



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

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TCN - 01

Ref: PSER:SCT: RKL-C1755:TCN-01

Date: 30-06-2016

Sub	Tender Change Notice (TCN) - 01	
Job	Main Plant Civil & Structural work including Misc Building. Road work, Levelling & Grading, Fire Fighting, Cooling Tower (IDCT), AHP, 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	All other pertinent issues till date.

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

1. Due date of offer submission is extended from 09-07-2016 to **11-07-2016** (15=00 Hrs) and opening time of Bid shall be 16=00 Hrs.. Bidders are requested to submit their offer by extended due date positively.
2. The following point may please be noted for compliance:

"The contractor shall, at all stages of work deploy skilled/semi-skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/ Industrial Training Institute/ National Institute of Construction Management and Research (NICMAR), National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/ Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled/ semi-skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer-in-Charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer-in-Charge. Failure on the part of contractor to obtain approval of Engineer-in-Charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate of Rs. 100 per such tradesman per day. Decision of Engineer-in-Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding".

3. Revised BOQ cum price schedule, **VOLUME-III-PRICE SCHEDULE, REV-01** is attached **superseding VOLUME-III PRICE SCHEDULE, REV-00** issued earlier along with NIT. Bidder shall quote as per this revised Volume-III, Rev-01 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-01**). **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.)

4. Clause No. 34.4 under Clause No. 34.0 OF TCC-VOLUME-IF-CML-REV-0 shall be revised as follows:

"The quantities of the various items mentioned in the respective Price schedules, Volume-III are approximate, based on very preliminary information and may vary to any extent or to 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 the work executed under any part of this contract including extra items, if any, but excluding any price variation, remains within +/- 30 % (plus/minus thirty percent) of the awarded price (as per LOI / WO)".

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

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

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 033-2339-8000/ 2339 8236



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5. In first para of NIT, the sentence "Consideration of their offer is subject to CUSTOMER APPROVAL & compliance of loading criteria as per clause no. 9.0 of NIT specified below" shall be read as "Consideration of their offer is subject to CUSTOMER APPROVAL & compliance of loading criteria as per clause no. 8.0 of NIT specified below".

6. Introduction of clause no 33.0 in the NIT:

Clause No. 33.0- "Integrity Pact (IP)

(a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. A panel of Independent External Monitors (IEMs) have been appointed to oversee implementation of IP in BHEL.

The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory who signs in the offer) along with techno-commercial bid. Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.

Details of IEM for this tender is furnished below:

Name: - SHRI D R S CHAUDHARY, IAS (Retd.),
Address: - FLAT NO L-202 & L 203 (1ST FLOOR),
ANSAL LAKE VIEW ENCLAVE, SHAMLA HILLS, BHOPAL-
462013.
Email: - dilip.chaudhary@icloud.com

(b) Please refer Section-8 of the IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to the IEM mentioned in the tender.

No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department."

7. Bank Guarantee formats for "SUPPLY FREE ISSUE MATERIAL" & "RELEASE OF AMOUNTS WITHHED/LIQUIDATED DAMAGES AMOUNT" is introduced under Volume-IE and attached herewith.

8. Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder shall submit no deviation certificate as per enclosed format only.

9. 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

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 033-2339-8000/ 2339 8236

**VOLUME-III
PRICE SCHEDULE, REV-01**

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

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

SL NO	PREAMBLE
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, IB, 1C, 1D, 1E, 1F, II and other tender sections (as applicable as per NIT) and shall have precedence over any contrary statement mentioned any where 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 fifteen percent ($\pm 15\%$) 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.
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.
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 30% 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 shall 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.

**VOLUME-III
PRICE SCHEDULE, REV-01**

JOB: MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC. BUILDING, ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT), AHP, 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 recknoed & will stand null & void.		
2.0	Bidder to note that grand total price at sl no 3.0 above shall be considered for evaluation & awarding. As such grand total price should be complete in all respect for the full scope defined and considering all terms and conditions.		
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.		

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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 after rounded off .
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	Unit rates of each item of works of respective schedules/ parts will be derived by dividing derived amount by corresponding quantities. In deriving the unit rates of each item in this manner, figures only upto 7 decimal places will be taken into account. Any adjustment, if required, due to such methodology, will be effected in final bill.
9.0	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.
10.0	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.
11.0	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-01				
JOB: MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC. BUILDING, ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT), AHP, BOUNDARY WALL AND MISC. FOUNDATIONS/ STRUCTURES AT 1X250 MW ROURKELA PP-II EXPANSION, ODISHA.				
TENDER NO : PSER:SCT: RKL-C1755:16.				
<u>SCH-2-PART-1-SERVICE</u>				
ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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.			
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	164789	0.0155567
b	Depth exceeding 2 m but not exceeding 4 m	CUM	89789	0.0093478
c	Depth exceeding 4 m but not exceeding 6 m	CUM	23737	0.0027225
d	Depth exceeding 6 m but not exceeding 8 m	CUM	990	0.0001249
e	Depth exceeding 8 m but not exceeding 10 m	CUM	563	0.000078
f	Depth exceeding 10 m but not exceeding 15 m	CUM	100	0.0000153
A101	Excavation for pipe encasing in earth soil/clay/Ash,sand, Gravel, and soft murum including dewatering removing the excavated material upto a distance of 100 m beyond the CT area and stacking or spreading as directed, preparing the bed for foundation ,dewatering, including shoring and strutting if required	CUM	4100	0.0003871
102	Extra over ST No. 101 for dewatering of ground water by well point method as per IS 9759.	CUM	210	0.0000096
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.			
a	Depth from ground level but not exceeding 2 m	CUM	1100	0.0001689
b	Depth exceeding 2 m but not exceeding 4 m	CUM	500	0.0000926

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
c	Depth exceeding 4 m but not exceeding 6 m	CUM	11248	0.0023917
d	Depth exceeding 6 m but not exceeding 8 m	CUM	1234	0.0003092
e	Depth exceeding 8 m but not exceeding 10 m	CUM	33	0.0000097
104	Earth work in excavation in hard rock requiring blasting (but excluding controlled blasting) including wedging, line drilling, pre shearing etc as required, setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statutory clearances for blasting, supply, storage & handling of blasting materials, 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.			
a	Depth from ground level but not exceeding 2 m	CUM	55	0.0000172
b	Depth exceeding 2 m but not exceeding 4 m	CUM	110	0.0000378
c	Depth exceeding 4 m but not exceeding 6 m	CUM	110	0.0000432
d	Depth exceeding 6 m but not exceeding 8 m	CUM	110	0.0000518
e	Depth exceeding 8 m but not exceeding 10 m	CUM	110	0.0000661
f	Depth exceeding 10 m but not exceeding 15 m	CUM	110	0.0000663
105	Earth work in excavation in hard rock requiring controlled blasting including wedging, line drilling, pre shearing etc as required, setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statutory clearances for blasting, supply, storage & handling of blasting materials, 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.			
a	Depth from ground level but not exceeding 2 m	CUM	55	0.0000189
b	Depth exceeding 2 m but not exceeding 4 m	CUM	55	0.0000208
c	Depth exceeding 4 m but not exceeding 6 m	CUM	55	0.0000238
d	Depth exceeding 6 m but not exceeding 8 m	CUM	5	0.0000026
e	Depth exceeding 8 m but not exceeding 10 m	CUM	5	0.0000033
f	Depth exceeding 10 m but not exceeding 15 m	CUM	5	0.0000033
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.			
a	Depth from ground level but not exceeding 2 m	CUM	10	0.0000038
b	Depth exceeding 2 m but not exceeding 4 m	CUM	10	0.0000042
c	Depth exceeding 4 m but not exceeding 6 m	CUM	10	0.0000048
d	Depth exceeding 6 m but not exceeding 8 m	CUM	88	0.0000501
e	Depth exceeding 8 m but not exceeding 10 m	CUM	5	0.0000036

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
f	Depth exceeding 10 m but not exceeding 15 m	CUM	5	0.0000036
A106	Supplying and driving sheet piling upto all depths in various types of soils including cost of sheet, tools and plants, anchoring arrangement , labour etc all complete including removing the sheet piles on completion of respective Civil Works (Tthe item shall be executed on specific approval by the Engineer-in-charge on a case-to-case basis depending on space constraints).	SQM	3850	0.0028193
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	100	0.0000082
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	100	0.0000073
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 thickness and 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	149500	0.0134539
Aa	Each layer compacted so as to achieve at least 97% maximum dry density as per IS-2720 (Part-VIII)	CUM	500	0.000045
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	100	0.000008
B107	Filling using selected excavated materials in trenches, plinths, sides of foundations and other underground structures, pipes, area levelling etc. in layers not exceeding 250 mm thickness including lead upto 1.0 km and all lifts & including loading from stock pile, carting, unloading, filling, watering and compacting/ ramming each layer, all complete as per specification, drawings & as directed by engineer to achieve following densities.			
a	Ordinary manual compaction.	CUM	55	0.0000036
b	90% Standard Proctor Density.	CUM	8825	0.0006338
c	95% Standard Proctor Density.	CUM	11825	0.0009342
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	8825	0.0007241
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	8825	0.0006462
c	Ordinary manual compaction.	CUM	550	0.0000362
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	46731	0.0038344

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	1000	0.0000732
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	33581	0.0007407
110	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 approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying borrowed soil, royalty (if any), 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	1100	0.0004387
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	275	0.0001055
A110	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	18000	0.0014769
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	2000	0.0001313
B110	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 boorrowed 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	120000	0.0220217
C110	Supplying and laying murrum of approved quality in layersand compacting and watering to achieve proctor density of 95% including transportation of material, loading, unloading	CUM	3000	0.0011964
111	Supplying 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	5298	0.0029495
200	CONCRETE WORKS			
	Supplying 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)			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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	2223	0.0042247
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	7350	0.0152651
203	Concrete of grade M15 (1 part cement, 2 part sand, 4 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	30	0.0000663
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.			
a	M15 Grade	CUM	355	0.0007213
b	M20 Grade	CUM	2465	0.0053153
205	Supplying 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	27795	0.0662119
b	M30 Grade	CUM	6793	0.0211744
206	Supplying 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	13618	0.0349993
b	M30 Grade	CUM	3269	0.0095408
A206	Concrete of grade M-25 in machine foundations at all heights from finished floor level except TG and top deck 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.	CUM	6	0.0000199
207	Supplying and laying Design Mix cement concrete confirming to IS:456 & IS 10262-2009 for reinforced concrete works of grade M-30 Grade in machine foundations for TG, Gas Turbine, 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	100	0.0002886
A207	Concrete of grade M-30 in machine foundations at all heights from finished floor level except TG and top deck 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.	CUM	6	0.0000195

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
B207	Supplying 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, Gas Turbine, 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	5273	0.0179112
208	Supplying 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, embedments and temperature control of concrete. Payment terms - a) After casting 75% ; b) After receipt of ultrasonic test report - 25%.			
a	M30 grade (with 20mm nominal size graded stone aggregate)	CUM	120	0.0003597
b	M35 grade (with 20mm nominal size graded stone aggregate)	CUM	640	0.0020537
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 Supplying, storing and mixing of ice with water, cooling of aggregates etc. All complete as per specification, drawing and instruction of engineer in charge.	CUM	640	0.000201
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	52	0.0000487
211	Supplying 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. (Payment of welded wire mesh, chicken wire mesh shall be made separately)			
b	M25 grade	CUM	2325	0.0066483
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	855	0.0021205
b	1:1.5:3 (1 part cement, 1.5 part sand, 3 parts of aggregate by volume)	CUM	6	0.0000216

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
213	Supplying 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	699	0.0032871
b	M 30 grade	CUM	2434	0.0064317
A213	Supplying 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 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 M30 grades.	CUM	67	0.0001862
214	Supplying 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 conforming 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	890	0.0022128
b	M 30 grade	CUM	11639	0.0356842
A214	Concrete of grade M-15 in plinth protection, pipe encasing etc complete with 20 mm nominal size graded aggregate.	CUM	6	0.0000177
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	703	0.0003455
b	Reinforced cement concrete of all grades	CUM	18	0.0000128
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	531	0.0006371
A216	Cutting of masonry/ PCC/ RCC work of thcikness 30cm for making openings/ pockets at any floors/ walls of all levels and according to shapes and sizes as per drg by using power cutting tool (DD2E of Hilti make or equivalent), disposal of waste materials upto a lead of 1 km as directed by engineer including equipment, making good broken edges/ surfaces with cement mortar (1:3) etc complete as per instructions of BHEL (measurement will be paid as per cutting surface area of masonry/ concrete & reinforcement).	SQM	6	0.0000087

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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	105	0.0000229
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	10	0.0000009
219	Supplying and applying curing compound of approved make where ever required as per manufacturer's specification.	SQM	100	0.0000273
220	Supplying & 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	68	0.0001438
221	Supplying 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.			
a	M20 Grade	CUM	20	0.0000467
b	M25 Grade	CUM	26	0.0000895
A221	Pavement works around CT atleast 3m from outer edge of Basin wall of RCC base slab over 75mm thick 1:4:8, PCC sub base and 250mm thick stone soling, RCC base slab of M-25 grade and not less than 150mm having double layer reinforcement.	SQM	1250	0.0043563
300	FORM WORKS			
Supplying, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffolding and centering complete including pockets etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.				
A301	Ordinary form work below & above finished ground floor level for foundations, footings, bases of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	SQM	7366	0.0014947
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	114560	0.0343651
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	84731	0.0300521
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	4704	0.0016684
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	375	0.0004847

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
304	Supplying, 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	105	0.0000286
b	Pockets of depths more than 150mm and upto 300 mm depth	Each	105	0.00004
c	Pockets of depths more than 300mm and upto 600 mm depth	Each	105	0.0000687
d	Pockets of depths more than 600mm and upto 1000 mm depth	Each	105	0.0001375
e	Pockets of depths more than 1000mm and upto 1500 mm depth	Each	105	0.0001947
305	Fairface plywood with filmface/laminated formwork 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 where ever specifically mentioned in the drawing.	SQM	10	0.0000047
A305	Curved form work using Slip form for Silos etc at all heights and levels (for all structure of diameter more than 6m)	SQM	4414	0.0026482
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	36	0.0005172
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)	MT	7760	0.0387785
407	Supplying, straightening, cutting, bending, placing in position at any level, binding in position high yield strength steel reinforcements in brickwork/concrete enchahing including cost of reinforcement and binding wire, labour, scaffolding etc. complete all as per specifications & drawings.	MT	1	0.0000399
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)			
501	Supplying and laying underbed grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 25 mm including preparation of surface, batching, mixing, leveling etc. all complete.	SQM	50	0.0000073
A501	Supplying screed/ grading plaster of average 20 mm thickness in ratio 1:6 nominal by volume including finishing smooth and even etc all complete at all levels above or below grade level.	SQM	550	0.0000961
B501	Supplying 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	12112	0.0009724

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
C501	Supplying 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	13000	0.002271
D501	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 battons, repair of the edges of plaster panel and finishing the groove etc complete as per specification, drawing and instructions of engineer.	RM	1100	0.000264
E501	Supplying 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.	RM	1100	0.0002785
502	Supplying and laying in-situ light weight foam concrete insulation as per relevant IS Code in suitable panels over roofs followed by a layer of 15 mm thick cement sand plaster 1:5 (1 cement: 5 coarse sand) after the curing period of laid foam concrete and Supplying of expansion joint at intervals as per the recommendation of manufacturer. The insulating properties shall be such that the thermal conductivity shall not exceed 0.125 Kcal/sqm-hr deg C. Cost shall include making of fillets, cleaning & preparation of surface, expansion joints at suitable intervals etc all complete for following.			
a	Average 50 mm thickness	SQM	6	0.0000027
b	Average 75 mm thickness	SQM	6	0.0000035
c	Average 100 mm thickness	SQM	2	0.000001
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	392	0.0001826
503	Supplying and applying bitumen felt water proofing for normal treatment having bonding materials consisting of blown type conforming to IS: 702 or residual bitumen conforming to IS: 73 or a mixture of the two with one layer of felt consisting of five courses and with a minimum overlap of 75 to 100 mm of felt including preparation of surfaces etc all complete. (For description of layers refer specification)			
a	With hessian base felt	SQM	2	0.0000008
b	With fiber base felt	SQM	2	0.0000009
A503	Supplying and laying roof water treatment with high solid content liquid applied elastomeric water proofing membrane with separate wearing course as per ASTM C-898 . Thickness of membrane shall be min 1.5 mm. Treatment shall include application of polymerized mortar over roof achieving a smooth surface and a primer coat. Wearing course on the top of membrane shall consist of 40 mm thick PCC (1:2:4) cast in panels of maximum size 1.2 X 1.2 m and reinforced with 0.56 mm dia galvanised chicken wire mesh and sealing of joints using sealing compound complete as per specifications and as directed by engineer in charge. BHEL will supply cement free of cost as per TCC	SQM	3182	0.0012633

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
504	Supplying and applying bitumen felt water proofing for heavy treatment having bonding materials consisting of blown type conforming to IS: 702 or residual bitumen conforming to IS: 73 or a mixture of the two with two layers of felt each consisting of seven courses and with a minimum overlap of 75 to 100 mm of felt including preparation of surfaces etc all complete for following base felts (For description of layers refer specification):			
a	With hessian base felt	SQM	20	0.0000088
b	With fiber base felt	SQM	50	0.0000239
505	Supplying and applying bitumen felt water proofing for extra heavy treatment having bonding materials consisting of blown type conforming to IS: 702 or residual bitumen conforming to IS: 73 or a mixture of the two with three layers of felt consisting of nine courses and with a minimum overlap of 75 to 100 mm of felt including preparation of surfaces etc all complete for following base felts (For description of layers refer specification):			
a	With hessian base felt	SQM	20	0.0000097
b	With fiber base felt	SQM	50	0.0000263
506	Supplying 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 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	15187	0.0046897
507	Supplying 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	14737	0.0032505
508	Supplying 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	14737	0.0068911
A508	Supplying & laying pressed precast CHEQUERED concrete tiles over water proofing of min size 300x300 & min thickness 20 mm conforming to IS 13801 including 15 mm thick cement mortar (1:4) bedding inclusive of provision for thermal expansion for each roofing tile filled with polysulfide joint sealant (water proofing paid elsewhere). BHEL will supply cement free of cost as per TCC for laying of tiles.	SQM	22	0.0000093
509	Supplying 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	110	0.0000304
A509	Supplying 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	60000	0.0079405

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
510	Supplying and applying water proofing with blown bitumen bonding material conforming to IS:702 of 65/25 grade in Basements, ducts, pits, tunnels etc below the ground level on the concrete surfaces exposed to soil / ash and up to 150 mm above ground level on outside of walls and top of RCC slab including preparation of surface, brick lining single brick thick with 1:4 cement mortar etc. all complete with following number of layers of bitumen felts:			
a	2 Layers of felt for depth up to 5m below ground level for floors	SQM	20	0.000006
b	3 Layers of felt for depth beyond 5m below ground level for walls	SQM	50	0.0000225
511	Supplying and mixing water proofing compound conforming to IS:2645 in concrete or cement mortar all complete.	Litres	2200	0.0002912
512	Anti termite chemical treatment of soil with Chloropyrifos emulsifiable concentrates (1%) conforming to IS :8944 all complete.	SQM	3103	0.0005065
513	Supplying and applying concrete structures two coats of ERPB (Epoxy resin based anticorrosive and chemical resistant paint) over a coat of CPCI (concrete penetrating bipolar corrosion inhibitor) with 300 to 325 micron DFT for protection of concrete against carbonation and chloride penetration in saline/marine environment all complete of approved make and as per manufacturer's recommendation	SQM	50	0.0000192
514	Supplying and applying IP net coating system to exposed concrete surfaces of approved make and as per manufacturer's recommendation.	SQM	50	0.0000035
600	JOINTS AND FILLERS			
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	Supplying & installation of bitumen impregnated fibre board confirming 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	1035	0.0004685
b	20 mm wide joints.	SQM	116	0.0000759
c	25 mm wide joints	SQM	1610	0.0014588
d	50 mm wide joints	SQM	116	0.0001317
602	Supplying 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	5513	0.0018532
b	20mmX25mm	RM	210	0.0000988
c	25mmX25mm	RM	3000	0.0020169
d	50mmX25mm	RM	210	0.0002646
602	Supplying and filling in position two part polysulphide sealant conforming to IS 12118 including cleaning, mixing, pouring/ injecting sealing compound in gaps in joints at all levels including labour, material, equipments etc. all complete as per specification/ drawing, instruction of engineer.	Kg	11	0.0000007

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
603	Supplying and filling in position hot applied bitumin sealing compound (Grade A) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.			
a	10mm X 40mm	RM	20	0.0000041
b	12mm X 25mm	RM	30	0.0000069
c	20mmX25mm	RM	40	0.000013
603	Supplying & filling in position hot applied bitumin sealing compound (Grade A) confirming to IS 1834 including cleaning, mixing, heating, pouring/ injecting sealing compound in gaps in joints at all levels including application of primer, labour, material, equipments etc all complete as per spec/ drg, instruction of engineer.	kg	55	0.0000034
604	Supplying and filling in position hot applied bitumin sealing compound (Grade B) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.			
a	10mm X 40mm	RM	20	0.0000041
b	12mm X 25mm	RM	30	0.0000069
c	20mmX25mm	RM	40	0.000013
605	Supplying 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	1296	0.0006369
b	50mmX25mm	RM	10	0.0000071
606	Supplying and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following:			
a	150 mm wide and 8 mm thick	RM	100	0.0000273
b	230 mm wide and 6 mm thick	RM	5887	0.004176
700	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.			
701	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. all complete.	MT	303	0.0043729
702	Same as above with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.	MT	22	0.0003361
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	2	0.0000229

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
704	Fabrication, transportation, delivery at site and 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, stiffener plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete.	MT	57	0.0008226
705	Transporting, fabricating, 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	0.0000253
b	PVC pipes / conduits of all diameters	Quintal	95	0.0002954
c	UPVC pipes / conduits of all diameters	Quintal	10	0.0000311
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	5	0.0000005
ii	Beyond 250 Kg and upto 500 kg	Each	5	0.0000008
iii	Beyond 500 Kg and upto 750 kg	Each	5	0.0000014
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	5	0.0000005
ii	Beyond 250 Kg and upto 500 kg	Each	5	0.0000008
iii	Beyond 500 Kg and upto 750 kg	Each	5	0.0000014
706	Placing, locking and releasing of Vibration Isolation spring modules over the foundation at all elevations including Supplying all assistance under the supervision of the supplier, transportation from BHEL store, necessary staging, platforms, leveling, alignment etc. all complete.	Each	48	0.0000563
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	Supplying & 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.	SQM	26	0.0000117
802	Supplying & 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.	CUM	10	0.0001309
803	Supplying & 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).	CUM	33	0.000288

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
804	Supplying & 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	13	0.0003972
805	Supplying & 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	4	0.0001222
A805	Supplying and grouting of column base with CM 1:1:2 (1 part cement : 1 part sand : 2 parts coarse aggregates with 12.5 mm or down chips) including all cost of labour,etc. complete as per drawing,specification and direction of engineer-in-charge. BHEL will supply cement free of cost as per TCC	CUM	1	0.000004
B805	Supplying & water proofing with chemical injection grouting including supplying and fixing GI nozzles all complete as per drawings, specifications and direction of engineer. Contractor to supply all materials.	SQM	743	0.0004261
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	Supplying 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 smoothening, 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	10	0.0004846
902	Supplying 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	0.0000491
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, 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 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 conforming 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	106	0.0001506
904	Transporting and fixing single or double steel door shutters with 35 mm thk flush design shutter comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres 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	430	0.0007235

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
906	Transporting and 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 3mm 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)	SQM	243	0.0002468
907	Transporting and fixing fire proof steel doors (single or double shutter) with panic devices having 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers 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	102	0.0003948
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	569	0.0004593
b	fixed type	SQM	135	0.0001045
909	Supplying and fixing anodised aluminium work of Jindal, Hindalco or other equivalent approved make for 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-metallic protection etc.including preparation 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, Supplying 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 separately).Weight of aluminium section only shall be measure.	Kg	22843	0.0090693
910	Fxing 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.			
a	3mm	SQM	100	0.0000914
b	4mm	SQM	100	0.0001928
c	5mm	SQM	1000	0.0023583
911	fixing of door closers as per IS 3564 ,of approved make & quality all complete of following type :			
a	Over head hydraulic door closures	Each	108	0.000048
b	Floor mounted Hydraulic door closers	Each	55	0.0000416

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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	5587	0.0001775
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.	Kg	315	0.00001
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	49	0.0000444
b	Mechanically Operated	SQM	194	0.000217
c	Electrically operated	SQM	441	0.0010105
914	Transporting and fixing in position PVC doors(25 thk double skin) of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	50	0.0000386
A914	Transporting and fixing in position solid core FRP doors including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	58	0.0000493
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.			
a	4 mm thick clear sheet glass	SQM	6	0.0000015
b	4 mm thick clear float glass	SQM	1572	0.0004369
e	6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges	SQM	10	0.0000061
f	4 mm thick ground glass	SQM	10	0.0000016
g	6 mm thick tinted heat reflecting type float glass	SQM	10	0.0000038
h	6 mm thick clear toughened safety glass	SQM	709	0.0003209
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	231	0.0001942
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	10	0.0000086

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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	21	0.0000167
i	6 mm thick laminated glass	SQM	10	0.0000028
j	6 mm thick clear float glass	SQM	410	0.0000883
916	Supplying and fixing weather stripping of approved make and quality to doors as per instructions of engineer in charge and specification complete.	RM	105	0.0000286
917	Supplying 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	105	0.0001947
918	Supplying and fixing steel louvered window with ISMC 100 frame all round including verticals with 18G pressed steel louvers, painting etc. all complete.	SQM	105	0.0002275
919	Supplying 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	105	0.0003534
920	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 sealant, screws with pvc cap, self tapping screws, epdm rubber gasket.etc all complete as per detailed drawing and specification.	SQM	1050	0.0032424
A921	Supplying 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	90	0.0000318
A922	Supplying and fixing automatic closing sliding glass doors with fittings, fixtures including all necessary arrangement including sensor, motor, frames, finishes etc. all complete.	EACH	9	0.0000357
A923	Supplying, fitting and fixing heavy duty minimum six lever mortised lock of godrej or equivalent make with handles or knobs to single and double leaf door (wooden/ steel/Aluminium) with duplicate set of keys and masterkeyed locks, openable from one side by the key and from the other side by the handle etc all complete as per drawing, specification and instruction of engineer.	Each	23	0.0001725
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)			
1001	Supplying 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 lime bricks conforming to IS 12894 with crushing strength of 75 kg/cm2	CUM	855	0.0023848
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	57	0.0002066
d	Using burnt clay bricks of class designation 5.0 of nominal dimension	CUM	28	0.0001015

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
1002	Supplying 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 lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	CUM	5097	0.0187524
b	Using clay ash bricks as per IS 13757 with crushing strength of 75 kg/cm2 and minimum percentage of fly ash 25%	CUM	2	0.000007
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	204	0.0007505
d	Using burnt clay bricks of class designation 5.0 of nominal dimension	CUM	770	0.0028329
A1002	Supplying 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 lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	CUM	52	0.0001998
B1002	Supplying brick work with 2 hr fire rating 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 lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	CUM	105	0.0003845
1003	Supplying 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 Supplying 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 lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	SQM	719	0.0003712
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	SQM	115	0.0000706
A1003	Supplying Light Weight Aerated Concrete Panel in walls at all heights, places and position above or below plinth/graded level including jointing, scaffolding etc complete as per specification.	SQM	525	0.0003951
1004	Supplying 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 lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	SQM	26	0.0000176
b	Using clay ash bricks as per IS 13757 with crushing strength of 75 kg/cm2 and minimum percentage of fly ash 25%	SQM	20	0.0000122
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	SQM	26	0.0000176
d	Using burnt clay bricks of class designation 5.0 of nominal dimension	SQM	20	0.0000115

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
1005	Supplying 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 lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	SQM	52	0.0000127
b	Using clay ash bricks as per IS 13757 with crushing strength of 75 kg/cm2 and minimum percentage of fly ash 25%	SQM	10	0.0000017
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	SQM	52	0.0000104
A1005	Supplying and laying 115 mm thick brick wall of CM 1:4 using approved quality of brick of designation 5 at all heights and levels including Supplying 2nos of 6mm dia MS rod at every 3rd layer, curing etc all complete as per specifications, approved drawings and direction of Engineer-in-charge	CUM	1	0.0000048
B1005	Supplying & laying brick on edge on both edges of black top of roads, as per specification and direction of engineer-in-charge.	RM	1	
C1005	Supplying & laying Random Rubble masonry with hard stone in all levels including leveling up with cement concrete 1 :6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size at plinth level with cement mortar 1 :6 (1 cement : 6 coarse sand)	CUM	2	0.0000086
D1005	Making openings in existing brick wall or partition wall including making good the broken edges/ surface with cement mortar etc complete.	SQM	1	0.0000005
E1005	Supplying & filling brick bats in soak pits, below plinth protection etc complete.	CUM	1	0.0000037
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	742	0.0003646
1007	Supplying 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	0.0000154
1008	Supplying 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	52	0.0000082
1009	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete.	CUM	5	0.000003
1010	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 including cutting, bending, fixing etc. complete.	SQM	20	0.0000062
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	10	0.0000034
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	52	0.0000352
1012	Supplying and filling brick bats in soak pits all complete.	CUM	6	0.0000041

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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)			
1101	Supplying Damp Proof Course 40mm thick 1:1.5:3 concrete (10mm 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	1470	0.0006212
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)			
1201	Supplying 18mm thick plaster in two layers outside the building/boundary wall in cement mortar 1:6 on walls, finished to a smooth finish including Supplying 3mmx3mm size grooves at junctions of two dissimilar materials all complete.	SQM	4204	0.0009161
A1201	Supplying 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 Supplying 3mmx3mm size grooves at junctions of two dissimilar materials all complete.	SQM	30010	0.0066723
1202	Supplying 12mm 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	4320	0.0008004
A1202	Supplying 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	18436	0.0036598
1203	Supplying 12mm thick plaster in cement mortar 1:6 on walls with rough finish all complete.	SQM	201	0.0000372
1204	Supplying 6mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth all complete.	SQM	10095	0.0015497
1205	Supplying 12mm thick plaster in walls, drains/culverts with a paste of neat cement @ 1kg/sqm and rubbed smooth with trowel etc. all complete.	SQM	1	0.0000001
1206	Supplying and making decorative plaster of all types and design on walls, ceilings, arcs, columns with various thickness upto 18 mm including finishing all complete.	SQM	50	0.0000114
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 battons, 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	843	0.0000461
1208	Supplying 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	299	0.0000164
1209	Supplying 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 engineer in charge (chicken wire mesh to be paid separately)	SQM	100	0.0003273
1210	Ruled pointing in masonry in CM 1:3 (1 cement and 3 fine sand) including raking out joints, curing etc. complete.	SQM	105	0.0000286
1300	FINISHES TO CONCRETE / PLASTERED SURFACES			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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.				
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	828	0.000027
1302	Two or more coats of Exterior masonry paint (water or solvent base) of special resins, adhesives and additives mixed with fine, hard stone aggregate and suitable pigment. The paint shall be applied on a coat of primer over dried, prepared plaster surface as manufacturers guidelines. The final finished coating shall be fungus resistant, UV resistant, water repellent, alkali resistant and extremely durable with color fastness as per specification.	SQM	20	0.0000026
1303	Supplying and applying two or more coats of oil bound distemper 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.	SQM	2405	0.0002631
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	23714	0.0021968
A1304	Two or more coats of NO VOC (volatile organic compound) acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete.	SQM	551	0.0000564
1305	Supplying 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.	SQM	6238	0.0010182
A1305	Supplying 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.	SQM	38100	0.0070255
B1305	Supplying and applying two or more coats of NO VOC (volatile organic compound) 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.	SQM	551	0.0001201
1306	Supplying 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, Supplying 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	465	0.0001268
1307	Two or more coats of fire resistant transparent paint as per IS 162 on all woodwork over french polish as per IS 348 or flat oil paint as per IS 137 of approved grade and manufacture to give an even shade as per specifications.	SQM	100	0.0000381
1308	Two or more coats of black anti-corrosive bitumastic painting of approved brand and manufacture to give an even shade complete.	SQM	20	0.0000033
1309	Two or more coats of synthetic enamel paint of approved make made from synthetic resins and drying oil with rutile titanium dioxide and other selected pigments to give smooth, hard, durable & glossy finish to all interior and exterior surfaces complete.	SQM	40	0.0000065
1310	Supplying 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	50	0.0000082

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
1311	Supplying 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	7822	0.0046997
A1311	Supplying and applying resin bonded granular textured finish with low VOC (volatile organic compound) , 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	262	0.0005747
1312	Supplying 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	8700	0.000806
1313	Supplying 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	105	0.0001718
1314	Supplying and applying Synthetic plaster for external applications composed of synthetic fibre and petroleum based chemical similar to RENOVO or equivalent and of approved natural color/shade applied on cured and dried plaster surface.The final finish Paint 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	10	0.0000049
1315	Supplying and applying two or more coats of Acrylic based weather coat paint of approved brand and manufacture and required shade over one coat of primer after necessary cleaning/ washing, preparing the surface using coir brush/ wire brush, sand paper, including filling of cracks with putty wherever required etc. all complete to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guidelines. The final finished coating shall be fungus resistant, UV resistant, water repellent and extremely durable with color fastness as per specification.	SQM	20	0.0000055
A1316	Two or more coats of cement paint (for internal use) of approved brand and manufacture to give an even shade including priming coat complete.	SQM	4950	0.0007337
A1317	Two or more coats of cement paint (for external use) of approved brand and manufacture to give an even shade including priming coat complete.	SQM	110	0.0000179
A1318	Supplying & Applying Coating for concrete surfaces which are expected to be wet & o/s of basin with bitumen as per IS9862 and as per spec .	SQM	8000	0.0015528
A1319	Supplying & Applying Coating with bitumen for concrete surfaces inside the cooling Tower as per Technical specification and relevant IS Sandard.	SQM	25500	0.0054445
A1320	Supplying 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	4500	0.0010323
1400	FLOORING AND SKIRTING			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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)				
1401	Supplying and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron paricles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5mm 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 including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of Supplying glass joint strips):	SQM	30250	0.0152127
A1401	Supplying and laying 40 mm thick heavy duty cement concrete flooring with metallic hardener pigmented topping of 12 mm thick uniform graded treated iron particles over underbed of 1 part cement, 1.5 part sand and 3 parts chips (10 mm down, well graded) by volume (only sufficient water added to give workable consistency) in flooring complete as per specification.	SQM	3187	0.0015156
1402	Supplying 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 10 mm thick uniform graded treated iron particles in skirting and dado complete as per specification.	SQM	318	0.0001599
1403	Supplying 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	1239	0.0011489
b	Laid in skirting	SQM	126	0.0001306
1404	Supplying and laying interlocking M30 Grade concrete blocks in paving with approved colour and pattern and should be laid on the subbase and bedding as per specifications and recommendations of manufacturer.			
a	60mm	SQM	20	0.0000115
b	75mm	SQM	20	0.0000119
A1404	Supplying 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.			
a	60mm	SQM	20	0.000012
b	75mm	SQM	315	0.0002234
c	80mm	SQM	1908	0.0013972
1405	Supplying and laying 50 mm thick floor finish with 25mm thk Terrazo Tiles including cement mortar bedding of 1:3 (1 cement : 3 sand) with neat cement slurry etc. all complete.	SQM	100	0.0000656
1406	Supplying 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	232	0.00019

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
1407	Supplying 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	94	0.000089
1408	Supplying 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	50	0.0000475
1409	Supplying polished Kota stone 14mm to 16mm thk in skirting projecting 6mm from adjacent plaster including cutting brickwall upto the required depth, edging, finishing etc. all complete.	SQM	50	0.0000473
1410	Marble stone Flooring laid in 50mm overall thickness with 18-20mm thick marble slabs (grade -1) with minium 30mm thick underbed of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level.The marbel slabs/tiles laid over underbed with mortar 1:3, 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	20	0.0000611
1411	Marble stone Flooring laid in 50mm overall thickness with 14 -16mm thick marble slabs (grade -1) with minium 35mm thick underbed of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level.The marbel slabs/tiles laid over underbed with mortar 1:3, 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	20	0.0000546
1412	Supplying 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	1891	0.0066035
1414	Supplying 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	105	0.0004009
1416	Supplying and laying vitrified ceramic tiles of polished variety of size 600x600 from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 with neat cement slurry etc. all complete for following			
b	10mm thick tiles In flooring	SQM	3026	0.0034654
d	10mm thick tiles In skirting and dado upto specific height	SQM	36	0.0000452
A1416	Supplying and laying vitrified ceramic (with recycle content) tiles of polished variety of size 600x600/800x800 from reputed / approved manufacturer, complete including including underbed of 40.5 mm thick cement concrete mix 1:1.5:3 (1 cement: 1.5 sand : 3 stone aggregates 12.5mm well graded) with 3mm groove joints as per approved pattern pointed neatly with 3X4mm stainless epoxy grout SP-100 of Laticrete or approved equivalent in approved colour to match colour of tile etc. all complete for following.			
a	10mm thick tiles In flooring	SQM	866	0.0010865
b	10mm thick tiles In skirting and dado upto specific height	SQM	105	0.0001317

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
1417	Supplying and laying vitrified ceramic tiles of matt/mirror finish of size 600x600mm from reputed / approved manufacturer including underbed of cement mortar 1:3 with neat cement slurry etc. all complete for following.			
a	7mm thick tiles In flooring	SQM	369	0.0004179
b	10mm thick tiles In flooring	SQM	1	0.0000014
A1417	Supplying and laying vitrified ceramic tiles of matt/mirror finish of size 450x450mm from reputed / approved manufacturer including underbed of cement mortar 1:3 with neat cement slurry etc. all complete for following.			
a	7mm thick tiles In flooring	SQM	314	0.0003793
1419	Supplying 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	12	0.0000458
1420	Supplying 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.			
a	300X300 mm	SQM	20	0.0000185
b	600X600 mm	SQM	183	0.0001897
1422	Supplying & 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.			
a	20mm thick	SQM	110	0.0002641
b	38mm thick	SQM	315	0.0008935
1423	Supplying & 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	1287	0.0039322
A1424	Supplying & fixing chemical resistant (Acid & Alkali) Tiles as per IS 4457 of minimum thickness 25 mm thick in flooring/Dado. The tiles shall be abrasion resistant and durable. The potassium silicate as per IS 4832,6 mm thick mortar used for setting or for under bed shall be durable strong and chemical resistant epoxy mortar including pointing etc. after laying bitumen primer as per IS 158 and 12 mm thick bitumastic complete as per IS 9510 and IS 412 and as per specification.	SQM	1	0.0000025
B1424	Supplying & fixing chemical resistant (Acid & Alkali) ceramic unglazed vitreous tiles as per IS 4457 of min thickness 20 mm in flooring/ dado. The tiles shall be abrasion resistant and durable. The bedding shall comprise of potassium silicate mortar conforming to IS: 4832 (Part I) and resin based mortar like epoxy for jointing.	SQM	1	0.0000024

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
C1424	Supplying & 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 followed by 6mm thick potassium silicate mortar bedding shall be provided before laying AR bricks. The joints between AR bricks shall be filled with resin type of mortar conforming to IS:4832, part II, seal coat of readymade epoxy paint shall be provided on joints to 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	52	0.0001986
1424	Supplying & 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 followed by 6mm thick potassium silicate mortar bedding shall be provided before laying AR bricks. The joints between AR bricks shall be filled with resin type of mortar conforming to IS:4832, part II, seal coat of readymade epoxy paint shall be provided on joints to 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	52	0.0002126
1425	Supplying 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	900	0.0027498
1427	Supplying 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	521	0.0005401
1429	Supplying 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	420	0.0029789
1430	Supplying 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	635	0.0000588
b	Aluminium strips 40 mm wide and minimum 3 mm thick	RM	531	0.0001434
c	Brass strips 20 mm wide and minimum 4 mm thick.	RM	525	0.0000617
d	Glass strips 50 mm wide and minimum 6 mm thick.	RM	110	0.0000113

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
e	Aluminium strips 50 mm wide and minimum 3 mm thick.	RM	6	0.0000018
1431	Supplying and laying wooden panel flooring and skirting of PERGO or equivalent of approved color,shade all complete as per manufacturer specification.	SQM	20	0.0000327
A1431	Supplying 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	55	0.0000995
A1432	Supplying and laying 2 mm thick homogenous anti-static PVC skirting of approved color,shade all complete as per manufacturer specification.	SQM	53	0.0000257
A1433	Supplying 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	105	0.0000602
A1434	Supplying & laying polished Mosaic tiles of tile size 250mm X 250mm X 25mm in flooring, staircase over underbed of 1 part lime putty, 1 part surkhi & 2 parts coarse sand by weight mixed with sufficient water to form a stiff workable mass. The stone slabs 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, making corners, granite polishing etc complete.	SQM	1	0.0000023
A1435	Supplying and laying 40 mm thick precast terrazzo tile flooring using 20 mm thick precast terrazzo tile of approved quality, texture, grains and color over cement mortar base of required thickness all complete as per specifications, approved drgs and directions of Engineer-in-charge.	SQM	55	0.0001179
A1436	Supplying 30 mm thick precast terrazzo tiles skirting using 20 mm thick precast terrazzo tile of approved quality, texture, grains and colour over cement mortar base of required thickness all complete as per specifications, approved drgs and directions of Engineer-in charge.	SQM	55	0.000114
A1437	Supplying and laying 50 mm thick granolithic flooring (cement concrete flooring in 1:1:2) with non metallic hardener pigmented topping of 12 mm thick in flooring complete as per specification.	SQM	55	0.000153
A1438	Supplying and laying 25 mm thick granolithic flooring (cement concrete flooring in 1:1:2) with non metallic hardener pigmented topping of 10 mm thick in skirting and dado complete as per specification.	SQM	55	0.0001383
A1439	Supplying and laying cement concrete flooring in M25 of thickness 50 mm without non metallic hardener topping with finishing,curing etc. complete as per specification,approved drawings and direction of engineer-in charge.	SQM	55	0.0001567
A1440	Supplying & laying 50 mm thick heavy duty cement concrete flooring with metallic hardener pigmented topping of 12 mm thick uniform graded treated iron particles including non-skid self leveling 150 microns epoxy in flooring complete as per specification.	SQM	142	0.0004573
A1441	Supplying and laying 5mm thick decorative coloured ceramic tiles as per specifications,drawings and direction of engineer-in-charge.	SQM	11	0.000016
A1442	Supplying dadoing with white glazed tile of approved brand, quality, colour and size including 12 mm thick bedding of cement mortar 1:3 all complete as per specification, approved drawings and direction of Engineer in- charge	SQM	11	0.0000165
A1443	Supplying & laying stone pitching in cement mortar 1:6 (1 cement: 6 coarse sand) in slopes and similar type of works by using hard stone in all levels etc. complete as per specification, approved drawing and direction of Engineer-in-charge (Cement will be supplied by BHEL as per TCC free of cost),	SQM	55	0.0001359
1500	ROOFING / SIDE CLADDING			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
	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 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.			
a	Span Upto 1800mm	SQM	6407	0.002165
b	Span Exceeding 1800mm and upto 2500 mm	SQM	9500	0.0041657
1502	Supplying 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	48	0.0019902
1503	Supplying,Transportation and fixing External 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 275 gm/sqm total on both sides 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 suitable primer. Inner 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.	SQM	20	0.0000055
1504	Supplying,Transportation and fixing External sheet of Permanent colour coated metal cladding with high strength tensile steel sheet 0.5mm bare metal thickness having minimum yield strength 350 MPa and zinc-aluminium alloy coating not less than 275 gm/sqm total on both sides 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 suitable primer. Inner 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.	SQM	20	0.0000063

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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	8000	0.001581
1505	Supplying,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 275 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	20	0.0000071
1506	Supplying 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	20	0.0000153
1507	Supplying 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	20	0.0000189
1508	Supplying 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	1110	0.0011331
1509	Supplying and fixing non metal opaque PVC sheet similar to ONDEX roofing or equivalent including all fixing accessories.	SQM	210	0.0001262
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	1110	0.0002732

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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	4063	0.0012296
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.			
1601	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) galvanized wires (rods) with special height adjustment clips, including preparation of working drawing, Supplying 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 mm thick GRG board with galvanized light gauge steel load bearing supporting GI frame and finished flat (seamless).	SQM	110	0.0000445
b	12 mm thick GRG board in profile (dome ,curved profiled etc.) with galvanized light gauge steel load bearing supporting GI frame and finished smooth (seamless).	SQM	50	0.0000169
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 (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.	SQM	700	0.0001268

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
A1602	Transportation and fixing aluminium false ceiling system comprising of 84 mm wide and 12.5 mm deep closed type plain panels of approved colour, roll formed out of 0.5 mm thick corrosion resistant aluminium alloy AA5050 fixed on roll formed carriers, suspended from RCC slab / structural steel or catwalkway steel channel grid above with 4 mm (min) galvanised wires (rods) with special height adjustment clips, including preparation of working drawing, Supplying openings for AC ducts, return air grills, light fixtures etc (but excluding cost of catwalkway grid) all complete as per drawings, specifications, and instructions of the engineer.	SQM	1	0.0000002
1603	Supplying 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	1632	0.0014193
1605	Supplying, Transportation, fixing and laying anodised natural colour matt finished aluminium false ceiling of Jindal/Hindalco make with corrosion resistance aluminium alloy panels of minimum thickness 0.5mm including 50mm thick mineral wool (density 48kg/cum insulation (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) grid shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. 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	20	0.0000142
1606	Transportation and fixing 12mm 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	761	0.0002814
A1607	Supplying and fixing cement bonded particle board false ceiling system consisting of 600X 600X12 mm board with one coat of primer and two coats of acrylic emulsion paint with suspension system consisting of 6mm dia galvanised steel rods suspended from ceiling supporting aluminium grid of 38X 25X 1.5 mm and cross-tie of 25X25X 1.5 mm and aluminium angle of 25x25x1.5 mm suspended from RCC slab / Structural Steel or catwalkway grid above with special height adjustment clips, including preparation of working drawing, Supplying openings for AC ducts, return air grills, light fixtures etc (but excluding cost of catwalkway grid) all complete as per drawings, specifications, and instructions of the engineer.	SQM	1	0.0000003
1700	RAIN WATER DOWN TAKE PIPES			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
	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.			
1701	Fixing of HCl down take pipes of 100 mm dia. with water tight lead joint, fixing clamps etc. all complete.	RM	20	0.0000065
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	20	0.0000056
1703	Fixing of HCl down take pipes of 150mm dia with water tight lead joint etc. all complete.	RM	20	0.0000105
1704	Fixing of galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) all complete.	RM	1305	0.0005331
1705	Fixing of UPVC down take pipes of 110mm diameter- Class 3 as per IS:4985 all complete.	RM	20	0.0000031
1706	Fixing of UPVC down take pipes of 160mm diameter- Class 3 as per IS:4985 all complete.	RM	381	0.000084
1707	Fixing of GI down take pipes conforming to IS:1239 /IS:3589 of medium duty all complete for following diameters.			
a	100 mm Dia	RM	220	0.0000673
b	150 mm Dia	RM	220	0.000097
c	200 mm Dia	RM	6	0.000004
1708	Supplying and fixing HDPE down take pipes conforming to IS:4984 as per specification of following diameters.			
a	110 mm Dia	RM	10	0.000001
b	160 mm Dia	RM	10	0.0000014
c	200 mm Dia	RM	10	0.0000019
A1709	Fixing of cast iron cement down take pipes conforming to IS:4984 as per specification of following diameters.			
a	110 mm Dia	RM	20	0.0000065
b	160 mm Dia	RM	2020	0.0008035
c	200 mm Dia	RM	20	0.0000096
A1710	Supplying 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	10	0.0000221
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.			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
1801	Supplying 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 230 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	1010	0.0022233
A1801	Supplying 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	11500	0.0265729
1802	Supplying and mixing approved Bipolar Concrete penetrating Corrosion inhibiting admixture in concrete as per detail specification of manufacturer etc. all complete.	Kg	20	0.0000035
1803	Anti termite chemical treatment of soil with Chlorpyrifos/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	50	0.0000082
1804	Installation of approved 25mm thick vibration damping resilient pads on/around foundation of vibrating equipment and at other locations all complete.	SQM	20	0.0000098
1805	Supplying 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.	SQM	267	0.0000916
1806	Supplying 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	267	0.0002375
1807	Supplying and fixing G.I strips minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete.	Kg	210	0.0000343
1808	Supplying 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	210	0.0001089
1809	Supplying 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	52	0.0000085
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	38	0.0009138
1811	Supplying 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	217	0.0000728
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	52	0.0006809

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
1813	Supplying 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	0.0000818
1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, concreting, reinforcement, formwork, Supplying & fixing GI strips/pipes, GI wires, covers etc as per drawing & specification including associated earthwork.	EACH	10	0.0001091
1815	Supplying and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete.	Kg	635	0.0001036
1816	Supplying and 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	31	0.0004059
1817	Supplying and fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc. all complete.			
a	Upto 75 mm dia	RM	20	0.0000056
b	100 mm dia	RM	20	0.0000064
c	150 mm dia	RM	20	0.0000105
d	200 mm dia	RM	20	0.0000185
1818	Supplying and laying dry stone pitching of 230 mm thickness for slope protection in cement mortar 1:6 including hammer dressing, raking of joints, pointing, preparing the bedding surface and voids filling with stone aggregate etc. all complete.	SQM	50	0.0001292
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	83	0.0031393
1820	SS component mentioned under ST No. 1819.	MT	11	0.0008487
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	67	0.0023128
1822	Cutting of groove of 10mm X 40mm size with groove cutting machine in concrete paving all complete.	RM	10	0.0000011
1823	Fire proofing of steel structures with VERMICULITE cementious coating including supply of all materials for vermiculite materials, reinforcement mesh (3mm thick wire, 50x50 size mesh) , nuts, tie wires, weldings, surface preparation, curing, staging, compatible paintings etc. all complete.	CUM	1	0.0000007

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
1824	Supply & fixing expanded metal steel sheet conforming to IS:412. Size of mesh shall be 10mmX40mm with strands of 2.5mm width and 1mm thickness to the structural steel for facilitating fireproofing works.	SQM	10	0.0000067
1825	Supply and laying approved quality Stone aggregate 40mm size in transformer yards.	CUM	110	0.0002647
1826	Supply and laying approved quality rounded pebbles / gravels of 40mm size in transformer yards.	CUM	362	0.000871
1827	Supply and laying fire clay refractory brick work with fire clay mortar conforming to IS: 6 & 195 including curing etc. all complete on tank pads & in building walls.	CUM	20	0.0000917
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 upto 1km all complete.	CUM	26	0.0000128
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	26	0.0000213
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	26	0.0001986
1831	Sprinkling of water by water tanker fitted with perforated GI pipe (portable tanker minimum 3000 litre capacity) for roads and miscellaneous area within plant boundary, for dust suppression and reduction of suspended material at site for day to day work, as directed by BHEL site engineer (water for this purpose shall be provided by BHEL free of cost and utilisation of machine will be in terms of Tank-hour put in actual use for water sprinkling).	TANK-HR	210	0.000045
1832	Supplying & filling Bentonite Powder (Sodium base) mixed with water in electronic earthing pit as per drawing & direction below ground level including all materials, transportation, labour, incidental etc all complete as per specification.	CUM	20	0.0001309
1833	Supply & fixing FRP (fibre reinforced plastic) sheets 2 mm thick including GI hooks/ J or L bolts, nuts, washers, bitumen washers etc. complete including overlap 100mm .	SQM	20	0.0000142
A1836	Supplying and fixing aluminium angle nosing with minimum 50x25x3 angle for edge protection of RCC stairs including jigs and fixtures all complete.	MT	5	0.0001544
A1837	Anti weed chemical treatment of soil with suitable chemical etc all complete.	SQM	519	0.0001603
A1839	Landscaping including water fountain in front of admin building	LS	1	0.0006617
A1840	Supplying and fixing sliding layer of bitumen paper or craft paper over the screed layer for water retaining	SQM	5092	0.0015724
A1841	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	0.0000049
A1842	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	456	0.0003621
A1843	Supply & fixing 150mm dia perforated PVC pipe ISI mark 6 Kg/ cm2 with air vent at top as per the drawing & specification complete.	RM	147	0.0000973
A1844	Supplying & fixing 150 dia PVC pipe ISI mark 6 Kg/cm2 as per specification.	RM	309	0.000184
A1845	Supply & packing uniformly 6mm to 3mm size gravel in the bore hole surrounding the perforated PVC pipe.	CUM	52	0.0000826
A1846	Supply & packing uniformly downgraded 40mm size gravel at all depth in the well dug for rain water harvesting.	CUM	52	0.000078

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
A1847	Supply & packing uniformly downgraded 40mm size pebbles at all depth in the well dug for rain water harvesting.	CUM	304	0.0004828
A1848	Supply & laying 300mm thick coarse sand layer at all depth in the well dug for rain water harvesting.	CUM	1186	0.0010987
A1849	Supplying engineering services for Rain water harvesting including preparation of Rain water harvesting scheme, collection of required data, submitting to ground water board and getting approval from NSPCL and Ground water board at start & completion of work etc. complete as per statutory norms. The Engineering firm/person should be approved/accepted by ground water board and shall have similar experience of rain water harvesting for complete power plant. The scope shall include rain water harvesting for entire plant including Coal handling plant inside plant boundary. The scope shall include preparation of rain water calculations, recharge potential, calculations for ground recharge, economical design of rain water harvesting with different options under discussion with BHEL and submit design, drawings, report to Ground water board, obtain approval from Ground water board & NSPCL and on completion of work get the completion approval for rain water harvesting from Ground water board. This includes visits to site with/without ground water board officials and rate of this item shall include all expenses of consultancy, site visits etc. required from start of work till final obtaining of completion approval from ground water board. Payment for execution of ground water recharge scheme shall be paid separately.	L.S.	1	0.0035291
A1850	Supplying special arrangement in form of shuttering/sheet piling etc in view of existing underground CW pipes for nearby foundation/structure.	L.S.	1	0.0004401
A1851	Supplying 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	0.0004401
A1852	Supplying and applying resin bonded granular textured decorative coating, shall consists of adhesive synthetic resins and natural crushed stone chips or pigmented synthetic granules. nominal thickness of 1.2mm of pigmented granular coating at all elevations for various buildings including material, labour, scaffolding, curing etc complete as per drawing and specification.	SQM	1	0.0000013
A1853	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	24	0.0003176
	Misc. Items for cooling Tower			
A1854	Water tightness test for cooling Tower basin	nos.	1	0.0004401
2000	FENCING AND GATES			
	Fencing and gates including all labour, material, 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	380	0.0010058

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
2003	Supplying and erecting in position 2.4 m high 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. Concertina of height of 600 mm at top of chain link fencing shall be provided with all accessories. Concertinal 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	176	0.0001936
2006	Supplying and fixing 600mm high concertina on top of boundary wall including GI tension wires, clips, anchors, accessories etc. all complete. Concertinal 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	2730	0.0004384
2007	Supply and fixing of hot dip galvanised mild steel posts for fencing. Rate of zinc coating shall not be less than 710 g/m2 on steel posts.	MT	15	0.0013584
A2007	Supply and fixing of pre- cast R. C. C. of minimum M20 grade Fence posts as per specification all complete.	CUM	21	0.0001019
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 stiffners, 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	4	0.0003797
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	0.0010442
A2012	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	0.0000972
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	Supplying 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	95	0.000114
2102	Supplying and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	EACH	49	0.0000294
2103	Supplying 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	3	0.0000039
b	50mm nominal bore.	EACH	47	0.0001282

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
2104	Supplying 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:			
a	15 mm nominal bore.	RM	11	0.0000026
b	20 mm nominal bore.	RM	473	0.0001239
c	25 mm nominal bore.	RM	33	0.0000097
2105	Supplying 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	10	0.0000026
b	20 mm nominal bore.	RM	10	0.0000028
c	25 mm nominal bore.	RM	147	0.0000466
d	50 mm nominal bore.	RM	147	0.0000722
2106	Supplying 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	50	0.0000982
2107	Supplying and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete.	EACH	50	0.0000818
2108	Supplying and fixing 25 mm diameter stainless steel towel rails (600mm X 25mm) all complete.	EACH	3	0.0000008
A2108	Supplying and fixing 25 mm diameter stainless steel towel rails (600mm X 20mm) all complete.	EACH	32	0.0000087
2109	Supplying and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete.	EACH	19	0.0000057
2110	Supplying and fixing C.P. soap holder mounted with C.P. screws etc all complete.	EACH	49	0.0000147
2111	Supplying 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	49	0.0000134
2112	Supplying and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. sll complete.	EACH	46	0.0000125
2113	Supplying and fixing chromium plated brass shower rose with 15 or 20 mm inlet all complete.	EACH	16	0.0000061
2114	Supplying & 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	0.0000546
b	2000 litres capacity	EACH	4	0.000096
c	5000 litres capacity	EACH	3	0.0001063
2115	Supplying 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	4	0.0000166
2200	SANITARY WORKS			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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	2	0.000012
b	Colored	EACH	46	0.0002761
2202	Supplying 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	0.0000142
2203	Supplying and fixing stainless steel kitchen sink of size 610x510x200mm conforming to IS: 13983 including all fittings etc. all complete.	EACH	16	0.0000786
2204	Supplying 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	17	0.0000835
b	Wall mounted	EACH	14	0.0000687
2205	Supplying 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	16	0.0000698
2206	Supplying 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	69	0.0004894
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	399	0.0003351
b	110mm dia pipes	RM	630	0.0007515
c	160mm dia pipes	RM	100	0.0001805
d	200mm dia pipes	RM	100	0.0001846
2208	Supplying, 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	526	0.000316
b	300mm dia	RM	17	0.0000183

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
c	450mm dia	RM	17	0.000025
b	600mm dia	RM	17	0.0000418
e	900mm dia	RM	17	0.0000797
f	150mm dia	RM	1	0.0000005
A2208	Supplying, laying non pressure spun CI pipes with collars including jointing, testing of joints etc all complete for following.			
a	200mm dia	RM	1050	0.0013896
b	300mm dia	RM	100	0.000139
c	450mm dia	RM	100	0.0001529
b	600mm dia	RM	50	0.0000841
F	100mm dia	RM	33	0.0000393
2209	Supplying, 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	52	0.0000676
2210	Supplying, 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:			
a	600mm dia	RM	52	0.0001302
2211	Supplying and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete.	EACH	2	0.0000097
2212	Supplying and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	21	0.000195
2213	Supplying 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:			
a	100x100mm P or S Type.	EACH	10	0.0000172
b	150x100mm P or S Type.	EACH	46	0.000086
c	150x150mm P or S Type.	EACH	10	0.00002
2214	Supplying 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:			
a	100x100mm P or S Type.	EACH	10	0.0000131
b	150x100mm P or S Type.	EACH	5	0.0000093
c	150x150mm P or S Type.	EACH	2	0.0000049
2215	Supplying and fixing C.I. floor traps with C.P jalli all complete.	EACH	81	0.0000663

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
2216	Supplying and fixing heavy duty UPVC floor traps with C.P jalli all complete.	EACH	29	0.0000301
2217	Supplying and installing approved brand single tap water cooler of 80 L cooling capacity all complete.	EACH	5	0.0002591
2218	Supplying and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	EACH	16	0.0016585
2219	Supplying and fixing white vitreous urinal partitions of size 675x325x85mm all complete.	EACH	48	0.0001309
2220	Supplying and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS:10592) all complete as per specification.	EACH	5	0.0004092
2300	STRUCTURAL STEEL			
	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.			
2301	Transportation, fabrication and erection of Coal Bunkers (cylindrical shell & conical hopper) and ring beam at site with structural steel of grade E250 conforming to IS:2062, connection design & preparation of fabrication drgs, 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 20° C for welding over 20 mm and upto 40 mm & 66° C for welding over 40 mm and upto 63 mm & 110° 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, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, rectification, blast cleaning of steel surface, application of primer, intermediate, final and final finish coat of paint etc all complete, as per drawing, specification & instructions of engineer in charge. Blast cleaning of steel surface , application of primer and paint including supply shall be paid separately as per Item No.2302A, 2304A, 2304B & 2304C. (STRUCTURAL STEEL WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)	MT	1280	0.0254976

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
A2301	Transportation, fabrication and erection of high strength structural steel (E300) in rolled/built up section conforming to IS:2062, in columns, beams, struts, monorails, stays, safety chains, ladders, gantry girders, roof trusses, portals, laced purlins, space frames, hangers, wall beams, sheeting runners, brackets, stiffeners, stub columns, bracings, cleats, base plates, splice plates,gussets, end plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs,stringers, treads, landings, decking and seal plates, galleries etc including blast cleaning, Supplying & applying primer,Supplying and applying intermediate, final and final finish coat of paint (blast cleaning,primer and paint shall be paid separately as per item no 2302A, 2304A, 2304B & 2304 C), connection design & preparation of fabrication drgs, 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, touch-up painting, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), etc all complete. (STRUCTURAL STEEL WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)	MT	150	0.0027006
B2301	Erection,alignment of pre-fabricated structural steel in any elevation , in any structure as per specification and drawing	MT	7523	0.0683344
A2302	Extra over ST NO. 2301 for blast cleaning of steel structures to near white metal surface(Sa 2 1/2) and applying 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%) where Zinc dust pigment shall conform to ISO 3549 and Zinc dust pigment content shall be determined in accordance with ASTM D 2371having 60 micron minimum Dry Film Thickness (DFT) at shop by Airless spray technique instead of primer coat of red oxide zinc-chromate, including touch-up painting etc all complete as per specification.	MT	1761	0.0047486
A2304	Supplying 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	8003	0.0063054
B2304	Supplying 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	8003	0.0064183
C2304	Supplying 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	8003	0.007421

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
2305	Supplying and applying two coats of epoxy based colour finish paint with minimum 50 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 110 microns including protection and cleaning, scaffolding etc. all complete.	MT	800	0.0023172
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	199	0.0054248
2308	Transportation, fabrication, erection and alignment of factory made chequered plates conforming to IS 3502 with mild steel of grade E250, quality BR, semi killed, conforming to IS:2062 or equivalent grade conforming to ASTM & BS standards only 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. Min. thickness of chequered plate shall be 6 mm excluding projection.	MT	8	0.000176
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	1	0.0000251
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	22	0.0000371
2311	Transporting and fixing in positing 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	257	0.0013354
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	11	0.0000744
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	11	0.0000936
b	In fabrication yard	MT	11	0.000084

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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	11	0.0001242
A2315	Transportation, 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.	MT	157	0.0086361
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	23	0.0000906
d	50 Tons	EACH	4	0.0000284
2318	Supplying 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	159	0.0002343
2319	Transporting, fabrication and fixing of stainless steel pipe hand railing of 32 mm/ 40 mm dia including transportation, loading/ unloading etc. all complete.	MT	7	0.0003475
A2320	Supply, 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	34	0.0026213
2321	Conducting radiography test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	51	0.0001614
2322	Conducting ultasonic test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	51	0.0000584
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	51	0.0000035
2324	Conducting magnetic particle test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	150	0.0001293
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	400	0.0002707
2400	ROAD WORKS			
	Supplying 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)			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
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	31650	0.0025969
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	6562	0.0021653
2403	Supplying, stacking & laying granular morrum for shoulder including watering, compaction with road roller to required camber etc all complete.	CUM	1650	0.0009797
2404	Supplying & 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	13550	0.0214471
2405	Supplying & 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	1050	0.0016619
2406	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	5150	0.008833
2407	Supplying & 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	3650	0.000483
2408	Supplying & applying tack coat of low viscosity liquid bitumen of grade 80/100 confirming to IS 73, 217 or 454 as applicable @ 6 kg/ 10 sqm for bituminous surface including cleaning with compressed air etc all complete.	SQM	1650	0.0001237
2409	Supplying, 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	0.0011875
2410	Supplying, 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	0.0007941
2411	Supplying 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	13000	0.0011814
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	8560	0.0022657

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
BA2412	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	7710	0.0017278
A2414	Supply and laying 200mm dia R.C.C NP-3 type Hume pipe in raised shoulders as rain water drains as per detailed drawing including fixing with cement mortar (1:2) in 13mm thick joints, finishing of joints with neat cement paste etc all complete.	RM	2758	0.0014845
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	5952	0.001838
2416	Supplying 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	0.0004235
	Supplying 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.			
2417	Supplying and laying of plain cement concrete of grade M15 using 40 mm graded stone aggregate including Supplying and fixing formwork, compaction etc. all complete	CUM	50	0.0001214
A2417	Supplying and laying of plain cement concrete of grade M20 using 40 mm graded stone aggregate including Supplying and fixing formwork, compaction etc. all complete	CUM	300	0.000919
2418	Supplying and laying cement concrete of grade M30 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 Supplying & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar)	CUM	50	0.0001676
A2418	Supplying 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 Supplying & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar)	CUM	6300	0.0093436
2419	Supplying & laying dry lean cement concrete of grade M15 with 20 mm nominal size graded stone aggregate over a prepared sub-grade including compaction, finishing, curing etc all complete.	CUM	50	0.000167
A2419	Supplying & 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	2100	0.0066793
	REINFORCEMENT FOR ROAD ETC			
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	75	0.0003744
2421	Straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500 conforming 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 (STEEL WILL BE SUPPLIED BY BHEL FREE OF COST)	MT	311	0.0015527

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
2422	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. (STEEL WILL BE SUPPLIED BY BHEL FREE OF COST)	MT	7	0.0000329
	MISCELLANEOUS			
2423	Supplying & 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.	RM	1750	0.0005635
2424	Supplying 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	20013	0.0045025
2425	Supplying and laying debonding strip/tape of specified thickness before applying sealant including cleaning etc all complete as per specification, drawing and as directed by Engineer.	RM	20	0.0000098
2426	Supplying & laying 75 mm thick precast interlocking concrete pavers of approved colour and pattern as per specification and recommendation of manufacturer.	SQM	31115	0.0150987
A2427	Supplying and laying 20mm thick sand layer below concrete pavers including compaction etc all complete as per specification, drawing and as directed by Engineer.	SQM	31115	0.0004392
A2428	Supplying 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	25000	0.0083596
A2429	Supplying 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	1312	0.0066916
A2430	Supplying, fixing and removing formwork for concrete road pavement complete as per specification and as directed by the engineer-in-charge.	SQM	13597	0.0053982
A2430	Supplying 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	0.0000882
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	0.0004411
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	0.0005294
A2433	Supplying and laying 300mm 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	1000	0.0022939
2600	LEVELING & GRADING			
2601	Cutting of trees having girth 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 within a lead upto 1km etc all complete.			
a	Beyond 30 cm girth upto and including 60 cm girth	EACH	1011	0.0001338
b	Beyond 60 cm girth upto and including 120 cm girth	EACH	11	0.0000016
c	Beyond 120 cm girth upto and including 240 cm girth	EACH	11	0.0000018

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
d	Beyond 240 cm girth	EACH	11	0.0000019
A2601	Bulldozing earth for grading of ground including removable of vegetation complete including disposal of debris upto 5 kms.	CUM	110	0.0000097
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	200640	0.0061957
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	7350	0.0006939
2604	Earth work in excavation upto any depth below ground level 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) for grading including setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, 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	200	0.0000625
2605	Earth work in excavation upto any depth below ground level in hard rock requiring blasting (but excluding controlled blasting) including wedging, line drilling, pre shearing etc as required for grading, setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statutory clearances for blasting, supply, storage & handling of blasting materials, stacking/disposal of surplus excavated material 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	100	0.0000397
2606	Earth work in excavation upto any depth below ground level in hard rock requiring controlled blasting including wedging, line drilling, pre shearing etc as required for grading, setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statutory clearances for blasting, supply, storage & handling of blasting materials, 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	100	0.0000476

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT
2607	Earth work in excavation upto any depth below ground level in hard rock requiring chiselling including wedging, line drilling, pre shearing etc as required for grading, setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, stacking/disposal of surplus excavated material 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	100	0.0000357
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	3670	0.0003011
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	30000	0.0024616
2610	Extra over ST No. 1 to 9 for carriage of unserviceable material/earth for every 1 km or part thereof beyond an initial lead of 1km.	CUM	55000	0.0012131
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	103660	0.0206688
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	6030	0.0023143
2612	Supplying and laying 225mm 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	100	0.0001765
2613	Supplying 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	5020	0.0106297
	TOTAL WEIGHTAGE			1.0000000

**VOLUME-III
PRICE SCHEDULE, REV-01**

JOB: MAIN PLANT CIVIL & STRUCTURAL WORK INCLUDING MISC. BUILDING, ROAD WORK, LEVELLING & GRADING, FIRE FIGHTING, COOLING TOWER (IDCT), AHP, 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	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
400	REINFORCEMENT			
401	Supplying mild steel reinforcements conforming to grade 1 of IS:432 (part 1 or grade IS-2062) as per specifications & drawings.	MT	36	0.0026017
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.			
701	Supply of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. all complete.	MT	303	0.0219962
704	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	57	0.0041379
705	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	0.0001272
b	PVC pipes / conduits of all diameters	Quintal	95	0.001486
c	UPVC pipes / conduits of all diameters	Quintal	10	0.0001564
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	5	0.0000053
ii	Beyond 250 Kg and upto 500 kg	Each	5	0.0000068
iii	Beyond 500 Kg and upto 750 kg	Each	5	0.0000076
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:			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
i	Upto 250 kg	Each	5	0.0000059
ii	Beyond 250 Kg and upto 500 kg	Each	5	0.0000076
iii	Beyond 500 Kg and upto 750 kg	Each	5	0.0000086
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.			
903	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 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 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)	SQM	106	0.0007574
904	Supplying of single or double steel door shutters with 45mm thk flush design shutter comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres 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	430	0.0036411

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
906	Supplying of 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 3mm 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)	SQM	243	0.0012404
907	Supplying of fire proof steel doors (single or double shutter) with panic devices shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers 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	102	0.0019858
908	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)			
a	openable type	SQM	569	0.0023116
b	fixed type	SQM	135	0.0005256
910	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.			
a	3mm	SQM	100	0.0004597
b	4mm	SQM	100	0.0009694
c	5mm	SQM	1000	0.0118778
911	Supplying and fixing of door closers as per IS 3564 ,of approved make & quality all complete of following type :			
a	Over head hydraulic door closures	Each	108	0.0002418
b	Floor mounted Hydraulic door closers	Each	55	0.0002095

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
912	Supplying and 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	5587	0.0009032
A912	Supplying and 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.	Kg	315	0.0000509
913	Supplying 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	49	0.0002233
b	Mechanically Operated	SQM	194	0.0010915
c	Electrically operated	SQM	441	0.0030078
914	Supplying of PVC doors(25 thk double skin) of sintex or equivalent make including all fitting & fixtures as per specification. drawing and instructions of engineer in charge.	SQM	50	0.0001942
A914	Supplying of solid core FRP doors including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	57	0.0002435
915	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			
a	4 mm thick clear sheet glass	SQM	6	0.0000074
b	4 mm thick clear float glass	SQM	1572	0.0022006
e	6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges	SQM	10	0.0000306

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
f	4 mm thick ground glass	SQM	10	0.0000082
g	6 mm thick tinted heat reflecting type float glass	SQM	10	0.000019
h	6 mm thick clear toughened safety glass	SQM	709	0.0016142
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	231	0.0009771
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	10	0.0000432
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	21	0.0000838
l	6 mm thick laminated glass	SQM	10	0.000014
j	6 mm thick clear float glass	SQM	410	0.0004445
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	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 polyster 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.			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
a	Span Upto 1800mm	SQM	6407	0.0108942
b	Span Exceeding 1800mm and upto 2500 mm	SQM	9500	0.0209598
A1504	Designing, Supplying 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	8000	0.0113814
1510	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.	SQM	1110	0.0013723

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
A1511	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.	SQM	4063	0.0061822
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.			
1601	Supplying of 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, Supplying 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 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless).	SQM	110	0.0002239

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
1602	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.	SQM	700	0.0006377
A1602	Supplying of aluminium false ceiling system comprising of 84 mm wide and 12.5 mm deep closed type plain panels of approved colour, roll formed out of 0.5 mm thick corrosion resistant aluminium alloy AA5050 fixed on roll formed carriers, suspended from RCC slab / structural steel or catwalkway steel channel grid above with 4 mm (min) galvanised wires (rods) with special height adjustment clips, including preparation of working drawing, Supplying openings for AC ducts, return air grills, light fixtures etc (but excluding cost of catwalkway grid) all complete as per drawings, specifications, and instructions of the engineer.	SQM	1	0.0000012
1603	Supplying 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	1632	0.0071393

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
1604	Supplying of permanently colour coated aluminium false ceiling of approved colour with stove enamel finish of approved make in LINEAR and SQUARE type with corrosion resistance aluminium alloys panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation (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) grid 1200 c/c maximum shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc.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		
1606	Supplying and Fixing 12mm 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	761	0.0014156
A1607	Supplying of cement bonded particle board false ceiling system consisting of 600X 600X12 mm board with one coat of primer and two coats of acrylic emulsion paint with suspension system consisting of 6mm dia galvanised steel rods suspended from ceiling supporting aluminium grid of 38X 25X 1.5 mm and cross-tie of 25X25X 1.5 mm and aluminium angle of 25x25x1.5 mm suspended from RCC slab / Structural Steel or catwalkway grid above with special height adjustment clips, including preparation of working drawing , Supplying openings for AC ducts, return air grills , light fixtures etc (but excluding cost of cat walkway grid) all complete as per drawings, specifications, and instructions of the engineer.	SQM	1	0.0000014
1700	RAIN WATER DOWN TAKE PIPES			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
	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.			
1701	Supplying of HCl down take pipes of 100 mm dia. with water tight lead joint, fixing clamps etc. all complete.	RM	20	0.0000324
1702	Supplying of galvanised MS down take pipes of 100 mm dia- Medium quality as per IS:1239(part-I) / IS:3589 all complete.	RM	20	0.000028
1703	Supplying of HCl down take pipes of 150mm dia with water tight lead joint etc. all complete.	RM	20	0.0000479
1704	Supplying of galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) all complete.	RM	1305	0.0026856
1705	Supplying of UPVC down take pipes of 110mm diameter- Class 3 as per IS:4985 all complete.	RM	20	0.0000157
1706	Supplying of UPVC down take pipes of 160mm diameter- Class 3 as per IS:4985 all complete.	RM	381	0.0004225
1707	Supplying of GI down take pipes conforming to IS:1239 /IS:3589 of medium duty all complete for following diameters.			
a	100 mm Dia	RM	220	0.0003385
b	150 mm Dia	RM	220	0.0004883
c	200 mm Dia	RM	6	0.0000202
1708	Supplying and fixing HDPE down take pipes conforming to IS:4984 as per specification of following diameters.			
a	110 mm Dia	RM	10	0.0000051
b	160 mm Dia	RM	10	0.0000072
c	200 mm Dia	RM	10	0.0000096
A1709	Supplying of cast iron cement down take pipes conforming to IS:4984 as per specification of following diameters.			
a	110 mm Dia	RM	20	0.0000328
b	160 mm Dia	RM	2020	0.0040418
c	200 mm Dia	RM	20	0.0000481
1800	MISCELLANEOUS WORKS			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
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.				
1804	Supplying of approved 25mm thick vibration damping resilient pads on/around foundation of vibrating equipment and at other locations all complete.	SQM	20	0.00004
1810	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	38	0.0045967
1819	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)	MT	83	0.015791
1820	SS component mentioned under ST No. 1819.	MT	11	0.0042691
1821	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.	MT	67	0.0116334
2300	STRUCTURAL STEEL			
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.				
2301	SUPPLY OF FINISHED PRODUCT OF DIFFERENT STRUCTURE S IN POWER PLANT ITEMS AS PER SPECIFICATION AND AS DIRECTED BY ENGINEER-IN-CHARGE.			

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
a	<p>Total firm price for procurement of required steel, fabrication/manufacture as required based on approved drawing and Supply on FOR site basis all required finished product of bunker structure involving Supply, transportation, Unloading and Receipt of steel materials from vehicles using bidder's own resources like T&P , manpower etc at bidder's facilities /works/factory, outside project premises, stacking, stockkeeping, fabrication, welding, primer coat of steel sections of self curing inorganic Zinc Silicate Primer coat (solid by volume minimum 60%) of minimum 75 micron dry film thickness(DFT) applied over blast cleaned surface to near white metal conforming to Sa21/2 finish of Swedish Standard SIS-05-5900. The primer coat shall be applied in shop immediately after shot blast cleaning using copper slag media by Airless spray technique on structural steel made from mildsteel conforming to IS:2062, pipes conforming to IS:1161/IS:1239, chequered plate conforming to IS:3052 and mild steel rounds, at all elevations involving rolled sections (including mild steel rounds), builtup sections fabricated out of plates, rolled sections and combination of plates and rolled sections, in columns, beams, junction towers, trestles, conveyor galleries, gantry girders, bunkers, silos, hoppers, rooftrusses, portals , lacedpurlins, spaceframes, shearconnectors, hangers, struts, monorails, galleries, stiffeners, wallbeams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, gratings, chequered plate flooring, decking and seal plates, diaphragm, steel frame gridover false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails, toe plates, MS Rungs, insert plates, edge angles-embedments, lugs, posts, cccstays, louvers, lacings, gusset plates, safety chains for walkways adjacent to crane girders etc, Straightening, making cutting plan, cutting, bending, rolling, grinding, drilling, bolting, erection bolts & nuts (weight of erection bolts & nut not payable, Supply of permanent bolt of grade C mild steel bolts & nuts to be paid separately under respective items of BOQ), temporary preassembly (full length column height), edge preparation, preheating (min preheat and interpass temperature of 20 degree C for welding over 20 mm and upto 40 mm & 66 degree C for welding over 40 mm and upto 63mm & 110 degree C for thickness over 63mm & use of low hydrogen / radiogenic electrodes), postheating, testing of welders, inspection of welds, visua linspection, nondestructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing as per erection scheme, Delivering finished products to Rourkela project site, protection against damage in transit, again receipt of finished product, stock at project site as per specification, drawings and instructions of the Engineer and as detailed in the tender for 1 x 250 MW NSPCL Rourkela Project</p>	MT	7523	0.7484499
2307	<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	199	0.0272871

ST. NO	DESCRIPTION OF ITEM	UNIT	TOTAL QUANTITY	WEIGHTAGE FOR AMOUNT OF EACH ITEM (Nearest to the 7 decimal points) W.R.T THE TOTAL AMOUNT.
2308	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.	MT	8	0.0008853
2310	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	22	0.0001867
2311	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	257	0.0067172
A2315	Supplying 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.	MT	157	0.0434403
2317	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	23	0.0004556
d	50 Tons	EACH	4	0.0001428
2319	Supply of stainless steel pipe hand railing of 32 mm/40 mm dia including transportation, loading/unloading etc. all complete..	MT	7	0.0017479
	TOTAL WEIGHTAGE			1.0000000

Bharat Heavy Electricals Limited Power Sector - Eastern Region, Kolkata		
TENDER NO. PSER:SCT:RKL-C1755:16 (TCN-01)		
FORMATS	BANK GUARANTEE FOR SUPPLY FREE ISSUE MATERIAL.	PAGE 1 OF 4

BANK GUARANTEE FOR SUPPLY FREE ISSUE MATERIAL.

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its Unit at Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700091 having awarded to (Name of the Vendor / Contractor / Supplier), having its registered office at _____¹ (hereinafter referred to as the 'Contractor/Supplier/Fabricator' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref. No.....dated² valued at Rs.....(Rupees -----) for <Nature of Work>³ (hereinafter called the 'Contract')

and, the Employer having agreed as per the terms and conditions of the Contract to supply free issue material costing Rs._____ for the manufacture/fabrication of the equipment at the Contractor's site on on furnishing a Bank Guarantee for Rs._____ (Rupees.....)⁴ in the manner hereinafter specified for the due safeguard of the free issue material,

we,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount of Rs ----- (Rupees -----) without any demur, merely on a demand from the Employer, .

Bharat Heavy Electricals Limited		
Power Sector - Eastern Region, Kolkata		
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Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Contractors/Supplier shall have no claim against us for making such payment.

We theBank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor/Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor/Supplier/ Fabricator and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's/Supplier's/ Fabricator's liabilities.

Bharat Heavy Electricals Limited Power Sector - Eastern Region, Kolkata		
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This Guarantee shall remain in force upto and including.....⁵ and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/ Supplier/ Fabricator but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the⁶ (3 months more than the present date of validity of Bank Guarantee) we shall be discharged from all liabilities under this guarantee thereafter.

We, BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁷
- b) This Guarantee shall be valid up to⁸
- c) Unless the Bank is served a written claim or demand on or before⁹ (3 months more than the present date of validity of Bank Guarantee) all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

Any claim or dispute arising under the terms of this document shall only be enforced or settled in the courts of at Kolkata only.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

¹ NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER .

Bharat Heavy Electricals Limited Power Sector - Eastern Region, Kolkata		
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² DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

³ PROJECT/SUPPLY DETAILS

⁴ BG AMOUNT IN FIGURES AND WORDS

⁵ VALIDITY DATE

⁶ DATE OF EXPIRY OF CLAIM PERIOD

⁷ BG AMOUNT IN FIGURES AND WORDS.

⁸ VALIDITY DATE

⁹ DATE OF EXPIRY OF CLAIM PERIOD

Note:

1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.
2. In Case of Bank Guarantees submitted by Foreign Vendors-
 - a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
 - b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)
 - b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
 - b.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
 - b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
 - b.4 The BG should clearly specify that the demand or other document can be presented in electronic form.

Bharat Heavy Electricals Limited Power Sector - Eastern Region, Kolkata		
TENDER NO. PSER:SCT:RKL-C1755:16 (TCN-01)		
FORMATS	BANK GUARANTEE FOR RELEASE OF AMOUNTS WITHHED/LIQUIDATED DAMAGES AMOUNT	PAGE 1 OF 5

BANK GUARANTEE FOR RELEASE OF AMOUNTS WITHHED/LIQUIDATED DAMAGES AMOUNT

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited ¹(hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its Unit at Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700091 having awarded to (Name of the Vendor / Contractor / Supplier) incorporated under thehaving its registered office at _____ ¹(hereinafter referred to as the 'Contractor', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated²valued at Rs.....(Rupees -----) for <Nature of Work>³(hereinafter called the 'Contract')

The Contractor as per Contract should have completed the work/ supplies under the contract by.....(date). As per terms and conditions of the Contract, the Employer is entitled to levy Liquidated Damages (LD) for delays and the Employer has withheld an amount of Rsby way of LD as per the Contract. Now, on the request of the Contractor, the Employer having agreed to release the amount of Rs.....withheld from the Contractor's invoices as Liquidated damages under the terms and conditions of the Contract on production of a Bank Guarantee for Rs._____ (Rupees.....only) ⁴

We,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount of Rs ----- (Rupees -----) without any demur, merely on a demand from the Employer

Bharat Heavy Electricals Limited Power Sector - Eastern Region, Kolkata		
TENDER NO. PSER:SCT:RKL-C1755:16 (TCN-01)		
FORMATS	BANK GUARANTEE FOR RELEASE OF AMOUNTS WITHHED/LIQUIDATED DAMAGES AMOUNT	PAGE 2 OF 5

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the contractors/supplier shall have no claim against us for making such payment.

We thebank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor/Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's/ Supplier's liabilities.

This Guarantee shall remain in force upto and including.....⁵ and shall be extended from time to time for such period as may be desired by Employer.

Bharat Heavy Electricals Limited Power Sector - Eastern Region, Kolkata		
TENDER NO. PSER:SCT:RKL-C1755:16 (TCN-01)		
FORMATS	BANK GUARANTEE FOR RELEASE OF AMOUNTS WITHHED/LIQUIDATED DAMAGES AMOUNT	PAGE 3 OF 5

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the⁶ (3 months more than the present date of validity of Bank Guarantee) we shall be discharged from all liabilities under this guarantee thereafter.

We, BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁷
- b) This Guarantee shall be valid up to⁸
- c) Unless the Bank is served a written claim or demand on or before⁹ (3 months more than the present date of validity of Bank Guarantee) all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

Any claim or dispute arising under the terms of this document shall only be enforced or settled in the courts of at Kolkata only.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

Bharat Heavy Electricals Limited Power Sector - Eastern Region, Kolkata		
TENDER NO. PSER:SCT:RKL-C1755:16 (TCN-01)		
FORMATS	BANK GUARANTEE FOR RELEASE OF AMOUNTS WITHHED/LIQUIDATED DAMAGES AMOUNT	PAGE 4 OF 5

¹ NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

² DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

³ PROJECT/SUPPLY DETAILS

⁴ BG AMOUNT IN FIGURES AND WORDS

⁵ VALIDITY DATE

⁶ DATE OF EXPIRY OF CLAIM PERIOD

⁷ BG AMOUNT IN FIGURES AND WORDS.

⁸ VALIDITY DATE

⁹ DATE OF EXPIRY OF CLAIM PERIOD

Note:

1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.

2. In Case of Bank Guarantees submitted by Foreign Vendors-

a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

b. **From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**

b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

b.2 **In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank** (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.

Bharat Heavy Electricals Limited		
Power Sector - Eastern Region, Kolkata		
TENDER NO. PSER:SCT:RKL-C1755:16 (TCN-01)		
FORMATS	BANK GUARANTEE FOR RELEASE OF AMOUNTS WITHHED/LIQUIDATED DAMAGES AMOUNT	PAGE 5 OF 5

- b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
- b.4** The BG should clearly specify that the demand or other document can be presented in electronic form.

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), AHP, 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	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)