000221511
A2412	Supplying and laying 450mmx250mmx500mm deep precast concrete kerb stone of grade M-25 with 20 mm nominal size stone aggregate and of shape as per detailed drawing including fixing with cement mortar (1:2) in 13mm thick joints, finishing of joints with neat cement paste, making drainage opening where required etc all complete.	RM	7000	0.002258126
B2412	Supplying and laying 300mmx250mmx150mm deep precast concrete kerb stone of grade M-25 with 20 mm nominal size stone aggregate and of shape as per detailed drawing including fixing with cement mortar (1:2) in 13mm thick joints, finishing of joints with neat cement paste, making drainage opening where required etc all complete.	RM	6100	0.001666067
2415	Dismantling of existing road consisting of premix carpet, kerb stone/ brick on edge, bitumen macadem course, WBM, preparing subgrade to receive new WBM including camber consolidation including disposal of debris within a lead of 1 km etc all complete.	SQM	5900	0.002220490
2416	Providing 20mm compacted thick premix carpet on existing/damaged road surfaces in a single course composed of suitable small size aggregate premixed with a bituminous binder using medium setting grade bitumen on the existing base including tack coat, cleaning of existing surface, mixing, applying, rolling etc all complete.	SQM	1000	0.000516143
A2417	Providing and laying of plain cement concrete of grade M20 using 40 mm graded stone aggregate including providing and fixing formwork, compaction etc. all complete	CUM	300	0.001120030

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A2418	Providing and laying cement concrete of grade M35 using 20 mm nominal size stone aggregate with approved admixture (if required), provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar)	CUM	8000	0.049799196
A2419	Providing & laying dry lean cement concrete of grade M10 with 20 mm nominal size graded stone aggregate over a prepared sub-grade including compaction, finishing, curing etc all complete.	CUM	6000	0.028704002
REINFORCEMENT				
2420	Fixing in position MS dowel bar reinforcement including surface painted with bitumen and greasing, dowel end caps with cotton fills etc all complete as per specification, drawing and as directed by Engineer. (STEEL WILL BE SUPPLIED BY BHEL FREE OF COST)	MT	60	0.000365429
2421	Providing, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500 confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc all complete as per specification, drawing and as directed by Engineer.	MT	250	0.001522622
2422	Providing, straightening cutting, bending, placing in position at any level, binding in position of steel reinforcement of mild steel reinforcements including cost of binding wire, labour, scaffolding transportation to & from stores etc all complete as per specifications, drawings and as directed by Engineer.	MT	10	0.000060905
MISCELLANEOUS				
2423	Providing & installation of bitumen impregnated fibre board of specified thickness confirming to IS 1838 as joint filler including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete as per specification, drawing and as directed by engineer.	SQM	1000	0.000392484
2424	Providing and filling in position hot applied bitumen sealing compound (Grade A) of specified thick confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints, sealant primer etc all complete as per specification, drawing and as directed by Engineer.	RM	16500	0.004524316

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
A2426	Providing & laying 75 mm thick precast interlocking concrete pavers (Grade M35) of approved colour and pattern as per specification and recommendation of manufacturer.	SQM	15000	0.017210143
A2427	Providing and laying 20mm thick sand layer below concrete pavers including compaction etc all complete as per specification, drawing and as directed by Engineer.	SQM	25000	0.000430119
A2428	Providing and laying Impermeable plastic sheeting 125 microns thick laid flat without creases as per IRC 15-2002 etc all complete as per specification, drawing and as directed by Engineer.	SQM	20000	0.001118310
A2429	Providing and laying Inverted Choke with 25 mm course of screenings (Grading-B) over prepared subgrade including compaction etc all complete as per specification, drawing and as directed by Engineer.	CUM	600	0.003728488
B2430	Providing and installation of Variable message signs including Cantilever type MS supports etc. all complete as per drawings, specifications, manufacturer's recommendations, indian standards.	EACH	100	0.000107530
A2431	Scarifying the existing bituminous road surface/tiles to a depth of 50mm by mechanical/manual means including disposal of the scarified materials within 1km lead etc all complete and as directed by the Engineer-in-charge.	SQM	2000	0.000537649
A2432	Scarifying the existing WBM to a depth of 75mm by mechanical/manual means, consolidation/compaction including making good the undulations to receive new WBM layer over the thus prepared surface etc all complete and as directed by the Engineer-in-charge.	SQM	2000	0.000645179
2600	LEVELING ,GRADING & ENABLING WORK			
2601	Cutting of trees having girth more than 300 mm measured at a height of 1m above ground level including removal of roots, stacking the seviceable material like trunks,branches etc at specified area within the plant boundary and disposal of unseviceable parts/materials withtin a lead upto 1km etc all complete.	EACH	1000	0.000161295

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2602	Earth work in stripping of top soil upto a maximum depth of 0.30m below ground level so as to exclude all debris, grass, vegetation, bushes, trees having girth upto 300mm including roots and organic materials etc for leveling and grading including dressing to specified levels & grades and compacting the graded/stripped surface by manual/mechanical means, disposal of stripped materials within a lead upto 1km etc all complete as per specification, drawing and as directed by the engineer-in-charge.	Sq.m	75000	0.002822657
2603	Earth work in excavation upto any depth below ground level in all types of soil including moorum, ash which can be excavated by any means for grading including setting out, levelling, dewatering (wherever required), dressing the sides & bottom, levelling to grade, all lifts, ramming/compacting the excavated bottom/graded surface, stacking/disposal of surplus excavated materials within a lead upto 1km, spreading/levelling of disposed materials etc all complete as per specification, drawing and as directed by the engineer-in-charge.	CUM	27000	0.003106536
2608	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300mm loose thickness with selected approved soil directly from excavation within a lead upto 1km and compacted as specified including dewatering if required, sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete as per specification, drawing and as directed by the engineer for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	7000	0.000700019
2609	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300mm loose thickness with selected approved soil from compulsorily excavated soil available within a lead upto 1km and compacted as specified including re-excavation of stacked earth, all lifts, sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete as per specification, drawing and as directed by the engineer for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	32000	0.003200087

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2610	Extra over ST No. 2601,2602,2603,2608,2609 for carriage of unserviceable material/earth for every 1 km or part thereof beyond an initial lead of 1km.	CUM	45000	0.001209710
2611	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300 mm loose thickness with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying boorowed soil, royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing, all lead and lifts etc all complete as per specification, drawing and as directed by the engineer for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	40000	0.009720693
b	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 part XIV in case of sandy soils	CUM	5000	0.002338773
A2612	Providing and laying 300 mm thick stone pitching including caulking with 1 cement: 4 sand mortar on the slopes of earth fill/cut with approved quality of rock fragments including materials, testing, necessary excavations if any, compaction etc all complete as per specification, drawing and as directed by the engineer.	CUM	3500	0.007527085
2613	Consolidation of subgrade/ existing surface with 12 T power roller or vibromax including making good the undulations with earth and rerolling the subgrade for road, hard surfacing of equipment store,fabrication yard, assembly yard etc as directed by BHEL.	SQM	5000	0.001612947
2614	Providing and laying stone/boulder for making road with specified sizes of approved quality hard rock rubble or hand broken hard metal of sizes ranging from 100mm to 200mm, any depths etc in one layers approximately 250mm thickness after compaction, hand packing, filling in interstices with quarry spalls/ moorum and providing a layer of 25mm thickness (consolidated) including watering, thoroughly compacting layer with 12 tonne power roller or vibromax with minimum 8 passes etc all as per the direction of the engineer and as per specification.	CUM	1000	0.002150596

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
2615	Providing & laying water bound macadam base for hard surfacing of open equipment store, preassembly yard etc in layers of required thickness with stone aggregate 90mm to 45mm size stone screening and binding material including screening, sorting, spreading and consolidation with power road roller 12T including carriage spreading and consolidation of blinding material moorum etc Including cost of material, labour, all complete.	CUM	1000	0.001929084
2616	1.5M high fencing with MS angle post of size 45X45X5/6 mm 2.1 M long post placed every 3M centre to centre embeded in concrete blocks(1:2:4), every 15th post, last but one end post corner post shall be strutted on both sides and post on one side only and provided with 8 horizontal lines and two diagonal sinterwoven with horizontal wires, of barbed wire 9.38 kg per 100 metres (min) between two post fitted and fixed with GI staples turn buckles, angle post shall be embeded in plain cement concrete(1:2:4)size 300x300x600mm deep below ground etc complete including excavation, backfilling, concreting, one coat of primer, two coat of synthetic enamel paint finish. (Contractor will supply all materials including cement, structural steel, paint, labour etc complete.			
A)	For structural angle with two coata of bitumen based protective coating etc complete.	MT	4	0.000328301
B)	Providing, fitting, fixing galvanised chain link fencing of approved quality 50mmx50mmx8 g, by means of galvanised `C` clips, with fixing of galvinised special clips etc. Contractor to supply all materials. Angle post to be paid separately as per item no 2732 (A).	SQM	3000	0.000967768
C)	For G I barbed with all fixing etc complete.	MT	1	0.000093964
2617	Installation of 30 mtr high lighting mast with head frame, power winch rope ,trailing cable, concrete foundation including bolt, lamps, lighting fixture, controlgear, built in wiring etc complete of make BAJAJ/Crompton Greaves/ Philips/ Havel/ any other BHEL approved vendor make.(Lamp shall be as per 2x400W BGENF 22 R or equivalent make with CG Boxes and Lamps etc complete in all respects -16 Nos). Supply of control panel housing suitable control for the operation of the mast-1 No (Civil work like excavation, concrete etc will be p[aid separately as per relevant items of BOQ)	set	7	0.000299356

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SERVICE PART.
	Total (in Service part)			1.000000000

VOLUME-III				
PRICE SCHEDULE, REV-04				
JOB: MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC BUILDING. ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT), BOUNDARY WALL AND MISC FOUNDATIONS/ STRUCTURES AT 1X250 MW ROURKELA PP-II EXPANSION, ODISHA.				
TENDER NO : PSER:SCT: RKL-C1755:16.				
SCH-3-PART-2-SUPPLY				
ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SUPPLY PART.
	Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.			
400S	REINFORCEMENT			
401S	Supplying mild steel reinforcements conforming to grade 1 of IS:432 (part 1 or grade IS-2062) as per specifications & drawings.	MT	35	0.013744653
A402S	Supplying uncoated stress relieved strands (diameter, length, ply and number as per drawing) of minimum 0.2 percent proof load of 32460 N confirming to IS:6006 in precast wall panels, columns etc. complete all as per specifications, drawings and as directed by Engineer.	MT	15	0.006755307

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SUPPLY PART.
	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks,fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
700S	MS EMBEDMENTS			
	Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.			
A701S	Supply of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. all complete.	MT	50	0.019723583
704S	Supply of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. all complete.	MT	50	0.019723583
705S	Supplying following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.			
a	MS pipes of all diameters	Quintal	10	0.000691421

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	Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.			
b	PVC pipes / conduits of all diameters	Quintal	100	0.008499620
d	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide:			
i	Upto 250 kg	Each	100	0.000575667
ii	Beyond 250 Kg and upto 500 kg	Each	200	0.001469657
iii	Beyond 500 Kg and upto 750 kg	Each	200	0.001661891
e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:			
i	Upto 250 kg	Each	100	0.000639745
ii	Beyond 250 Kg and upto 500 kg	Each	200	0.001661891
iii	Beyond 500 Kg and upto 750 kg	Each	200	0.001866526
900S	DOORS, WINDOWS, VENTILATORS, LOUVERS			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SUPPLY PART.
	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
	<p>Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material, equipments, transportation, handling, preparation of working drawings etc. at any level as per specification, drawings and as directed by engineer - in - charge.</p>			

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SUPPLY PART.
	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
903S	<p>Supplying of solid core flush door shutter as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldehyde synthetic resin, partial board core conforming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings. godrej or equivalent make mortice lock with handles on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops , 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color dyed), finish synthetic paint over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge. with commercial faces and teak wood edges. (Finish painting paid separately)</p>	SQM	200	0.007765825

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SUPPLY PART.
	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
A906S	<p>Supplying anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 2mm wall thickness as per IS:1285, IS:733 and anodized and electro color coating of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners, SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be clear float glass of 6mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately)</p>	SQM	150	0.003776461

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SUPPLY PART.
	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
B906S	<p>Supplying anodised tubular aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent. The door frame shall be of 101.4mm x 44.6mm and shutter of 50mm tubular extrusions, 3mm thick. The opening arrangement shall be single action or double action as shown in drawing with spring hinges in floor. The glazing shall be 5.5mm thick plain glass panes fixed with necessary gaskets and aluminium beading strip. The door shall be provided with one security lock. The shutters shall be provided with 1.6mm thick 300x150mm push plates and 1.6mm thick 300mm wide kick plate of anodised aluminium for full width of door inside and outside. The door frames shall be polished and anodized with approved colour. The average thickness of anodic coating shall not be less than 15 microns as per IS: 1868. Door frame shall be provided with approved anchors @ 90 cm c/c maximum for fixing. (Glazing shall be paid separately)</p>	SQM	150	0.003565624

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SUPPLY PART.
	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks,fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
A907S	<p>Supplying fire proof steel doors (single or double shutter) with panic devices shall be 35mm thk flush design comprising of two outer sheets of 1.2 mm steel sheets rigidly connected and reinforced inside with continuous vertical 1.0 mm stiffeners, spot welded in position at not more than 150mm on centers, side, top & bottom edges of shutters shall be reinforced by continuous pressed steel channel with minimum 1.2 mm, including all fittings, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and as per specification. Minimum ratings shall be 2 Hrs.</p>	SQM	100	0.010102600
908S	<p>Supplying of steel windows/ventilator with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision.including all fittings, metal beadings, hold fasts, shop and final painting ,glazing etc. all complete. (Glazing shall be paid separately)</p>			0.000000000
a	<p>openable type</p>	SQM	100	0.002207586

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
b	fixed type	SQM	100	0.002115603

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SUPPLY PART.
	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
A909S	<p>Supplying anodised (Electro colour dyed) aluminium work with 15 micron coating thickness of Jindal, Hindalco or other equivalent approved make for door panels, grill, door frames, windows, ventilators, partitions, railing etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-mettalic protection etc.including preperation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/panelling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stainless steel screws, providing and fixing hinges/pivots, and making provision for fixing of fitting wherever required including cost of PVC/neoprene gasket, all complete as per drawing, specification and instructions of engineer in charge (Glazing and panelling shall be paid seperately).Weight of aluminium section only shall be measure.</p>	Kg	21000	0.068366959

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	Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.			
910S	Design,drawing,Supplying of aluminium composite panel(ACP) of following thickness with PVDF or polyester coating for interior partition of approved shade ,color etc all complete as per specification.			
b	4mm	SQM	1000	0.052678214
c	5mm	SQM	400	0.025817183
911S	Supplying of door closers as per IS 3564 ,of approved make & quality all complete of following type :			
a	Over head hydraulic door closures	Each	100	0.001216446
b	Floor mounted Hydraulic door closers	Each	50	0.001035064
912S	Supplying pressed steel frames fabricated from 16 gauge M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars ,paintings etc all complete as per specifications.	Kg	5000	0.004392435

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
A912S	<p>Supplying pressed steel frames for partition fabricated from minimum 2.0mm galvanized steel sheet pressed to form a profile of nominal size 60mm x 70 mm & fixed to the supporting construction by means of M 10 X 120 or bigger steel bolts at 300mm from the edges & every 500mm c/c etc all complete as per specifications.</p>	Kg	300	0.000263546

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
913S	<p>Supplying rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.(partly coiled and lath/full lath).</p>			
a	Hand Operated	SQM	50	0.001238150
b	Mechanically Operated	SQM	200	0.006114269
c	Electrically operated	SQM	200	0.007412363

ST. NO	DESCRIPTION OF ITEM	UNIT	QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 9 decimal points) W.R.T THE TOTAL AMOUNT OF SUPPLY PART.
	Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks,fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.			
914S	Supplying of PVC doors(25 thk double skin) of sintex or equivalent make including door frame,all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	50	0.001055218
A914S	Supplying of solid core FRP doors including door frame, all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	100	0.002321479
915S	Supply of glazing of first grade class in steel/ aluminium/ wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete as per Specification for the followings			
b	4 mm thick clear float glass	SQM	1800	0.013691995
d	6 mm thick wired glass	SQM	300	0.002818393
h	6 mm thick clear toughened safety glass	SQM	700	0.008659815
i	Two nos. 6 mm thick clear toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)	SQM	200	0.004597071

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	Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.			
j	Two nos. 6 mm thick tinted toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)	SQM	100	0.002349178
k	One outer 6mm thick tinted heat-reflecting type float glass and one inner 6mm thick plain float glass hermetically sealed and seperated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).	SQM	100	0.002169346
Ae	2mm thick fire and UV resistant Polycarbonate sheet	SQM	200	0.008946098
Ak	One outer 6mm thick heat-reflecting type toughened glass and one inner 6mm thick clear toughened glass hermetically sealed and seperated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).	SQM	100	0.003131548
Am	2 mm thick polycarbonate sheet with profile matching with metal sheeting	SQM	100	0.004473049
An	6 mm thick reflective toughened glass	SQM	300	0.009394643

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
Ao	One outer 6mm thick toughened, fire resistant plane glass and one inner 6mm thick fire resistant, tinted glass hermetically sealed and seperated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).	SQM	100	0.003131548
1500S	ROOFING / SIDE CLADDING			
	Roofing / side cladding work including all labour, material, equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at any level as per specification, drawings and as directed by engineer - in - charge.			

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
A1501S	<p>Designing & supplying permanently color coated galvanised MS troughed metal sheet decking plate of approved colour and conforming to class3 of IS 14246 over roof purlins for cast-in-situ roof slab as per relevant IS code and specification. Bare metal thickness of deck plate shall be minimum 0.8mm with minimum trough depth of 44 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab 100mm thick measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads of min 150 kg/sqm during construction between purlins as per manufacturer's recommendations/ calculations/ test certificates for approval including fixing of plates to purlins, side lapping, end lapping etc. all complete for below mentioned spans. The sheet shall be permanently coated with silicon modified polyester paint of minimum 20 micron DFT on exposed surface (facing operating floor) and minimum 7 micron on other face over epoxy primer applied over hot dipped galvanising @ 275 gm/sqm including fixing of sheet to purlin with self drilling white zinc plated heat treated carbon steel screws of minimum 5.6 mm dia @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking.</p>			

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
a	Span Upto 1800mm	SQM	4000	0.036958465
b	Span Exceeding 1800mm and upto 2500 mm	SQM	6000	0.071932582

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
A1504S	<p>Designing, Supplying External sheet of Permanent colour coated metal cladding shall be troughed (Minimum depth of trough= 28 mm & Maximum pitch of trough= 200 mm) zinc-aluminium alloy (55% Aluminium, 43.4% Zinc and 1.6% Silicon) coated, not less than 150 gm/sq m, having High Tensile sheet (Fy=550 MPa) of 0.5 mm (minimum) Base Metal Thickness including fixing to supports / rails by concealed fixing system, corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. The exposed face of the sheet shall be permanently colour coated with Polyfluro Vinyl Coating (PVF2) of minimum dry film thickness (DFT) 20 microns over minimum 5 microns of suitable primer. Inner face of the sheet shall be provided with suitable pre-coating of minimum DFT 12 microns over minimum 5 microns of suitable primer. The permanent colour coated sheet shall meet the general requirements of IS : 14246 and shall conform to class 3 for the durability.</p>	SQM	2000	0.015461371

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
A1505	<p>Designing & supplying Inner sheet of Permanent colour coated metal cladding with troughed M.S. sheets of 0.6mm bare metal thickness having minimum yield strength 250 MPa and zinc-aluminium alloy coating not less than 150gm/sqm total on both sides of both sheets including fixing to supports / rails by concealed fixing system, corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete. The exposed surface of the sheet shall be permanently colour coated with silicon modified polyester paint of minimum dry film thickness (DFT) 20 microns over suitable primer. Other face of the sheet shall be provided with suitable pre-coating of minimum DFT 7 microns over suitable primer. The permanent colour coated sheet shall meet the general requirements of IS : 14246 and shall conform to class 3 for the durability. The sheet shall be fixed directly to side runners and Z spacers as per IS : 277. The sheet shall be fixed at the rate not more than 1500mm center to center to hold the insulation and external sheeting.</p>	SQM	2000	0.016122820

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
1509S	<p>Designing & supplying UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured outof 2400 TEX panel rovigs incorporating minimum 0.3% ultra-violet stabilizer in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent,clear or pigmented, textured or smooth as specified.</p>			
a	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	SQM	200	0.001546137

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
1510S	<p>Supplying of 1 mm thick corrugated/semicorrugated G.I. sheet in roofs, cladding of minimum galvanisation of 275 gsm total on both sides with minimum 150mm overlapping, 8 dia G.I. hook bolts or 'J' Bolts and nuts @305 mm c/c along with G.I. and bitumen washers including cutting of sheets for opening etc. all complete.</p>	SQM	1000	0.006717842

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A1511S	<p>Designing & supplying Prefabricated sandwich panels comprising troughed profile with outer sheet of permanent Color coated (non-insulated) metal sheets troughed (Minimum depth of trough= 28 mm & Maximum pitch of trough= 200 mm) zinc-aluminium alloy (55% Aluminium, 43.4% Zinc and 1.6% Silicon) coated, not less than 150 gm/sq m, having High Tensile sheet (Fy=550 MPa) of 0.5 mm (minimum) Base Metal Thickness. The exposed face of the outer sheet shall be permanently colour coated with Polyfluro Vinyl Coating (PVF2) of minimum dry film thickness (DFT) 20 microns over minimum 5 microns of suitable primer. Inner face of the outer sheet shall be provided with suitable pre-coating of minimum DFT 12 microns over minimum 5 microns of suitable primer and inner sheet made up of slight profiled linear tray of 0.5mm BMT 340 Mpa galvanized steel of 150 gsm zinc coating (total on both sides) with RMP color coating of 25 microns on the exposed side over the primer and 12 microns on the covered side over a 5 microns primer coat. The insulation material shall be of high density CFC- free 30mm (at the valley position of the outer sheet) thick polyurethane foam insulation of density 40 – 42 Kg/m³ sandwiched in between the two sheets. The panel should be finished with a malefemale jointing system. The panels shall be fixed to the purlins with hexa-headed self-drilling fasteners of required size with synthetic washers at the crests. Flashing and capping (top and bottom) shall be made of pre-coated Galvalume sheet in plain form but in required shape.</p>	SQM	4000	0.033072452

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	1600S FALSE CEILING			0.00000000
	<p>False ceiling including all labour, material, equipment, transportation, handling, suspension system etc at any level as per specification, drawings and as directed by engineer - in - charge.</p>			0.00000000
A1601S	<p>Supplying glass fibre reinforced gypsum plaster board (GRG) ceiling (having gypsum core mixed with glass fibre) system consisting of metal supporting grid system forming panels of specified size, suspended from RCC slab/structural steel or catwalkway grid above with 4 mm (minimum) galvanised wires (rods) with special height adjustment clips, including preparation of working drawing, providing openings for AC ducts, return air grills, light fixtures etc (but excluding the cost of catwalkway grid) all complete as per drawings, specification and instructions of the engineer.</p>			0.00000000
a	<p>12.5 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless).</p>	SQM	200	0.002211720

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1602S	<p>Supplying of light weight mineral fiber tile false ceiling of minimum thickness 15 mm and exposed surface semi-perforated with depth of perforation as 4 mm and humid resistance of 95% RH and fire performance of class 0/1 as per BS 476 with metal suspension grid system with galvanized Tees of section 24 X 38 mm for main runners of approved colour and make as per specification including 50mm thick mineral wool insulation (density 48kg/cum) as per IS:8183 bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures. A.C. ducts etc. suitable M.S. channel (minimum MC 75 @ 1.2m) grid shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. complete with cut-outs etc. The size of tiles shall be 600 X 600 mm or 600 X 1200 mm. Required MS channel shall be measured & paid extra under respective item unit rate.</p>	SQM	700	0.003465373

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1603S	<p>Supplying permanently colour coated aluminium false ceiling of approved colour and Luxalon 84 C or approved equivalent with corrosion resistant aluminium alloy panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation(density 48 kg/cum) conforming to IS:8183 bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures, A.C. ducts etc all complete. Suitable M.S. channel grid with minimum MC 75 shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Materials for structural platform grid made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)</p>	SQM	1500	0.035656237

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A1606S	<p>Supplying 12.5mm thick Gypsum board plain/perforated false ceiling tiles(600x600mm) of India Gypsum or equivalent make in plan or elevation with aluminium grid, metal suspension system, anchor fastener adjustable hangers etc. including two or more coats of acrylic emulsion paint of approved colour to give an even shade with smooth finish all complete.as per architectural design and detail.metal suspension system as per ASTM C-635 shall be hot dipped M.S.galvanized (grade 180 as per is :277) nominal size of T-section shall be 24 x 38 mm or 24 x 25 mm cross runners. 24mm wide exposed flange surface shall be permanently color coated.suspension system shall be as per manufacturer's specification supported over movement platform.The work to be complete as per specifications, drawings and direction of engineer.(Materials for structural platform grid for movement made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)</p>	SQM	700	0.007075438

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
A1607S	<p>Supply of 12 mm thick calcium silicate board of 'HILUX' or equivalent with suspension system as per manufacturers details including supporting grid system, expansion fasteners for suspension arrangement , providing openings for AC ducts, return air grills, light fixtures, etc., all complete. (With concealed grid and finished flat seamless).</p>	SQM	200	0.001546137
1700 RAIN WATER DOWN TAKE PIPES				
	<p>Rain water down take pipes including all labour, material, transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc at any level as per specification, drawings and as directed by engineer - in - charge.</p>			
1702S	<p>Supplying of galvanised MS down take pipes of 100 mm dia- Medium quality as per IS:1239(part-I) / IS:3589 all complete.</p>	RM	500	0.003803332
1703S	<p>Supplying of HCl down take pipes of 150mm dia with water tight lead joint etc. all complete.</p>	RM	200	0.002602389
1704S	<p>Supplying of galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) all complete.</p>	RM	500	0.005591311

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
1705S	Supplying of UPVC down take pipes of 110mm diameter- Class 3 as per IS:4985 all complete.	RM	500	0.002139374
1706S	Supplying of UPVC down take pipes of 160mm diameter- Class 3 as per IS:4985 all complete.	RM	400	0.002410155
A1709S	Supplying of cast iron cement down take pipes conforming to IS:4984 as per specification of following diameters.			
a	110 mm Dia	RM	500	0.004459613
b	160 mm Dia	RM	500	0.005436284
A1710S	Supplying 450x450 KHURRAS for rain water down take pipes as per specification.	Each	100	0.001808650
1800S	MISCELLANEOUS WORKS			
	Miscellaneous works including all labour, material, equipment etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.			

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	Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks,fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.			
1804S	Supplying of approved 25mm thick vibration damping resilient pads on/around foundation of vibrating equipment and at other locations all complete.	SQM	50	0.000543112
1810S	Supplying of rails and guide rails in concrete for transformer, rail track including cutting of rails, joining of rails, anchoring lugs etc all complete.	MT	35	0.023006191
1816S	Supplying PVC pressure release valve of minimum dia 90mm in water retaining structure including 160 mm dia housing pipe of minimum length 3.75 m with perforation as per IS4558, nylon jali, perforated end plug, collar, graded filter, excavation, fixing in concrete slab/wall etc. all complete.	EACH	200	0.021474356
1817S	Supplying HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc. all complete.			
c	150 mm dia	RM	500	0.000920861
d	200 mm dia	RM	500	0.003803332

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	<p>Civil, Structural & Architectural works of Main Power House Building, TG & BFP foundations, Boiler Foundations, Mill Bunker bay (bowl mill, all floors, roof and bunker supporting structure including coal bunkers), Transformer Yard including fencing & gates, ESP Foundations, ESP Control Room, Mill Reject System, DG System, Pipe and Cable Racks, Compressor House, Admin Building, Fans (PA, FD, ID & seal), Duct Supporting Structures, tank foundation, air washer, CW & CEP Pit , CW thrust block & CW pipe encasing, CST Tank Foundation, ETP sump pits, STP, Permanent store, Fire water pump house, Clarified water storage tank, CW treatment plant, Chlorine dioxide system, Interconnecting & miscellaneous platforms , Plinth protection , Paving and underground works, laying of underground earthing rod, Earth stripping, tree cutting, roads , sewage network, Storm Water Drainage System, plumbing and Sanitary works, rain Water Harvesting, Cooling tower, Levelling & grading, Road works, boundary wall, Miscellaneous foundations for equipment, pump, tanks, fire fighting civil works etc. if any etc and any other building/structure/works necessary for completion of project.</p>			
1819S	<p>Design, supply, fabrication of stoplog gates in CW Pumps with embedments required, lifting beams, special tools & plants, spare parts for three years, machining, casting, all materials such as structural steel, cast steel, stainless steel, brass used for seals, rubber seals, gears, ball and roller bearing, branch bushings, greasing, bolts, nuts, lugs, threaded fastners etc., cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc 750 gms/sqm., following by an application of etching primer and dipping in black bitumen as per B.S. 3416, erection along with a second stage concreting to true plumb and levels, submission of drawings / fabrication drawings for engineers approval etc all complete. The leakage through rubber seal shall not be more than 5 lit/min/metre length of seal under maximum head.(only weight of structural steel including embedments shall be considered for payment purpose) (SS component shall be measured separately for payment)</p>	MT	70	0.072366968
1820S	SS component mentioned under ST No. 1819.	MT	10	0.021088855

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1821S	<p>Design, Supply, fabricating, bolted and / or welded structural steel work for stationary screens made out of rolled sections and / or plates including cutting, straightening if required, edge preparation, bolting / welding of joints, cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc as 750 gms./sqm. followed by application of an etching primer and dipping in black bitumen as per BS 3416 etc all complete.</p>	MT	60	0.056610322
2300S	<p>STRUCTURAL STEEL</p>			
	<p>Structural steel works including all labour, material, equipments, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.</p>			

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2307S	<p>Supplying, fabrication of factory made electroforged galvanised grating units with mild steel (having minimum galvanisation of 610 g/sqm) conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.</p>	MT	150	0.111765250
2308S	<p>Supplying, fabrication of factory made galvanised welded grating units with mild steel conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection), fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.</p>	MT	10	0.006013605

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2310S	Supplying of permanent mild steel bolts (class 4.6 as per IS : 1367 and grade `C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete.	Quintal	20	0.000942772
A2311	Supplying of high strength structural bolts (of property class 8.8 and product grade `C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class `8' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete.	Quintal	250	0.035506377
2317S	Supplying of PTFE type sliding bearings of reputed manufacturer, individual bearing suitable for required vertical loads as per the construction drawings and for maximum displacement of ± 50 mm including all taxes, duties, transportation, installation, drilling, bolting, erecting, aligning etc all complete for following vertical loads.			
a	20 Tons	EACH	10	0.001076405

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c	40 Tons	EACH	10	0.001854641
d	50 Tons	EACH	10	0.001940113
2319S	Supply of Polished stainless steel pipe hand railing of 38mmdia including SS Accessories ,transportation, loading/unloading etc. all complete..	MT	10	0.013568490
A2320S	Supply of GI pipe hand railing of 32 mm/40 mm dia (Medium Grade) with galvanised using 610 gm/sqm of zinc including transportation, loading/unloading, etc. all complete..	MT	30	0.018965707
2617S	Supply of 30 mtr high lighting mast with head frame, power winch rope ,trailing cable, concrete foundation including bolt, lamps, lighting fixture, controlgear, built in wiring etc complete of make BAJAJ/Crompton Greaves/ Philips/ Havel's/ any other BHEL approved vendor make.(Lamp shall be as per 2x400W BGENF 22 R or equivalent make with CG Boxes and Lamps etc complete in all respects -16 Nos). Supply of control panel housing suitable control for the operation of the mast-1 No	set	7	0.006713708

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	Total (in Supply part)			1.000000000

FORMAT FOR NO DEVIATION CERTIFICATE
(To be submitted in the bidder's letter head)

BHARAT HEAVY ELECTRICALS LIMITED,
Power Sector - Eastern Region,
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Main Plant Civil & Structural work including Misc Building. Road work, Levelling & Grading, Fire Fighting, Cooling Tower (IDCT), Boundary wall and Misc Foundations/ Structures at 1x250 MW Rourkela PP-II Expansion, Odisha.	
Ref	1.0	Tender no PSER:SCT:RKL-C1755:16.
	2.0	BHEL's NIT, vide reference no PSER:SCT:RKL-C1755:5080 Date:18-06-2016
	3.0	BHEL's TCN-01, vide reference no PSER:SCT: RKL-C1755:TCN-01, Dated 30-06-2016
	4.0	BHEL's TCN-02, vide reference no PSER:SCT: RKL-C1755:TCN-02, Dated 05-07-2016
	5.0	BHEL's TCN-03, vide reference no PSER:SCT: RKL-C1755:TCN-03, Dated 25-07-2016
	6.0	BHEL's TCN-04, vide reference no PSER:SCT: RKL-C1755:TCN-04, Dated 29-07-2016
	7.0	BHEL's TCN-05, vide reference no PSER:SCT: RKL-C1755:TCN-05, Dated 01-08-2016
	8.0	BHEL's TCN-06, vide reference no PSER:SCT: RKL-C1755:TCN-06, Dated 06-08-2016
	9.0	BHEL's TCN-07, vide reference no PSER:SCT: RKL-C1755:TCN-07, Dated 10-08-2016
	10.0	All other pertinent issues till date.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted/uploaded offer/documents in accordance with tender instructions with acceptance of the terms & conditions of the tender by us and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized representative of the bidder)