



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 01

Ref: PSER: SCT: SDG-C1455:TCN-01

Date: 19-04-2013

Sub	Tender Change Notice (TCN) - 01.	
Job	Civil, Structural, Architectural, etc of Balance Civil Work of 1x500 MW Unit#4 for 2x500 MW units at Sagardighi STPP, WB.	
Ref	1.0	Tender no PSER:SCT:SDG-C1455:13.
	2.0	BHEL's NIT, vide reference no PSER: SCT: SDG-C1455:3238 Date: 08-04-2013
	3.0	Other References,if any.

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

- 1) Revised Notice Inviting Tender (NIT) attached, superseding earlier NIT.
- 2) Revised BOQ cum price schedule format VOL-III- PRICE SCHEDULE, REV-01 superseding VOL-III PRICE SCHEDULE, REV-00 issued earlier along with NIT.

Bidders are requested to submit their offer as per revised BOQ (Rev-01) only. Offer from bidders in superseded price schedule (Vol-III, REV-00) shall not be considered. Bidders are also requested to submit a declaration in techno-commercial offer that they have submitted their price bid in sealed envelope as per **REVISED price schedule** format (VOL-III- PRICE SCHEDULE, REV-01).

- 3) Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached format only.
- 4) All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

ENGINEER(SCT)

Encl:

- 1.0 Revised Notice Inviting Tender (NIT).
- 2.0 Revised BOQ cum price schedule format (VOL-III- PRICE SCHEDULE, REV-01)
- 3.0 Revised format of 'No deviation certificate'.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

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

फैक्स/Fax : (033) 23211960

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(A Govt. of India Undertaking)

Ref: PSER: SCT: SDG-C1455:3238-(REV-01)

Date: 19-04-2013

NOTICE INVITING TENDER

**NOTE: INTENDING BIDDER TO PARTICIPATE MAY DOWNLOAD FROM WEB SITES
OR
PURCHASE TENDERS FROM THIS OFFICE**

Sealed offers in two part bid system are invited from reputed & experienced bidders meeting PRE QUALIFICATION CRITERIA as mentioned in Annexure-I, for the subject job by the undersigned on the behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender document. Issue of tender to any bidder shall not construe that the bidder is considered to be qualified. Consideration of their offer is subject to CUSTOMER APPROVAL & compliance of loading criteria as per clause no. 9.0 of NIT specified below. Following points relevant to the tender may please be noted and complied with.

1.0 Salient Features of NIT

SL NO	ISSUE	DESCRIPTION
i	TENDER NUMBER	PSER:SCT:SDG-C1455:13.
ii	Broad Scope of job	Civil, Structural, Architectural, etc of Balance Civil Work of 1x500 MW Unit#4 for 2x500 MW units at Sagardighi STPP, WB.
iii	DETAILS OF TENDER DOCUMENT	
a	Volume-IA	General conditions of contract (Supply) Not Applicable.
b	Volume-IB	General conditions of contract (Service) Applicable.
c	Volume-IC	Special conditions of contract (Supply) Not Applicable.
d	Volume-ID	Special conditions of contract (Service) Applicable.
e	Volume-IE	Forms and Procedures etc. Applicable
f	Volume-IF	Technical Conditions of Contract (TCC) Applicable
g	Volume-II	Technical Specification,FQPs & Drawings: (i) Technical Specification (PE-TS-373-600-C004) (ii) FQP-civil work (Erection) (iii) FQP-Structural Steel work (iv) Technical Specification-LPP (v) Coal Tar Specification-LPP (vi) FQP-LPP (QP NO:6922:QPC:02 Rev:01) (vii) Tech Spec-Below Ground Earthing System (PES-509-01 Rev-02) (viii) Earthing Details-Drawing No.PE-DG-266-509-E603-SHEET-2 to 21) (ix) Tech Spec- Clay Fly Ash Bricks (x) Drawing No-PE-DG-373-100-M001-Rev-03 (xi) Drawing No-PE-DG-373-100-M002-Rev-00 (xii) Drawing No-PE-DG-373-100-M003-Rev-03 (xiii) Drawing No-PE-DG-373-100-M004-Rev-03 (xiv) Drawing No-PE-DG-373-100-M005-Rev-03 (xv) Drawing No-PE-DG-373-100-M006-Rev-03 (SHEET 1 &2)

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		(xvi) Drawing No. PE-DG-373-100-M007-Rev-01. (xvii) Drawing No. PE-DG-373-612-C002-Rev-00. (xviii) GI REPORT (Job No. 2498)	
h	Volume-III	Price Schedule (Absolute value)	Applicable
iv	Issue of Tender Documents	1. <u>Sale from BHEL PS ER office:</u> Start : 08-04-2013. Close:29-04-2013. 2. From BHEL website (www.bhel.com & www.jantermanter.com) Tender documents can however be downloaded from website till due date of submission.	1.Applicable 2. Applicable
v	DUE DATE & TIME OF OFFER SUBMISSION	Date :29-04-2013, Time :15-00 Hrs. Place : BHEL office, Salt Lake City,-kolkata	Applicable
vi	OPENING OF TENDER	Date :29-04-2013. 2 hours after the latest due date and time of Offer submission Notes: (1) In case the due date of opening of tender becomes a non-working day, tenders shall be opened on next working day at the same time. (2) Bidder may depute representative to witness the opening of tender.	Applicable
vii	EMD AMOUNT	Rs.2,00,000/-	Applicable
viii	COST OF TENDER	Rs. 10,000/-.	Applicable
ix	LAST DATE FOR SEEKING CLARIFICATION	--	Not Applicable
x	SCHEDULE OF Pre Bid Discussion (PBD)	--	Not Applicable (In case BHEL decides to conduct PBD, date, time & venue of PBD will be intimated suitably thru TCN.)
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	Applicable <i>IEM DETAILS: Shri J. M. Lyngdoh , IAS (Retd.) Plot No. 144-145, Pragati Resort, Proddator Village & P.O., Shankarpally Road, Rangareddy Distt. (AP)- 500 033</i>	Applicable
xii	Latest updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage (www.bhel.com →Tender Notifications →View Corrigendums & www.jantermanter.com →Tender Notice) and not in the newspapers. Bidders to keep themselves updated with all such information.	Shall be intimated to bidder

- 2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly signed & stamped on each page, as part of offer. **Rates/Price including discounts/rebates, if any, mentioned anywhere/ in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.**
- 3.0 Unless specifically stated otherwise, bidder shall remit cost of tender and courier charges if applicable, in the form of Demand Draft drawn in favour of Bharat Heavy Electricals Ltd, payable at Kolkata, issuing the Tender, along with techno-commercial offer. Bidder may also choose to deposit the Tender document cost by cash at the Cash Office as stated above against sl no iv of 1, on any working day; and in such case copy of Cash receipt is to be enclosed with the Techno Commercial offer. Sale of tender Documents shall not take place on National Holidays, holidays declared by Central or State Governments and BHEL PSER,at **KOLKATA**, Sundays and second/ last Saturdays .
- 4.0 Unless specifically stated otherwise, bidder shall have to deposit through Demand Draft/Pay Order in favour of Bharat Heavy Electricals Ltd, payable at Kolkata.For other details and for 'One Time EMD' please refer General Conditions of Contract.
- 5.0 **Procedure for Submission of Tenders:** The Tenderers must submit their Tenders to Officer inviting Tender, as detailed below:
- PART-I consisting of 'PART-I A (Techno Commercial Bid)' & 'PART-I B (EMD/COST of TENDER)' in two separate sealed and superscribed envelopes (ENVELOPE-I & ENVELOPE-II)
 - PART-II (Price Bid) – in sealed and superscribed envelope (ENVELOPE-III)
 - One set of tender documents shall be retained by the bidder for their reference.
- 6.0 The contents for ENVELOPES and the superscription for each sealed cover/Envelope are as given below. **(All pages to be signed and stamped)**

Sl no	Description	Remarks
	Part-I A	
	<u>ENVELOPE – I superscribed as :</u> PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:	
	CONTAINING THE FOLLOWING:-	
i.	Covering letter/Offer forwarding letter of Tenderer.	
ii.	Duly filled-in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above. Note: a. In case of any deviation, the same should be submitted separately for technical & commercial parts, indicating respective clauses of tender against which deviation is taken by bidder. The list of such deviation shall be placed after document under sl no (i) above. It shall be specifically noted that deviation recorded elsewhere shall not be	

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	entertained. b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding. i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL ii). In case of unacceptable deviations, BHEL reserves the right to reject the tender	
iii.	Supporting documents/ annexures/ schedules/ drawing etc as required in line with Pre-Qualification criteria. It shall be specifically noted that all documents as per above shall be indexed properly and credential certificates issued by clients shall distinctly bear the name of organization, contact ph no, FAX no, etc.	
iv.	All Amendments/Correspondences/Corrigenda/Clarifications/Changes/ Errata etc pertinent to this NIT.	
v.	Integrity Pact Agreement (Duly signed by the authorized signatory)	If applicable
vi.	Duly filled-in annexures, formats etc as required under this Tender Specification/NIT	
vii.	Notice inviting Tender (NIT)	
viii.	Volume – I F : Technical Conditions of Contract (TCC)	
ix.	Volume – I D : Special Conditions of Contract (SCC)-Service	
x.	Volume – I B : General Conditions of Contract (GCC) -Service	
xi.	Volume – I E : Forms & Procedures etc.	
xii.	Volume – I I : Technical Specification, FQPs & Drawings	
xiii.	Volume – III- (UNPRICED – without disclosing rates/price, but mentioning only 'QUOTED' or 'UNQUOTED' against each item.	
xiv.	Any other details preferred by bidder with proper indexing.	

	PART-I B	
	ENVELOPE – II superscribed as: PART-I (EMD &/or COST of TENDER) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:	
	CONTAINING THE FOLLOWING:-	
i.	1. Earnest Money Deposit (EMD) in the form as indicated in this Tender <u>OR</u> Documentary evidence for 'One Time EMD' with the Power Sector Region of BHEL floating the Tender 2. Cost of Tender (Demand Draft or copy of Cash Receipt as the case may be)	

	PART-II	
	PRICE BID consisting of the following shall be enclosed	

	<u>ENVELOPE-III</u> superscribed as: PART-II- (PRICE BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:	
	CONTAINING THE FOLLOWING:-	
i	Covering letter/Offer forwarding letter of Tenderer enclosed in Part-I	
ii	Volume III – PRICE BID (Duly Filled in Schedule of Rates – rate/price to be entered in words as well as figures)	

	OUTER COVER	
	<u>ENVELOPE-IV (MAIN ENVELOPE / OUTER ENVELOPE)</u> superscribed as: TECHNO-COMMERCIAL BID, PRICE BID & EMD TENDER NO: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION:	
	CONTAINING THE FOLLOWING:	
i	<ul style="list-style-type: none"> ○ Envelopes I ○ Envelopes II ○ Envelopes III 	

SPECIAL NOTE :

- A) Your offer & documents submitted along with offer shall be signed & stamped in each page by your authorised representative. No overwriting/ correction in tender documents by bidders shall be allowed. However, if correction is unavoidable, the same may be signed by authorized signatory.
- B) All documents/ annexures submitted with the offer shall be properly annexed and placed in respective places of the offer as per enclosure list mentioned in the covering letter. BHEL shall not be responsible for any missing documents.

7.0 No Deviation with respect to tender clauses and no additional clauses/ suggestions/ in Techno-commercial bid/ Price bid shall normally be considered by BHEL. Bidders are requested to positively comply with the same.

8.0 BHEL reserves the right to accept or reject any or all Offers without assigning any reasons thereof. BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).

9.0 Assessment of Capacity of Bidders:

Bidders capacity for executing the job under tender shall be assessed 'LOAD' wise and 'PERFORMANCE' wise as per the following:

- I. **LOAD:** Load takes into consideration **ALL** the contracts of the Bidder under execution with BHEL Regions, irrespective of whether they are similar to the tendered scope or not. The 'Load' is the sum of the unit wise identified packages (refer Table-1) for contracts with BHEL Regions. The cut off month for

reckoning 'Load' shall be the month, two (2) months preceding the month corresponding to the 'latest date of bid submission', in the following manner:

(Note: For example if latest bid submission is in Aug 2011, then the 'load' shall be calculated upto and inclusive of June 2011)

i). Total number of Packages

Total number of Packages in hand = P

Where

- 'P' is the sum of all unit wise identified packages under execution with BHEL Regions as of the cut off month defined above, including packages yet to be commenced, excepting packages which are on HOLD due to reasons not attributable to Bidder.

II. **PERFORMANCE:** Here 'Monthly Performance' of the bidder for all the packages (**under execution/** executed during the 'Period of Assessment' in all the Power Sector Regions of BHEL) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced shall be taken into consideration. The 'Period of Assessment' shall be 6 months preceding the cut off month. The cut off month for reckoning 'Period of Assessment' shall be the month two (2) months preceding the month corresponding to the 'latest date of bid submission', in the following manner:

(Note: For example if 'latest date of bid submission' is in Aug 2011, then the 'performance' shall be assessed for a 6 month period upto and inclusive of June 2011, for all the unit wise identified packages (refer Table I)

i). Calculation of Overall 'Performance Rating' for 'similar Package/Packages' for the tendered scope under execution at Power Sector Regions for the 'Period of Assessment':

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for all the similar Package/packages', divided by the total number of Package months for which evaluation should have been done, as per procedure below:

- $P_1, P_2, P_3, P_4, P_5, \dots, P_N$ etc be the packages (**under execution/** executed during the 'Period of Assessment' in all Regions) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced. Total number of similar packages for all Regions = P_T (i.e $P_T = P_1 + P_2 + P_3 + P_4 + \dots + P_N$)
- Number of Months ' T_1 ' for which 'Monthly Performance Evaluation' as per relevant formats, should have been done in the 'Period of Assessment' for the corresponding similar package P_1 . Similarly T_2 for package P_2 , T_3 for package P_3 , etc for the tendered scope. Now calculate cumulative total months ' T_T ' for total similar Packages ' P_T ' for all Regions (i.e $T_T = T_1 + T_2 + T_3 + T_4 + \dots + T_N$)
- Sum ' S_1 ' of 'Monthly Performance Evaluation' Scores ($S_{1-1}, S_{1-2}, S_{1-3}, S_{1-4}, S_{1-5}, \dots, S_{1-N}$) for similar package P_1 , for the 'period of assessment' ' T_1 ' (i.e $S_1 = S_{1-1} + S_{1-2} + S_{1-3} + S_{1-4} + S_{1-5} + \dots + S_{1-N}$). Similarly S_2 for package P_2 for period T_2 , S_3 for package P_3 for period T_3 , etc for the tendered scope for all Regions. Now calculate cumulative sum ' S_T ' of 'Monthly Performance Evaluation' Scores for total similar Packages ' P_T ' for all Regions (i.e ' S_T ' = $S_1 + S_2 + S_3 + S_4 + S_5 + \dots + S_N$.)
- Overall Performance Rating ' R_{BHEL} ' for the similar Package/Packages (under execution/** executed during the 'Period of Assessment') in all the Power Sector Regions of BHEL):

Aggregate of Performance scores for all similar packages in all the Regions

=

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Aggregate of months for each of the similar package for which performance should have been evaluated in all the Regions

$$= \frac{S_T}{T_T}$$

e) Bidders to note that the risk of non evaluation or non availability of the 'Monthly Performance Evaluation' reports as per relevant formats is to be borne by the Bidder

f) Table showing methodology for calculating 'a', 'b' and 'c' above

SI no	Item Description	Details for all Regions							Total
		(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	
1	Similar Packages for all Regions → (under execution/ executed during period of assessment)	P ₁	P ₂	P ₃	P ₄	P ₅	...	P _N	Total No of similar packages for all Regions = P _T ie Sum (Σ) of columns (iii) to (ix)
2	Number of Months for which 'Monthly Performance Evaluation' as per relevant formats should have been done in the 'period of assessment for corresponding similar Package (as in row 1)	T ₁	T ₂	T ₃	T ₄	T ₅	...	T _N	Sum (Σ) of columns (iii) to (ix) = T _T
3	Monthly performance scores for the corresponding period (as in Row 2)	S _{1-1,} S _{1-2,} S _{1-3,} S _{1-4,} ... S _{1-T1}	S _{2-1,} S _{2-2,} S _{2-3,} S _{2-4,} ... S _{2-T2}	S _{3-1,} S _{3-2,} S _{3-3,} S _{3-4,} ... S _{3-T3}	S _{4-1,} S _{4-2,} S _{4-3,} S _{4-4,} ... S _{4-T4}	S _{5-1,} S _{5-2,} S _{5-3,} S _{5-4,} ... S _{5-T5}	S _{N-1,} S _{N-2,} S _{N-3,} S _{N-4,} ... S _{N-TN}	-----
4	Sum of Monthly Performance scores of the corresponding Package for the corresponding period (as in row-3)	S ₁	S ₂	S ₃	S ₄	S ₅	...	S _N	Sum (Σ) of columns (iii) to (ix) = S _T

ii) Calculation of Overall 'Performance Rating' (R_{BHEL}) in case 'similar Package/Packages' for the tendered scope ARE NOT AVAILABLE, during the 'Period of Assessment':

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for ALL the packages, divided by the total number of Package months for which evaluation should have been done. 'R_{BHEL}' shall be calculated subject to availability of 'performance scores' for at least 6 'package months' in the order of precedence below:

- a) 'Period of Assessment.
- b) 12 months preceding the cut-off month
- c) 24 months preceding the cut-off month
- d) 36 months preceding the cut-off month

In case, R_{BHEL} cannot be calculated as above, then Bidder shall be treated as 'NEW VENDOR'. Further eligibility and qualification of this bidder shall be as per definition of 'NEW VENDOR' described in 'Explanatory Notes'

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iii) Factor "L" assigned based on Overall Performance Rating (R_{BHEL}) at Power Sector Regions,;

Sl no	Overall Performance Rating (R_{BHEL})	Corresponding value of 'L'
1	=60	NA
2	> 60 and \leq 65	0.4
3	> 65 and \leq 70	0.35
4	> 70 and \leq 75	0.25
5	> 75 and < 80	0.2
6	\geq 80	NA

III. 'Assessment of Capacity of Bidder':

'Assessment of Capacity of Bidder' is based on the Maximum number of packages for which a vendor is eligible, considering the performance scores of similar packages, as below:

Max number of packages $P_{Max} = (R_{BHEL} - 60)$ divided by corresponding value of 'L'
i.e. $(R_{BHEL} - 60)/L$

Note:

- i. In case the value of P_{Max} results in a fraction, the value of P_{Max} is to be rounded off to next whole number
- ii. For $R_{BHEL} = 60$, $P_{Max} = '1'$
- iii. For $R_{BHEL} \geq 80$, there will be no upper limit on P_{Max}

The Bidder shall be considered 'Qualified' as per 'Assessment of Capacity of Bidder' for the subject Tender if $P \leq P_{Max}$
(where P is calculated as per clause 9.1)

IV. Explanatory note:

- a) Similar package means Boiler or ESP or Piping or Turbine or Civil or Structure or Electrical or CI, etc at the individual level irrespective of rating of Plant, and irrespective of whether the subject tender is a single package or as part of combined/composite packages. Normally Boiler, ESP, Piping, Turbine, Electrical, CI, Civil, Structure, etc is considered individual level of package. For example in case the tendered scope is a Boiler Vertical Package comprising of Boiler, ESP and Power Cycle Piping (i.e the 'identified packages as per Table-1 below), the 'PERFORMANCE' part against sl no II above, needs to be evaluated considering all the identified packages (ie Boiler, ESP and Power Cycle Piping) and finally the Bidder's capacity to execute the tendered scope is assessed in line with III above
- b) Identified Packages (Unit wise)

Table-1

	Civil	Electrical & CI	Mechanical
	i). Enabling works ii). Pile and Pile Caps iii). Civil Works including foundations iv). Structural Steel Fabrication & Erection v). Chimney vi). Cooling Tower vii). Others (Civil)	i). Electrical ii). CI iii). Others (Elec & CI)	i). Boiler & Aux (All types including CW Piping if applicable) ii). Power Cycle Piping/Critical Piping iii). LP Piping iv). ESP v). Steam Turbine Generator set & Aux vi). Gas Turbine Generator set & Aux vii). Hydro Turbine Generator set & Aux viii). Turbo Blower (including Steam Turbine)

			ix). Material Handling x). Material Management xi). Material Handling & Material Management xii). Others (Mechanical)
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- c) Bidders who have not been evaluated for at least six package months in the last 36 months in the online BHEL system for contractor performance evaluation in BHEL PS Regions, wef July 2010 shall be considered "NEW VENDOR".

A 'NEW VENDOR' shall be considered qualified subject to satisfying all other tender conditions

A 'NEW VENDOR' if awarded a job (of package/packages identified under this clause) shall be tagged as "FIRST TIMER" on the date of first LOI from BHEL.

The "FIRST TIMER" tag shall remain till execution of work for a period of not less than 09 months, from the commencement of work of first package

A Bidder shall not be eligible for the next job as long as the Bidder is tagged as "FIRST TIMER" excepting for the Tenders which have been opened on or before the date of the bidder being tagged as 'FIRST TIMER'.

After removal of 'FIRST TIMER' tag, the Bidder shall be considered 'QUALIFIED' for the future tenders subject to satisfying all other tender conditions including 'Capacity Evaluation of Bidders'.

- d) In the unlikely event of all bidders shortlisted against Technical and Financial Qualification criteria not meeting the criteria on 'Assessment of Capacity of Bidders' detailed above, OR leads to a single tender response on applying the criteria of 'Assessment of Capacity of Bidders' or due to non-approval by Customer, then BHEL at its discretion reserves the right to consider the further processing of the Tender based on the **Overall Performance Rating 'R_{BHEL}'** only, starting from the upper band.

- e) 'Under execution' shall mean works in progress as per the following:

- i. up to Boiler Steam Blowing in case of Steam Generator and Auxiliaries
- ii. upto Synchronisation in case of all other works excepting sl no (i) and (iii)
- iii. Upto execution of at least 90% of anticipated contract value in case of Civil & Structures (unit wise), Enabling works and upto 90% of material unloading (in tonnage) as per the original contract in case of MM Package.

Note : BHEL at its discretion can extend (or reduce in exceptional cases in line with Contract conditions) the period defined against (i), (ii) and (iii) above, depending upon the balance scope of work to be completed.

- f) Performance evaluation in CL 9 above is applicable to Prime bidder and consortium partner (or Technical tie up partner) for their respective scope of work

10.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage

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structure, wage rules, etc before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions.

- 11.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.
- 12.0 BHEL may decide holding of pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.
- 13.0 In the event of any conflict between requirement of any clause of this specification/ documents/drawings/data sheets etc or requirements of different codes/standards specified, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing error/missing pages/ other clerical errors in the tender documents, noticed must be pointed out before pre-bid meeting/submission of offer else BHEL's interpretation shall prevail.
- 14.0 Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
- 15.0 Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer), **if applicable** along with techno-commercial bid. This pact shall be considered as a preliminary qualification for further participation. **The names and other details of Independent External Monitor (IEM) for the subject tender is as given at point (xi) of 1 above.**
- 16.0 The Bidder has to satisfy the Pre Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of satisfying the Pre Qualification Criteria specified in this NIT as per Annexure-I (as applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.
- 17.0 In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorised representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.
- 18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.
- 19.0 BHEL reserves the right to decide the successful bidder on the basis of Reverse Auction process. In such case all qualified bidders will be intimated regarding procedure/ modality for Reverse Auction process prior to Reverse Auction and price will be decided as per the rules for Reverse Auction.
- However, if reverse auction process is unsuccessful as defined in the RA rules/procedures, or for whatsoever reason, then the sealed 'PRICE BIDS' will be opened for deciding the successful bidder. BHEL's decision in this regard will be final and binding on bidder.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

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

फैक्स/Fax : (033) 23211960

फोन/Phone : बॉर्डर/EPABX : 23211798/ 1691

- 21.0 In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR, along with supporting documents.
- 22.0 The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.
- 23.0 Consortium Bidding (or Technical Tie up) shall be allowed only if specified in Pre Qualifying Requirement (PQR) criteria, and in such a case the details to be complied with is enclosed herewith as per Annexure-5 UNLESS SPECIFIED OTHERWISE IN PQR.
- 24.0 The bidder shall submit documents in support of possession of 'Qualifying Requirements' duly self certified and stamped by the authorized signatory, indexed and properly linked in the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.
- 25.0 The bidder may have to produce original document for verification if so decided by BHEL.
- 26.0 The offers of the bidders who are on the banned list as also the offer of the bidders , who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL Website (www.bhel.com).
- 27.0 Annexure-A -Amendment to GCC shall be read in conjunction with GCC-Volume-IB.
- 28.0 Order of Precedence
In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:
- Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL
 - Notice Inviting Tender (NIT)
 - Price Bid-Volume-III
 - Technical Conditions of Contract (TCC)—Volume-IF
 - Technical Specification,FQPs & Drawings- Volume-II
 - Special Conditions of Contract (SCC) —Volume-ID
 - General Conditions of Contract (GCC) —Volume-IB
 - Forms and Procedures —Volume-IE

for BHARAT HEAVY ELECTRICALS LTD

ENGINEER (SCT)

Agency	Contact details	
BHEL, PSER, Kolkata	Address	DJ-9/1, Sector – II, Salt Lake, Kolkata – 700 091
	Phone no	033-23211796 (D)/ 1691. EPABX – 23216130, 34, 35; Extn – 3223/ 3228/ 3229/ 3230/ 3231/3236
	FAX no	033-23211960
	E-mail	ssen@bhelpser.co.in / anupriya@bhelpser.co.in

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Enclosure

01. Annexure-1: Pre Qualifying Criteria - Applicable –attached with NIT-Rev-00-issued earlier.
02. Annexure-2: Revised Format of No deviation Certificate-Attached with TCN-01.
03. Annexure-3: Format for Seeking clarification- attached with NIT-Rev-00-issued earlier.
04. Annexure-4: Check List - attached with NIT-Rev-00-issued earlier.
05. Annexure -5 Conditions for consortium/tie up - attached with NIT-Rev-00-issued earlier.
06. Annexure -A-Amendment to GCC
07. Integrity Pact Agreement format.(Separate) - attached with NIT-Rev-00-issued earlier.
08. Other Tender documents.

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Amendment to GCC

1. Introduction of Clause No 1.15.13 in GCC as below:

Clause No 1.15.13 : Additional security deposit (SD) has to be submitted by the successful bidder with value as follows :

- a) In case the Final Price of the successful bidder is greater than equal to Rs 100 Crores:
The value of additional SD shall be equal to:
 $0.30 \times \{ \text{the difference of (95\% of BHEL's estimate OR 95\% of the party's 'online sealed bid' (in case of RA)/ Paper price bid (in case of conventional paper bid), whichever is higher) and the final offered price of the successful bidder} \}$.
- b) In case the Final Price of the successful bidder is less than Rs 100 Crores:
The value of additional SD shall be equal to:
 $0.30 \times \{ \text{the difference of (90\% of BHEL's estimate OR 90\% of the party's 'online sealed bid' (in case of RA)/ Paper price bid, whichever is higher) and the final offered price of the successful bidder} \}$.

This additional SD shall have the same validity as that of the Security Deposit and shall be revalidated /released in the manner as spelt out for the Security Deposit as per relevant clause of GCC.

The BHEL's estimated value shall be disclosed after RA/Paper Bid opening.

2. Clause no. 2.8.3, 2.8.4 and 2.8.5 of GCC shall be read as below:

Clause no. 2.8.3: The contractor shall comply with all applicable State and Central Laws, Statutory Rules, Regulations, Notifications, etc. such as Payment of Wages Act, Minimum Wages Act, Workmen Compensation Act, Employer's Liability Act, Industrial Disputes Act, Employers Provident Act, Employees State Insurance Scheme, Contract Labour (Regulation and Abolition) Act, 1970, Payment of Bonus & Gratuity Act, Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, The Building and Other Construction Workers' Welfare Cess Act, 1996 and other Acts, Rules, and Regulations for labour/workers as applicable and as may be enacted by the State Government and Central Govt. during the tenure of the Contract and having force or jurisdiction at Site. The Contractor shall also comply with provisions of and give all such notices to the local Governing Body, Police and other relevant Authorities as may be required by the Law.

Clause no. 2.8.4: The Contractor shall obtain independent License under the Contract Labour (Regulations and Abolition) Act, 1970 for engaging contract labour as required from the concerned Authorities based on the certificate (Form- V) issued by the Principal Employer/Customer.

Clause no. 2.8.5: The contractor shall pay and bear all taxes, fees, license charges, Cess, duties, deposits, tolls, royalties, commission or other charges which may be leviable on account of his operations in executing the contract.

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VOLUME-III PRICE SCHEDULE, REV-01	
Civil,Structural,Architectural , etc of Balance Civil Work of 1x500 MW Unit#4 for 2x500 MW units at Sagardighi STPP,WB.	
TENDER NO - PSER:SCT:SDG-C1455:13	
PREAMBLE	
1.0	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender as per NIT together with subsequent changes/ modifications etc thereto as applicable as on date of submission of price offer.
2.0	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions.
3.0	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4.0	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, 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 tender document and this schedule.
5.0	Unless otherwise specified & except for tender on lumpsum basis, for all item rate based tenders, the quantities of the various items mentioned in price schedule are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. The quoted/ accepted rates shall remain firm and valid as long as variation in total value of work executed under this contract including extra items, but excluding any price escalation, remains within +/- 30% (thirty percent) of the contract price given in the LOI/ WO.
6.0	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing 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.
7.0	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.
8.0	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted.
9.0	The tender shall be deemed to have studied the specifications, details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
10.0	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.

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

Civil, Structural, Architectural , etc of Balance Civil Work of 1x500 MW Unit#4 for 2x500 MW units at Sagardighi STPP, WB.

TENDER NO - PSER:SCT:SDG-C1455:13

SCH-1 - TOTAL PRICE

SL NO	DESCRIPTION	AMOUNT (Rs)
1.0	TOTAL PRICE AS PER SCH-2 (SERVICE PART).	
2.0	TOTAL PRICE AS PER SCH-3 (SUPPLY PART).	
3.0	GRAND TOTAL PRICE (SCH-2 & SCH-3 TOGETHER)	

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

Civil,Structural,Architectural , etc of Balance Civil Work of 1x500 MW Unit#4 for 2x500 MW units at Sagardighi STPP,WB.

TENDER NO - PSER:SCT:SDG-C1455:13

SCH-2 - SERVICE PART

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.0	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 for the following)			
1.1	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.			
1.1.1	a	Depth from ground level but not exceeding 2 m.	17661		
1.1.2	b	Depth exceeding 2 m but not exceeding 4 m.	2132		
1.1.3	c	Depth exceeding 4 m but not exceeding 6 m.	3212		
1.3	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.			
1.3.1	a	Depth from ground level but not exceeding 2 m.	257		
1.3.2	b	Depth exceeding 2 m but not exceeding 4 m.	249		
1.3.3	c	Depth exceeding 4 m but not exceeding 6 m.	201		
1.3.4	d	Depth exceeding 6 m but not exceeding 8 m.	161		
1.3.5	e	Depth exceeding 8 m but not exceeding 10 m.	161		
1.3.6	f	Depth exceeding 10 m but not exceeding 15 m.	40		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.4	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 500 m and compacted as specified including re-excavation of stacked earth, watering, ramming/ compaction by manual/ mechanical means, dressing etc all complete for the following.			
1.4.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	527	CUM	
1.4.2	b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII).	6623	CUM	
1.4.3	d	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 part XIV in case of sandy soils.	4054	CUM	
1.5	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.			
1.5.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	2858	CUM	
1.5.2	b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII).	5700	CUM	
1.5.3	d	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 part XIV in case of sandy soils.	3251	CUM	
1.6	109A	Extra over ST NO 101 and 103 to 107 for carriage of excavated earth/selected materials for 500 m to 1KM beyond an initial lead of 500 m.	10075	CUM	
1.7	119B	Extra over ST NO 101 and 103 to 107 for carriage of excavated earth/selected materials from 1KM to 2KM	1606	CUM	
1.8	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.			
1.8.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	779	CUM	
1.8.2	b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII).	2023	CUM	
1.8.3	c	Each layer compacted so as to achieve at least 85% maximum dry density as per IS-2720 (Part-VII).	2	CUM	
1.8.4	d	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 part XIV in case of sandy soils.	1726	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.9	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.	253 CUM		
2.0	200	CONCRETE WORKS (Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating and curing, (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc complete as per drawing, specifications and as per direction of engineer for the following. Unless specified otherwise, cement will be supplied by BHEL free of cost as per tender)			
2.1	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.	241 CUM		
2.2	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.	747 CUM		
2.3	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.	161 CUM		
2.4	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.			
2.4.1	a	M15 grade.	32 CUM		
2.4.2	b	M20 grade.	1325 CUM		
2.5	205	Providing and laying design mix cement concrete conforming to IS:456 & IS:10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/ substructure, grade slab, paving, drains, under floors etc at any level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
2.5.1	a	M25 grade.	10476 CUM		
2.5.2	b	M30 grade.	2850 CUM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
2.6	206	Providing and laying design mix cement concrete conforming to IS:456 & IS:10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at any level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
2.6.1	a	M25 grade.	12443	CUM	
2.6.2	b	M30 grade.	321	CUM	
2.7	207	Providing and laying design mix cement concrete conforming to IS:456 & IS:10262-2009 for reinforced concrete works of grade M30 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 125 mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate in concrete all complete as per specification & drawing.	1044	CUM	
2.8	208	Providing and laying design mix cement concrete as per IS:456 & IS:10262-2009 of grades mentioned below for reinforced concrete works using graded aggregate in top decks of all machine foundations supported on vibration isolation system (excluding supply and installation of vibration system) and top deck of TG foundation at all levels including addition of suitable plastisizers conforming to IS:9103 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, 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%.			
2.8.1	a	M30 grade (with 20 mm nominal size graded stone aggregate).	12	CUM	
2.8.2	b	M35 grade (with 20 mm nominal size graded stone aggregate).	1646	CUM	
2.9	209	Extra over ST NO 205 to 208 for controlling of temperature of fresh concrete to less than 23 degree centigrade using ice, including all related arrangements for providing, storing and mixing of ice with water, cooling of aggregates etc. All complete as per specification, drawing and instruction of engineer.	935	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
2.10	210	Extra over ST NO 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 and as per specification.	201 CUM		
2.11	211	Providing and encasing of structural steel member with concrete using nominal aggregate size of 12.5 mm 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.			
2.11.1	b	M25 grade.	466 CUM		
2.12	212	Screed concrete conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5 mm/ 6 mm nominal size on the roof at any level or thickness, drains etc complete as per following.			
2.12.1	a	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume).	433 CUM		
2.13	213	Providing and laying design mix cement concrete as per IS:456 & IS:10262-2009 for reinforced concrete works using graded aggregate for concrete in precast works like roof slabs /trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/ moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transporting, 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.			
2.13.1	a	M25 grade.	120 CUM		
2.14	214	Providing and laying design mix cement concrete as per IS:456, IS:3370 & IS:10262-2009 for reinforced concrete works using graded aggregate for concrete in water retaining/ conveying structures including addition of suitable plastisizer cum waterproofing cement additives 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.			
2.14.1	a	M25 grade.	2729 CUM		
2.15	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.			
2.15.1	a	Plain cement concrete of all grades.	120 CUM		
2.15.2	b	Reinforced cement concrete of all grades.	161 CUM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
2.16	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 but excluding cutting of reinforcement.	1 CUM		
2.17	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. Measurement shall be on the cross sectional area of reinforcement cut.	120 SQCM		
2.18	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. Core dia - maximum 100 mm, Length/ depth - Maximum 200 mm.	120 NO		
2.19	218A	Cutting of existing concrete/ RCC work (Maximum thickness of concrete is 300 mm) inside existing control room/ existing pump house/ or any existing structures without disturbing routine operation at any level using power tools of (DD2E of HILTI/ BOSCH make) with low noise and dust including cutting reinforcements, removing the rubbish within a lead of 1 km, including making good the broken edges/ surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/ supporting at any level, all complete and as directed by engineer (measurements shall be taken as per cutting surface area).	8 SQM		
2.20	219	Providing and applying curing compound of approved make where ever required as per manufacturer's specification.	32 SQM		
3.0	300	FORM WORKS (Providing, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering complete including pockets etc complete as per drawing, specifications and as per direction of engineer for the following)			
3.1	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.	8429 SQM		
3.2	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.	36469 SQM		
3.3	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.	2007 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
3.4	304	Providing, fixing and removing formwork in block-outs/ pockets and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer.			
3.4.1	a	Upto 150 mm depth.	91 NO		
3.4.2	b	Pockets of depths more than 150 mm and upto 300 mm depth.	201 NO		
3.4.3	c	Pockets of depths more than 300 mm and upto 600 mm depth.	18 NO		
3.4.4	d	Pockets of depths more than 600 mm and upto 1000 mm depth.	26 NO		
3.4.5	e	Pockets of depths more than 1000 mm and upto 1500 mm depth.	5 NO		
4.0	400	REINFORCEMENT			
4.1	401	Receipt at project site, straightening, cutting, bending, placing in position at any level, binding of mild steel reinforcements conforming to grade 1 of IS:432 part 1 in concrete including cost of binding wire, labour, scaffolding, transportation to & from stores etc all complete as per specifications & drawings.	80 MT		
4.2	402	Providing, 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 complete all as per specifications, drawings and as directed by engineer. Reinforcement steel will be supplied by BHEL free of cost as per tender.	1178 MT		
4.3	406	Receipt at project site, providing, straightening cutting, bending, placing in position at any level, binding of mild steel reinforcements in brickwork including cost of reinforcement and binding wire, labour, scaffolding etc complete all as per specifications & drawings.	48 MT		
4.4	407	Providing, straightening, cutting, bending, placing in position at any level, binding in position high yield strength steel reinforcements in brickwork including cost of binding wire, labour, scaffolding etc complete all as per specifications & drawings. Reinforcement steel will be supplied by BHEL free of cost as per tender.	48 MT		
4.5	407A	Straightening of projected reinforcements from concrete column/ foundation/ structures, cleaning and removal of concrete waste, cutting if required, bending, for preparation for next stage of concrete at any level, binding in position of tor steel reinforcements confirming of grade Fe-500 conforming to IS:1786 including cost of binding wire, labour, etc complete all as per specifications, drawings and as directed by engineer (Measurement shall be taken at site as per actual work on joint measurement basis). Excavation, if any, shall be paid separately as per relevant item.	20 MT		
5.0	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)			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
5.1	501A	Providing and laying underbed grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 15 mm including preparation of surface, batching, mixing, leveling etc all complete. Cement will be supplied by BHEL free of cost as per tender.	3071 SQM		
5.2	502A	Providing and laying rigid insulation (extruded polystyrene blocks) as per relevant IS code in suitable panels over roofs followed by a layer of 15 mm thick cement sand plaster 1:4 (1 cement: 4 coarse sand) and providing of expansion joint at intervals and filling with sealant in both directions as per the recommendation of manufacturer. The block shall be strong enough to withstand without deformation the workload and standard loads expected on the roof. Cost shall include making of fillets, cleaning & preparation of surface, expansion joints including filling with sealants (10 mm thick) at suitable intervals etc all complete for following. Cement will be supplied by BHEL free of cost as per tender.			
5.2.1	a	Average 50 mm thickness.	3789 SQM		
5.2.2	b	Average 75 mm thickness.	1975 SQM		
5.3	506	Providing and applying PU based water proofing treatment with one coat of polyurethane or any other equivalent material based primer with an application rate of minimum 6 sqm 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.	6302 SQM		
5.4	508A	Providing and laying pressed precast concrete tiles of 20 mm thickness and size 600x600 mm conforming to IS 13801 with 15 mm thick 1:4 cement mortar over the top most layer of roofing treatment with fine joints including sealing of joints (silicon/ elastomeric sealant) etc all complete. Water proofing paid elsewhere. Cement for mortar will be supplied by BHEL free of cost as per tender.	5499 SQM		
5.5	509	Providing and applying two coats of bitumen grade 85/25 as per IS:702 (@ 1.7 kg/ 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.	1646 SQM		
5.6	512	Anti termite chemical treatment of soil with Chloropyrifos emulsifiable concentrates (1%) conforming to IS:8944 all complete.	739 SQM		
6.0	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. For approved make and vendors reference technical specification section - C)			
6.1	601	Supplying & installation of bitumen impregnated fibre board conforming to IS:1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc all complete.			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
6.1.1	a	12 mm wide joints.	32 SQM		
6.1.2	b	20 mm wide joints.	88 SQM		
6.1.3	c	25 mm wide joints.	5 SQM		
6.1.4	d	50 mm wide joints.	24 SQM		
6.2		Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves.			
6.2.1	a	12 mm x 25 mm.	185 RM		
6.2.2	b	20 mm x 25 mm.	185 RM		
6.2.3	c	25 mm x 25 mm.	96 RM		
6.2.4	d	50 mm x 25 mm.	96 RM		
6.3		Supplying and filling in position hot applied bitumin sealing compound (Grade A) conforming to IS:1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc all complete.			
6.3.1	a	10 mm x 40 mm.	112 RM		
6.3.2	b	12 mm x 25 mm.	144 RM		
6.3.3	c	20 mm x 25 mm.	80 RM		
6.4		Supplying and filling in position hot applied bitumin sealing compound (Grade B) conforming to IS:1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc all complete.			
6.4.1	a	10 mm x 40 mm.	40 RM		
6.4.2	b	12 mm x 25 mm.	32 RM		
6.4.3	c	20 mm x 25 mm.	24 RM		
6.5		Providing and sealing of joints with premium grade silicon sealant (Silpruf of GE silicon or approved equivalent) including cleaning of joints, raking out groove, joint filler tapes, application of primer, curing, scaffolding etc all complete as per manufacturer's recommendation for following size groove.			
6.5.1	a	25 mm x 25 mm.	201 RM		
6.5.2	b	50 mm x 25 mm.	305 RM		
6.6		Providing and fixing PVC water stops in joints conforming to IS:12200 & IS:15058 all complete for the following (Bulb or Kicker type).			
6.6.1	a	150 mm wide and 8 mm thick.	5 RM		
6.6.2	b	230 mm wide and 8 mm thick.	16 RM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
6.6.3	c	150 mm wide and 6 mm thick.	24 RM		
6.6.4	d	230 mm wide and 6 mm thick.	281 RM		
7.0	700	MS EMBEDMENTS (Embedments including all labour, material, equipment, transportation, handling etc at any level as per specification, drawings and as directed by engineer)			
7.1	701A	Transport, fabricating and fixing of mild steel embedments, inserts, angle, channels, plates of dimensions as required etc including welding, bolting, cutting, drilling, scaffolding, setting etc all complete. Structural steel shall be supplied by BHEL free of cost as per tender.	42 MT		
7.2	701B	Supply, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle/ channel/ beam pieces, rungs of various diameters, MS round, flats, plates of dimensions as required etc including welding, bolting, cutting, drilling, scaffolding, setting etc all complete. Contractor to supply all materials	10 MT		
7.3	702	Assembly, welding, 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. Fabricated material will be supplied by BHEL free of cost as per tender.	88 MT		
7.4	704	Receipt at site, 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, IS:364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc including welding, cutting, grinding, threading, drilling etc all complete.	24 MT		
7.5	705	Supplying, 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. Contractor shall supply all materials. Payment terms - a) On receipt of materials at site - 70%; b) On completion of erection & fixing - 30%.			
7.5.1	a	MS pipes of all diameters.	18504 KG		
7.5.2	b	PVC pipes/ conduits of all diameters.	7225 KG		
7.5.3	c	UPVC pipes/ conduits of all diameters.	4817 KG		
7.5.4	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.			
7.5.4.1	i	Upto 250 kg.	56 NO		
7.5.4.2	ii	Beyond 250 kg and upto 500 kg.	56 NO		
7.5.4.3	iii	Beyond 500 kg and upto 750 kg.	12 NO		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
7.5.5	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.			
7.5.5.1	i	Upto 250 kg.	72 NO		
7.5.5.2	ii	Beyond 250 kg and upto 500 kg.	72 NO		
7.5.5.3	iii	Beyond 500 kg and upto 750 kg.	36 NO		
7.5.6	Af	Chemical anchors of HILTI make or equivalent of safe tensile capacity as specified below for concrete work.			
7.5.6.1	i	Upto 250 kg.	112 NO		
7.5.6.2	ii	Beyond 250 kg and upto 500 kg.	72 NO		
7.5.6.3	iii	Beyond 500 kg and upto 750 kg.	56 NO		
7.6	706	Transport from store, placing, locking and releasing of Vibration Isolation Spring (VIS) modules over the foundation at all elevations including providing all assistance under the supervision of the supplier, transportation from BHEL store, necessary staging, platforms, leveling, alignment etc all complete. BHEL will supply VIS modules free of cost as per tender.	95 NO		
8.0	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. For approved make and vendors reference technical specification section - C)			
8.1	801	Providing & grouting with cement slurry mix of approved ratio using pressure pump for water retaining concrete structures as per approved procedure including cost of nipples/ nozzles, cement, admixture, curing, pressure pumps, slurry agitator etc all complete. Cost shall include fixing of nipples at minimum 500 mm centre to centre spacing, cutting of nipples after completing of grouting, making good of the nipple hole with appropriate non-shrink cement paste, water tightness test etc all complete wherever specified in the drawing. Cement will be supplied by BHEL free of cost as per tender.	52 SQM		
8.2	802	Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc with mix 1:1 (1 cement :1 sand) using non shrink admixture etc all complete. Cement will be supplied by BHEL free of cost as per tender.	26 CUM		
8.3	803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc all complete with mix 1:1:2 (1 cement : 1 coarse sand : 2 aggregate of 6 mm down graded stonechip) using non shrink admixture. Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor. Cement will be supplied by BHEL free of cost as per tender.	26 CUM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
8.4	804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc all complete with Conbextra GP-1 or equivalent. Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor.	30 CUM		
8.5	805A	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc all complete with Conbextra GPX-2 or equivalent. Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor.	20 CUM		
9.0	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. For approved make and vendors reference technical specification section - C. Unless otherwise specified, contractor shall supply all materials)			
9.1	901	Providing and fixing wooden frame conforming to IS:4021 made of best quality seasoned CP teakwood free from large or loose knots, cracks or other defects including sand paper smoothing, hold fasts, beading, primer and finish painting/ polishing etc all complete with proper wood joinery, accurately set to required lines or levels and rigidly secured in place. Finish painting/ polishing paid separately.	1 CUM		
9.2	902	Providing and fixing teakwood frame panel door shutter as per IS:1003 with 35 mm x 150 mm vertical rail & 35 mm 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 handles on both sides, approved ISI mark anodised fittings like door stopper, 300 mm long tower bolts, 16 x 300 mm 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.	44 SQM		
9.3	A903	Providing, fitting and fixing solid core factory made wooden flush door shutter as per IS:2202 Part II, 35 mm thick homogenous wood bonded with BWP type phenolformaldehyde synthetic resin, particle board core conforming to IS:3087 Type I, 35 x 12 mm thick teakwood beading all around including preparation of working drawings. Godrej or equivalent make mortice lock with handles on both sides, approved ISI mark anodised fittings like door stopper, 300 mm long tower bolts, 16 x 300 mm long aldrops, 125 mm 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 with commercial faces and teak wood edges. Finish painting paid separately.	72 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
9.4	904	Providing and fixing 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 150 mm 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. Payment terms - a) On receipt of materials at site - 70%; b) On completion of erection & fixing - 30%.	112 SQM		
9.5	905	Providing and fixing single or double steel door shutters with 18 gauge MS sheets shutter presenting a flush surface on the outside and inside stiffened with semitubular edge and central stiffening rail which shall convey the lock including fixtures, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete. Payment terms - a) On receipt of materials at site - 70%; b) On completion of erection & fixing - 30%.	32 SQM		
9.6	907	Providing and fixing fire proof steel doors (single or double shutter) with panic devices shall be 45 mm 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 150 mm 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. Payment terms - a) On receipt of materials at site - 70%; b) On completion of erection & fixing - 30%.	36 SQM		
9.7	908	Providing and fixing 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.			
9.7.1	a	Openable type.	56 SQM		
9.7.2	b	Fixed type.	32 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
9.8	909A	Providing and fixing anodised aluminium work of Jindal, Hindalco or other equivalent approved make for door frames/ shutters, window frames/ shutters, ventilators, partitions, railing, grills etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS:733 and IS:1285, 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-metalllic 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, providing and fixing hinges/ pivots, and making provision for fixing of fitting wherever required including cost of PVC/ neoprene gasket sealing of joints with sealant for water tightness, all complete as per drawing, specification and instructions of engineer. Glazing and panelling shall be paid seperately, weight of aluminium section only shall be measure. Payment terms - a) On receipt of materials at site - 70%; b) On completion of erection & fixing - 30%.	15132 KG		
9.9	910	Providing and fixing of aluminium composite panel (ACP) of following thickness with PVDF or polyester coating for interior partition of approved shade, color etc all complete as per specification.			
9.9.1	b	4 mm.	281 SQM		
9.10	911	Providing and fixing of door closers as per IS:3564, of approved make & quality all complete of following type.			
9.10.1	a	Over head hydraulic door closers.	24 NO		
9.10.2	b	Floor mounted hydraulic door closers.	24 NO		
9.11	912	Providing and fixing pressed steel frames fabricated from 16 gauge MS 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.	2489 KG		
9.12	913	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75 mm 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 3 mm thick galvanised steel plate and securely rivetted with stiffening angles (partly coiled and lath/ full lath). Payment terms - a) On receipt of materials at site - 70%; b) On completion of erection & fixing - 30%.			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
9.12.1	a	Hand operated.	48 SQM		
9.12.2	b	Mechanically operated.	76 SQM		
9.12.3	c	Electrically operated.	72 SQM		
9.13	914	Providing and fixing PVC doors (25 thk double skin) of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer. Payment terms - a) On receipt of materials at site - 70%; b) On completion of erection & fixing - 30%.	96 SQM		
9.14	915	Providing, fixing and fitting 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.			
9.14.1	a	4 mm thick clear sheet glass.	44 SQM		
9.14.2	b	4 mm thick clear float glass.	72 SQM		
9.14.3	c	5.5 mm thick clear float glass.	72 SQM		
9.14.4	d	6 mm thick wired glass.	361 SQM		
9.14.5	e	4mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges.	193 SQM		
9.14.6	f	4 mm thick ground glass.	88 SQM		
9.14.7	g	6 mm thick tinted heat reflecting type float glass.	12 SQM		
9.14.8	h	6 mm thick clear toughened safety glass.	16 SQM		
9.14.9	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).	36 SQM		
9.14.10	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.	5 SQM		
9.14.11	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.	72 SQM		
9.14.12	l	6 mm thick laminated glass.	4 SQM		
9.15	916	Supplying and fixing weather stripping of approved make and quality to doors as per instructions of engineer and specification complete.	68 RM		
9.16	917	Providing and fixing 12 mm thick BWP particle board, decorative veneer (prelaminated) on both sides, as panels in aluminium framed door shutter, fixed with necessary snap-on-beading etc all complete (excluding aluminium works).	68 SQM		
9.17	919	Providing and fixing 1 mm thk MS sheet sliding shutters with frame and diagonal braces of 50x50x6 angle iron, 3 mm MS gusset plates at junction and corners, 25 mm dia pulley, 50x50x6 angle and T-iron guide at the top and bottom respectively including painting etc all complete.	16 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
9.18	920A	Roof skylight structure for atrium with 4 mm thick Compact Polycarbonate sheet 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 including aluminium sections colour anodised fixed over steel section, preparation of detail working drawing for approval before section including painting of steel structure complete etc all complete as per detailed drawing and specification. Structural steel work required for this items shall be paid separately as per ST NO 2301A.	20 SQM		
9.19	921A	Providing and fixing MS grills of approved pattern made out of 25 mm x 6 mm MS flats and 12-20 mm MS square bars on window frames including painting as per specification.	60 KG		
10.0	1000	BRICK WORK (Brickwork masonry including all labour, material, equipment, transportation, handling, scaffolding etc at all levels as per specification, drawings and as directed by engineer. Unless specified otherwise, cement will be supplied by BHEL free of cost as per tender)			
10.1	1001	Providing brick work in cement mortar 1:6 (1 part cement : 6 parts coarse sand) in walls, chambers, trenches, etc in thickness 250 mm or more at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
10.1.1	c	Using burnt clay bricks of class designation 7.5 of nominal dimension.	24 CUM		
10.1.2	d	Using burnt clay bricks of class designation 5.0 of nominal dimension.	24 CUM		
10.1.3	Aa	Using fly ash cement bricks confirming to IS:12894 with crushing strength of 75 kg/ cm2. Cement for manufacturing of bricks within plant premises will be supplied by BHEL free of cost as per tender.	209 CUM		
10.2	1002A	Providing brick work in cement mortar 1:6 (1 part cement : 6 part coarse sand) in walls, chambers, etc in thickness 250 mm or more at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
10.2.1	c	Using burnt clay bricks of class designation 7.5 of nominal dimension.	24 CUM		
10.2.2	d	Using burnt clay bricks of class designation 5.0 of nominal dimension.	24 CUM		
10.2.3	Aa	Using fly ash cement bricks confirming to IS:12894 with crushing strength of 75 kg/ cm2. Cement for manufacturing of bricks within plant premises will be supplied by BHEL free of cost as per tender.	3412 CUM		
10.3	1003A	Providing brick work in cement mortar 1:4 (1 part cement : 4 part coarse sand) in partition walls, chambers, trenches, etc in thickness 125 mm at all heights, places and position above or below plinth/ graded level including providing two nos 6 mm diameter MS bars at every fourth layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification and drawing. MS reinforcement bars shall be provided as per tender. Payment for reinforcement (if provided) shall be provided as per relevant item of price schedule.			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
10.3.1	a	Using fly ash cement bricks confirming to IS:12894 with crushing strength of 75 kg/ cm2. Cement for manufacturing of bricks within plant premises will be supplied by BHEL free of cost as per tender.	546 SQM		
10.3.3	c	Using burnt clay bricks of class designation 7.5 of nominal dimension.	24 SQM		
10.3.4	d	Using burnt clay bricks of class designation 5.0 of nominal dimension.	24 SQM		
10.4	1004A	Providing brick soling including spreading of earth, ramming, watering including 12 mm 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.			
10.4.1	a	Using fly ash cement bricks confirming to IS:12894 with crushing strength of 75 kg/ cm2. Cement for manufacturing of bricks within plant premises will be supplied by BHEL free of cost as per tender.	48 SQM		
10.5	1005	Providing brick soling including spreading of earth, ramming, watering including 25 mm 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.			
10.5.1	a	Using fly ash cement bricks confirming to IS:12894 with crushing strength of 75 kg/ cm2. Cement for manufacturing of bricks within plant premises will be supplied by BHEL free of cost as per tender.	48 SQM		
10.6	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.	28 CUM		
10.7	1007	Providing and encasing of structural steel member with masonry work around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar. Encased member shall be wrapped with chicken wire mesh with 50mm lap etc. complete as per specification. (Chicken wire mesh to paid separately)	96 CUM		
10.8	1008	Providing and laying 75 mm thick bed of dry brick aggregate including of excavation, disposal of surplus earth spreading of earth, ramming, watering etc complete in all respects as directed by the engineer.	361 SQM		
10.9	1009	Making openings in existing brick wall or partition wall including making good the broken edges/ surface with cement mortar etc complete.	72 CUM		
10.10	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.	257 SQM		
10.11	1011	Filling existing brick wall/ partition wall (Maximum thickness shall be 250 mm) 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.	96 SQM		
10.12	1012	Providing and filling brick bats in soak pits all complete.	32 CUM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
11.0	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. Unless specified otherwise, cement will be supplied by BHEL free of cost as per tender)			
11.1	1101	Providing 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 @ 1.7 kg/ sqm shall be applied one before & one after the DPC.	843 SQM		
12.0	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. Unless specified otherwise, cement will be supplied by BHEL free of cost as per tender)			
12.1	1201	Providing 18 mm thick plaster in two layers outside the building/ boundary wall in cement mortar 1:6 on walls, finished to a smooth finish including providing 3 mm x 3 mm size grooves at junctions of two dissimilar materials all complete.	22638 SQM		
12.2	1201A	Providing 18 mm thick plaster in two layers outside the building/ boundary wall in cement mortar 1:4 on walls, finished to a smooth finish including providing 3 mm x 3 mm size grooves at junctions of two dissimilar materials all complete.	1268 SQM		
12.3	1202	Providing 12 mm thick plaster inside the building/ boundary wall in cement mortar 1:6 on walls finished to a smooth finish as per specification all complete.	18126 SQM		
12.4	1203	Providing 12 mm thick plaster in cement mortar 1:6 on walls with rough finish all complete.	2293 SQM		
12.5	1204	Providing 6 mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth all complete.	19893 SQM		
12.6	1205	Providing 12 mm thick plaster in walls, drains/ culverts with a paste of neat cement @ 1 kg/ sqm and rubbed smooth with trowel etc all complete.	289 SQM		
12.7	1206	Providing and making decorative plaster of all types and design on walls, ceilings, arcs, columns with various thickness upto 18 mm including finishing all complete.	578 SQM		
12.8	1207	Forming groove of uniform size from 12 x 12 mm upto 20 x 15 mm in plastered surface as per approved pattern, using wooden battens nailed to the under layer, including removal of wooden battens, repair of the edges of plaster panel and finishing the groove etc complete as per specification, drawing and the instructions of engineer.	101 RM		
12.9	1208	Providing drip course 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.	848 RM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
12.10	1209	Providing and laying encasement to box type steel beams at all levels with lath plaster 50 mm nominal thickness with cement plaster (1:4) over chicken wire mesh including all labour, materials, equipment, handling, transporting, mixing, placing, leveling, curing and cleaning, finishing the exposed surfaces etc including centering and shuttering all complete as per specification, drawing and instructions of engineer. Chicken wire mesh to be paid separately.	417 SQM		
12.11	1210	Ruled pointing in masonry in CM 1:3 (1 cement and 3 fine sand) including raking out joints, curing etc complete.	80 SQM		
13.0	1300	FINISHES TO CONCRETE/ PLASTERED SURFACES (Finishes, painting to concrete, plastered surfaces including all labour, material, equipment, surface preparation, scaffolding etc at any level as per specification, drawings and as directed by engineer. For approved make and vendors reference technical specification section - C)			
13.1	1301	Two or more coats of white wash/ colour wash as per IS:6278 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	120 SQM		
13.2	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.	249 SQM		
13.3	1303	Providing 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.	144 SQM		
13.4	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.	18841 SQM		
13.5	1305	Providing and applying two or more coats of acrylic emulsion paint as per IS:5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	7768 SQM		
13.6	1306	Providing and applying 2 or more coats of acid/ alkali resistant paint of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying bitumen primer conforming to IS:158 complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, complete as per specifications.	289 SQM		
13.7	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.	128 SQM		
13.8	1308	Two or more coats of black anti-corrosive bitumastic painting of approved brand and manufacture to give an even shade complete.	96 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
13.9	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.	273 SQM		
13.10	1310	Providing and applying 3 coats of water proof cement paint of approved make and color on exterior surface at all heights including material, labour, scaffolding, curing etc including primer coat complete as per specification.	2745 SQM		
13.11	1311	Providing and applying resin bonded granular textured finish, for external applications shall consist of crushed stone/ quartz chips of 0.5 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.	177 SQM		
13.12	1312A	Providing and applying 2 mm thick white cement 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.	7827 SQM		
13.13	1313	Providing and applying ready made Epoxy Paint over areas other than steel structure with suitable pigments of approved shade as per specification and direction of engineer. The epoxy paint shall be a two pack material and shall be resistant to water, splash, spillage & acidic environment. The epoxy paint coating shall be of 150 micron thickness over epoxy primer.	570 SQM		
13.14	1314	Providing 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.	144 SQM		
13.15	1315	Providing 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.	120 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
14.0	1400	FLOORING AND SKIRTING (Flooring and skirting at any level including base layer, labour, material, equipments, transportation, handling, curing, polishing etc at any level as per specification, drawings and as directed by engineer. For approved make and vendors reference technical specification section - C. Unless specified otherwise, cement will be supplied by BHEL free of cost as per tender)			
14.1	1401A	Providing and laying 40 mm thick heavy duty IPS flooring with metallic hardener pigmented topping 12 mm thick uniform graded treated iron particles in flooring. Under layer of 28 mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5mm well graded) and top layer of 12 mm 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, glass strips etc all complete for following. Quoted item rate shall be inclusive of providing glass joint strips.	1834 SQM		
14.2	1401B	Providing and laying 40 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12 mm thick uniform graded treated iron particles in flooring. Under layer of 28mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5mm well graded) and top layer of 12 mm 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 providing aluminium joint strips.	5293 SQM		
14.3	1402	Providing and laying 25 mm thick heavy duty cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates) flooring with metallic hardener pigmented topping of 10 mm thick uniform graded treated iron particles in skirting and dado complete as per specification.	5273 SQM		
14.4	1403	Providing and laying precast polished heavy duty cement concrete tiles (Carborundum topping) of size 300 x 300 x 25 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. Maximum mortar thickness shall be 25 mm.			
14.4.1	a	Laid in floors.	32 SQM		
14.4.2	b	Laid in skirting.	7 SQM		
14.5	1404	Providing 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.			
14.5.1	a	60 mm.	1028 SQM		
14.5.2	b	75 mm.	24 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
14.6	1406A	Providing and laying polished Kota stone 20 mm to 25 mm thk in flooring. Under bed shall average 15 mm 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 malle 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.	949 SQM		
14.7	1408A	Providing polished Kota stone 25 mm thk in skirting projecting 6mm from adjacent plaster including cutting brickwall upto the required depth, edging, finishing etc all complete.	36 SQM		
14.8	1410A	Marble stone flooring laid in 40 mm overall thickness with 20-22 mm thick marble slabs (Grade -1) with underbed of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The marble 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.	281 SQM		
14.9	1412A	Providing and laying 18-20 mm thick polished Granite stone of approved color and texture in flooring with brass/ stainless steel strips. Under bed shall average 20 mm 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.	219 SQM		
14.10	1413A	Providing and laying 12 mm thick polished Granite slab (size as per approval) of approved color and texture in dado. The granite stone slabs fixed over prepared base with cement slurry with minimum joints including pigment, curing, grinding, granite polishing etc all complete.	127 SQM		
14.11	1414	Providing and laying polished granite stone 18-20 mm thk in skirting and dado with 6 mm thick projection from adjacent plaster including mortar (1:3), cement slurry, pigments, curing, grinding, moulding, granite polishing etc all complete.	12 SQM		
14.12	1416	Providing and laying vitrified ceramic tiles of polished variety of size 600 x 600 from reputed/ approved manufacturer, complete including underbed of cement mortar 1:3 with neat cement slurry etc all complete for following. Maximum mortar thickness shall be 43 mm.			
14.12.1	a	7 mm thick tiles In flooring.	48 SQM		
14.12.2	b	10 mm thick tiles In flooring.	96 SQM		
14.12.3	c	7 mm thick tiles In skirting and dado upto specific height.	36 SQM		
14.12.4	d	10 mm thick tiles In skirting and dado upto specific height.	24 SQM		
14.13	1417	Providing and laying vitrified ceramic tiles of matt finish of size 600 x 600 mm from reputed/ approved manufacturer including underbed of cement mortar 1:3 with neat cement slurry etc all complete for following. Maximum mortar thickness shall be 43 mm.			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
14.13.1	a	7 mm thick tiles In flooring.	36 SQM		
14.13.2	b	10 mm thick tiles In flooring.	24 SQM		
14.13.3	c	7 mm thick tiles In skirting and dado upto specific height.	24 SQM		
14.13.4	d	10 mm thick tiles In skirting and dado upto specific height.	24 SQM		
14.14	1418	Providing and laying 10 mm thk non-skid fully vitrified tiles of make 'MARBONITE' or 'FERRASTONE of BOSS Profile limited' or equivalent in flooring and skirting over 30 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, complete as per specification laid in pattern of following sizes			
14.4.1	a	400 x 400 mm.	24 SQM		
14.4.2	b	600 x 600 mm.	706 SQM		
14.15	1418A	Providing and laying 10 mm thk non-skid fully vitrified tiles of make 'MARBONITE' or 'FERRASTONE "KAJARIA" equivalent in flooring and skirting over 30 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, complete as per specification laid in pattern of following sizes.			
14.15.1	a	400 x 400 mm.	20 SQM		
14.15.2	b	600 x 600 mm.	903 SQM		
14.16	1419	Providing and laying granite stone slab of 20 mm thickness single piece for wash basin/ sink slab/ fascia of black or approved colour with cutting, making corners, moulding and opening etc all complete.	32 SQM		
14.17	1420	Providing and laying heavy duty dust pressed ceramic tiles of 7mm thick of reputed manufacturer of approved finish shade and colour including underbed of cement mortar 1:3 with neat cement slurry etc all complete. Maximum mortar thickness shall be 43 mm.			
14.17.1	b	600 x 600 mm.	48 SQM		
14.18	1421A	Providing and laying heavy duty dust pressed (grade-5) ceramic tiles (Matt Finish) of size 600 x 600 mm (approved size) and 7 mm thick of reputed/ approved manufacturer (Kajaria, Jhonson, Spartek or equivalent) of approved finish, shade and colour. The tiles shall be scratch resistance of minimum 5 on Mohr's scale and shall have a bending strength of 350 kg/ sqm, with under bed shall average 43 mm thk of 1 cement : 2 sand : 4 stone aggregates by volume and brought to proper level including cement mortar all complete.	241 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
14.19	1422	Providing & fixing acid/ alkali resistant (Chemical resistant) tiles conforming to IS:4457 in flooring/ dado and shall be laid over bitumastic lining of min 12 mm thick (to be laid in layers of 6 mm each). The tiles shall be applied with 6 mm 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.			
14.19.1	a	20 mm thick .	48 SQM		
14.19.2	b	38 mm thick.	48 SQM		
14.20	1423A	Providing & fixing acid/ alkali resistant (Chemical resistant) tiles conforming to IS:4457 in flooring/ dado bedded and jointed with silica based epoxy mortar all complete for following thicknesses. The tiles should be abrasion resistant & durable. Overall thickness shall be 40 mm in flooring.			
14.20.1	a	20 mm thick .	361 SQM		
14.21	1425	Providing and laying polished marble slabs, 600 mm x 600 mm (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.	289 SQM		
14.22	1425A	Providing and laying kota stone, 600 mm x 600 mm (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.	289 SQM		
14.23	1426	Providing and laying marble skirting/ dado (Aranga white or approved shade/ color/ design) equivalent of minimum 20 mm thickness projecting 6 mm from adjacent plaster all complete including underbed cement mortar 1:3, scaffolding etc all complete.	24 SQM		
14.24	1427	Providing and fixing glazed ceramic tiles of approved color and design of size 200 x 300 mm/ 300 x 300 mm in dado of approved size, projecting 6 mm uniformly from adjacent plaster or wall finish. The mix for underbed plaster shall consist of 1 part 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.			
14.24.1	a	5 mm thick.	289 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
14.24.2	b	7 mm thick.	48 SQM		
14.25	1428	Providing and laying 3mm thick antistatic PVC flooring/ skirting of approved shade, as per IS:3462 and laying as per IS:5318 all complete.	72 SQM		
14.26	1429A	Providing and fixing removable type flooring system consisting of fire resistant phenyl formaldehyde bonded particle board of size 600 x 600 x 35 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. Maximum floor height shall be 1000 mm.	72 SQM		
14.27	1430	Providing and fixing dividing strips in joints of cast in situ floorings at various elevations, finishing, all labour, material etc complete as per drawing, specification and instructions of engineer.			
14.27.1	a	Glass strips 40 mm wide and minimum 6 mm thick.	321 RM		
14.27.2	b	Aluminium strips 40 mm wide and minimum 3 mm thick	96 RM		
14.28	A1432	Providing and laying self levelling epoxy flooring consisting of first coat of solvent free resin based dispersion primer @ 200 gm/ sqm, first layer of epoxy floorin @ 4.4 kg/ sqm of 2 mm thickness, second layer of prime r @ 100 gm/ sqm, final decorative epoxy topping @ 3.6 kg/ sqm of approx 2 mm thickness complete as per specification, including all material, labour, etc all complete.	3107 SQM		
15.0	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. For approved make and vendors reference technical specification section - C)			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
15.1	1501A	Receipt, fixing permanently color coated galvanised MS troughed metal sheet decking plate of approved colour and conforming to class 3 of IS:14246 over roof purlins for cast-in-situ roof slab as per relevant IS code and specification. Bare metal thickness of deck plate shall be minimum 0.8 mm with minimum trough depth of 44 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab 100 mm 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 @ 260 mm 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.			
15.1.1	a	Span upto 1800 mm.	7305 SQM		
15.1.2	b	Span exceeding 1800 mm and upto 2500 mm.	1345 SQM		
15.2	1502	Providing and fixing shear connectors of mild steel studs having 16 mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant IS codes and specification.	24 KG		
15.3	1503A	Receipt, erection and fixing profiled External Cladding sheet manufactured out of 0.55 mm TCT (Total coated thickness) of permanently colour coated zincalume steel (150 gm. zinc-aluminium alloy coating total of both sides as per AS:1397:1993) having 300 MPa yield strength. The colour coating shall comprise of 20 microns finish coat over a 5 micron primer coat on the exposed side and a back coat of 5 micron over a primer coat of 5 micron on reverse side. The sheet shall have 500 mm cover width, 47 mm height crests at 250mm centres with special male/ female side laps and anti-siphoning features to prevent leakage. The sheet shall be fixed with the help of concealed compatible interlocking clips and wafer head zinc coated self drilling fasteners/ screws 4.2 x 25 mm long on to the sub-girts. The clips shall be concealed and no fasteners are to penetrate the external sheeting, all complete as per specification.			
15.3.1	a	For final painting with Silicon Modified Polyester (SMP).	6791 SQM		
15.3.2	b	For final painting with Super Polyester XRW (as per AS/NZS-2728:1997 Category3).	3813 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
15.4	1505A	Receipt, fixing profiled internal cladding sheet manufactured out of 0.6 mm TCT (Total coated thickness) of permanently colour coated zincalume steel (150/ 180 gsm zinc-aluminium alloy coating mass total of both sides as per AS:1397:1993). The colour coating shall comprise of 20 microns finish coat over a 5 micron primer coat on the exposed side and a back coat of 5 micron over a primer coat of 5 micron on reverse side. The sheet shall have 980 mm cover width, 28 mm height crests at 195 mm centres with special male/ female side laps and anti-siphoning features to prevent leakage. The sheet shall be fixed to the structure by means of self drilling fasteners no 12-24 x 25 mm conforms to AS:3566 Class-3 long at valley. Sub- girts of size 50 mm x 50 mm x 50 mm manufactured out of 16G GI (1.6mm GI) 'Z' shape would be fixed the inner sheeting on face side at runner locations all complete as per specification.			
15.4.1	a)	For final painting with Silicon Modified Polyester (SMP).			
15.4.1.1	i)	For zincalume sheet 150 gsm and having 550 Mpa yield strength.	2071 SQM		
15.4.1.2	ii)	For zincalume sheet 180 gsm and having 240 Mpa yield strength.	1020 SQM		
15.4.2	b)	For final painting with Super Polyester XRW (as per AS/ NZS-2728:1997 Category3).			
15.4.2.1	i)	For zincalume sheet 150 gsm and having 550 Mpa yield strength.	851 SQM		
15.4.2.2	ii)	For zincalume sheet 180 gsm and having 240 Mpa yield strength.	498 SQM		
15.3	1506	Supply, transportation to site, 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.	3436 SQM		
15.4	1506A	Supply, transportation to site, fixing insulation of polystyrene block of 50 mm nominal thickness for under deck insulation including application of glue and tying with lacing wire as per manufacturer's recommendations.	393 SQM		
15.5	1507	Supply, transportation to site, 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 75 x 75 x 1.6 mm dia to hold in position and application of glue & tying with lacing wire, for glass/ rock wool as per manufacturer's recommendation.	1032 SQM		
15.6	1508	Supply, transportation to site, providing and installing under deck insulation using minimum 0.05 mm thick aluminium foil on exposed surface followed by 0.56 mm dia and 25 mm mesh GI wire netting, fixed at various elevations with rawl plugs including clips but excluding cost of insulation.	385 SQM		
15.7	1509	Supply, transportation to site, providing and fixing non metal opaque PVC sheet similar to ONDEX roofing or equivalent including all fixing accessories.	19 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
16.0	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)			
16.1	1601	Providing and fixing glass fibre reinforced gypsum plaster board (GRG) ceiling (having gypsum core mixed with glass fibre) system consisting of metal supporting grid system forming panels of specified size, suspended from RCC slab/ structural steel or catwalkway grid above with 4 mm (minimum) galvanised wires (rods) with special height adjustment clips, including preparation of working drawing, providing openings for AC ducts, return air grills, light fixtures etc (but excluding the cost of catwalkway grid) all complete as per drawings, specification and instructions of the engineer.			
16.1.1	a	12 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless).	48 SQM		
16.1.2	b	12 mm thick GRG board in profile (dome, curved profiled etc) with galvanised light gauge steel load bearing supporting GI frame and finished smooth (seamless).	48 SQM		
16.2	1604	Transportation from store, fixing and laying 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 0.5 mm including 50 mm 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. AC ducts etc suitable MS 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 free of cost as per tender and shall be paid under ST NO 2301A.	1806 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
16.3	1606A	Receipt, fixing 12.5 mm thick glass fibre reinforced gypsum plastic borad in plan curve or in 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 MS 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. 24 mm wide exposed flange surface shall be permanently color coated.suspension system shall be as per manufaturer's specification supported over movement platform including 25 mm thick resin bonded mineral wool insulation (as per IS:8183) bound in polythene bags on top of ceiling. The work to be complete as per specifications, drawings and direction of engineer. Materials for structural platform grid for movement made up of MS channel/ beams/ angles shall be supplied by BHEL free of cost as per tender and shall be paid under ST NO 2301A.	225 SQM		
17.0	1700	RAIN WATER DOWN TAKE PIPE (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)			
17.1	1707A	Receipt, fixing GI down take pipes conforming to IS:1239/ IS:3589 of heavy duty all complete for following diameters.			
17.1.1	a	100 mm dia.	96 RM		
17.1.2	b	150 mm dia.	2087 RM		
17.1.3	c	200 mm dia.	722 RM		
18.0	1800	MISCELLANEOUS WORKS-1 (Miscellaneous works including all labour, material, equipment etc at any level unless otherwise specified as per specification, drawings and as directed by engineer)			
18.1	1801	Providing and filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 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.	1666 CUM		
18.2	1802	Providing and mixing approved Bipolar Concrete penetrating corrosion inhibiting admixture in concrete as per detail specification of manufacturer etc all complete.	48 KG		
18.3	1803	Anti termite chemical treatment of soil with Chlorpyrifos/ Lindane EC 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.	120 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
18.4	1804	Supply and installation of approved 25 mm thick vibration damping resilient pads on/ around foundation of vibrating equipment and at other locations all complete.	20 SQM		
18.5	1805A	Providing 25 mm thick premix carpet surfacing laid with 12 mm downgraded stone chips mixed with 80/100 grade bitumen @ 52 kg/ cum including compaction etc all complete.	120 SQM		
18.6	1806A	Providing 75 mm thick gravel, coarse sand or other suitable material topping with compacted crushed stone, screenings, fine gravel, clear sand or similar material mixed with hot asphalt (80/ 100 bitumen or its equivalent quality 8 to 10% by volume) and rolled or compacted all complete.	120 SQM		
18.7	1808	Providing and fixing aluminium strips minimum 18 SWG thk and 300 mm wide over expansion joints with minimum lap of 50 mm length including brass/ aluminium screws, rawl plugs etc all complete.	10 KG		
18.8	1809	Providing chemical injection grouting with pressure pump for water retaining concrete structures conforming to IS:6494, including fixing nozzles, cost of approved cement, admixture, curing etc all complete. Payment shall be made as per the consumption of chemical grout.	64 KG		
18.9	1810	Receipt, laying and fixing rails, guide rails, fixtures, bolts etc in concrete for transformer, rail track including cutting of rails, joining of rails, anchoring lugs etc all complete.	40 MT		
18.10	1811	Providing and fixing weep holes in drains consisting of 100 mm dia HDPE pipe sleeves with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq opening covered with 40 mm downgraded aggregates in 300 x 300 mm sq and 300 mm deep size all complete.	161 NO		
18.11	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 as per tender.	24 MT		
18.12	1813	Providing earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc all complete.	5 NO		
18.13	1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, concreting, reinforcement, formwork, providing & fixing GI strips/ pipes, GI wires, covers etc as per drawing & specification including associated earthwork.	2 NO		
18.14	1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/ sqm etc all complete.	120 KG		
18.15	1816	Providing and fixing PVC pressure release valve of minimum dia 90 mm in water retaining structure including 160 mm dia housing pipe of minimum length 3.75 m with perforation as per IS:4558, nylon jali, perforated end plug, collar, graded filter, excavation, fixing in concrete slab/ wall etc all complete.	16 NO		
18.16	1817	Providing and fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc all complete.			
18.16.1	a	Upto 75 mm dia.	40 RM		
18.16.2	b	100 mm dia.	40 RM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
18.16.3	c	150 mm dia.	40 RM		
18.16.4	d	200 mm dia.	40 RM		
18.17	1818	Providing 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.	48 SQM		
18.18	1822	Cutting of groove of 10 mm x 40 mm size with groove cutting machine in concrete paving all complete.	562 RM		
18.19	1823	Fire proofing of steel structures with VERMICULITE cementitious coating including supply of all materials for vermiculite materials, reinforcement mesh (3 mm thick wire, 50 x 50 size mesh), nuts, tie wires, weldings, surface preparation, curing, staging, compatible paintings etc all complete.	2 CUM		
18.20	1824	Supply & fixing expanded metal steel sheet conforming to IS:412. Size of mesh shall be 10 mm x 40 mm with strands of 2.5 mm width and 1 mm thickness to the structural steel for facilitating fireproofing works.	112 SQM		
18.21	1825	Supply and laying approved quality stone aggregate 40 mm size in transformer yards.	24 CUM		
18.22	1826	Supply and laying approved quality rounded pebbles/ gravels of 40 mm size in transformer yards.	5 CUM		
18.23	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 1 km etc all complete.	12 MT		
18.24	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 as per tender and utilisation of machine will be in terms of tank-hour put in actual use for water sprinkling.	60 TANK-HR		
18.25	1832	Providing & 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.	5 CUM		
18.26	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 100 mm .	48 SQM		
19.0	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)			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
19.1	2001A	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 75 mm x 75 mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. GI barbed wire fencing of height of 600 mm confirming to IS:298 at top of chain link fencing shall be provided with 4 strands of barbed wire hot dip galvanised wire of 12G comprising of 3 ply of wires with barbs of 16G spaced at 100mm. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25 x 6 mm GI flat stretcher bar at end posts, accessories etc all complete. Structural post shall be separately paid under item 2007. Payment terms - a) On receipt of chain link fencing at site - 50%; b) On completion of erection & fixing - 50%.	144 RM		
19.2	2003A	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 75 mm x 75 mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 8 gauge. Concertina of height of 600 mm at top of chain link fencing shall be provided with all accessories. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1 m 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, 25 x 6 mm GI flat stretcher bar at end posts etc all complete. Structural post shall be paid separately. Payment terms - a) On receipt of chain link fencing at site - 50%; b) On completion of erection & fixing - 50%.	289 RM		
19.3	2008	Supply, fabrication and fixing of mild steel posts for fencing including painting etc all complete.	2 MT		
19.4	2010	Supply, fabrication and installing in position and testing MS gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffeners, bracings, fabricated hinges, MS aldrops with locking arrangement, tempered steel pivot, guide track of MS tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc all complete as per specification.	2 MT		
20.0	2100	WATER SUPPLY (Water supply work including men, material, equipment etc at any level as per specification, drawings and as directed by engineer)			
20.1	2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks including sockets, union, nuts etc all complete - 15 mm nominal bore.	36 NO		
20.2	2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15 mm nominal bore.	48 NO		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
20.3	2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality including all specials etc all complete for following sizes.			
20.3.1	a	25 mm nominal bore.	40 NO		
20.3.2	b	50 mm nominal bore.	32 NO		
20.4	2104	Providing and fixing GI pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes.			
20.4.1	a	15 mm nominal bore.	562 RM		
20.4.2	b	20 mm nominal bore.	490 RM		
20.4.3	c	25 mm nominal bore.	498 RM		
20.5	2105	Providing and fixing GI pipes class B complete for external work with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete for following sizes.			
20.5.1	a	15 mm nominal bore.	739 RM		
20.5.2	b	20 mm nominal bore.	594 RM		
20.5.3	c	25 mm nominal bore.	546 RM		
20.5.4	d	50 mm nominal bore.	337 RM		
20.6	2106	Providing and fixing 610 mm x 453 mm x 6 mm thk mirror from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws etc all complete.	5 NO		
20.7	2106A	Providing and fixing 450 mm x 750 mm high square edge 6 mm thk float glass mirror from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws etc all complete.	24 NO		
20.8	2107	Providing and fixing 610 mm x 127 mm x 6 mm thk clear glass with CP Guard rails and mounted on CP brackets etc all complete.	5 NO		
20.9	2108	Providing and fixing 25 mm diameter stainless steel towel rails (600 mm x 25 mm) all complete.	36 NO		
20.10	2109	Providing and fixing 20 mm dia chromium plated MS.pipes wall mounted towel rod with CP brackets etc all complete.	5 NO		
20.11	2110	Providing and fixing CP soap holder mounted with CP screws etc all complete.	5 NO		
20.12	2111A	Providing and fixing stainless steel liquid soap dispenser. Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on SS brackets etc all complete.	5 NO		
20.13	2112A	Providing and fixing glazed vitreous wall mounted SSpaper roll holder with suitable cover cum cutter fitted with CP screws etc all complete.	24 NO		
20.14	2113	Providing and fixing chromium plated brass shower rose with 15 or 20 mm inlet all complete.	5 NO		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
20.15	2114	Providing & fixing in position PVC 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.			
20.15.1	a	1000 litres capacity.	6 NO		
20.15.2	b	2000 litres capacity.	10 NO		
20.15.3	c	5000 litres capacity.	2 NO		
20.16	2115	Providing and fixing approved stainless steel sink with integrated drainboard as per IS:13983 of size 915 x 460 x 178mm with CI brackets, stainless steel chain with rubber plug 40 mm, CP brass waste trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc all complete.	5 NO		
20.17	2116A	Providing and fixing minimum 600 mm PORCELAIN TRAY with suitable with CP screws etc all complete.	5 NO		
20.18	2117A	Providing and fixing recessed porcelain soap tray all complete.	5 NO		
20.19	2118A	Providing and fixing ROBE HOOKS with suitable CP screws all complete.	5 NO		
21.0	2200	SANITARY WORKS (Sanitary work including all labour, material, equipment etc at any level as per specification, drawings and as directed by engineer)			
21.1	2201	Supply and fixing glazed vitreous china Wash Basin conforming to IS:2556 part 4 of oval shape with RS or C. brackets painted white, 15 mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32 mm chromium plated brass bottle trap and waste of standard pattern, 32 mm 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.			
21.1.1	a	White.	28 NO		
21.1.2	b	Colored.	12 NO		
21.2	2202	Providing and fixing approved vitreous china laboratory sink of size 600 x 400 x 200 mm conforming to IS:2556 (part-5) with RS or CI brackets, chromium plated brass chain with rubber plug 40 mm, CP brass waste and 40 mm CP brass trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc all complete.	8 NO		
21.3	2203	Providing and fixing stainless steel kitchen sink of size 750 x 510 x 200 mm conforming to IS:13983 including all fittings etc all complete.	2 NO		
21.4	2204	Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, necessary CP connections etc all complete.			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
21.4.1	a	Floor mounted.	28 NO		
21.4.2	b	Wall mounted.	12 NO		
21.5	2205	Providing and fixing colour glazed vitreous indian type Orissa pattern (580 x 440 mm) 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 CP connections etc all complete.	12 NO		
21.6	2206	Providing and fixing white flat back glazed vitreous china urinals of size 440 x 265 x 355 mm with photo voltaic control flushing system as per IS:2556 (part 6, section 1) with flush pipes, lead pipes, gratings, traps and necessary CP fittings etc all complete.	28 NO		
21.7	2208	Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following. Excavation, back filling shall be paid separately as per relevant item. Payment terms - a) On receipt of material at site - 50%; b) On completion of erection & fixing - 50%.			
21.7.1	a	200 mm dia.	642 RM		
21.7.2	b	300 mm dia.	241 RM		
21.7.3	c	450 mm dia.	385 RM		
21.7.4	b	600 mm dia	305 RM		
21.7.5	e	900mm dia	329 RM		
21.8	2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following. Excavation, back filling shall be paid separately as per relevant item. Payment terms - a) On receipt of material at site - 50%; b) On completion of erection & fixing - 50%.			
21.8.1	a	150 mm dia.	40 RM		
21.8.2	b	250 mm dia.	32 RM		
21.8.3	c	300 mm dia.	24 RM		
21.8.4	d	500 mm dia.	24 RM		
21.9	2210	Providing, laying light duty non pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following. Excavation, back filling shall be paid separately as per relevant item. Payment terms - a) On receipt of material at site - 50%; b) On completion of erection & fixing - 50%.			
21.9.1	a	450 mm dia.	32 RM		
21.9.2	b	600 mm dia.	32 RM		
21.9.3	c	900 mm dia.	3 RM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
21.10	2211	Providing and fixing CI manhole heavy duty cover of size 600 mm x 450 mm including frame from reputed manufacture etc all complete.	24 NO		
21.11	2212	Providing and fixing circular heavy duty CI manhole cover of 600 mm dia with frame etc all complete.	24 NO		
21.12	2213	Providing and fixing square mouth SW gully trap grade 'A' complete with CI grating, brick masonry chamber and water tight CI cover with 300 x 300 mm (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. Excavation, back filling shall be paid separately as per relevant item.			
21.12.1	a	100 x 100 mm P or S type.	48 NO		
21.12.2	b	150 x 100 mm P or S type.	16 NO		
21.12.3	c	150 x 150 mm P or S type.	32 NO		
21.13	2215	Providing and fixing CI floor traps with CP jalli all complete.	36 NO		
21.14	2217	Providing and installing approved brand single tap water cooler of 80 ltr cooling capacity all complete.	5 NO		
21.15	2218	Providing and installing approved brand single tap water cooler of 150 ltr cooling capacity all complete.	5 NO		
21.16	2219	Providing and fixing white vitreous urinal partitions of size 675 x 325 x 85 mm all complete.	10 NO		
21.17	2220	Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS:10592) all complete as per specification.	5 NO		
21.18	2221A	Providing and fixing heavy duty cast iron pipes for above and below ground sanitary works with water tight lead joint, fixing clamps, excavation, filling, disposal etc all complete for the following.			
21.18.1	a	75 mm dia pipes .	80 RM		
21.18.2	b	100 mm dia pipes.	112 RM		
21.18.3	c	150 mm dia pipes.	96 RM		
21.18.4	d	200 mm dia pipes.	40 RM		
21.18.5	e	250 mm dia pipes.	24 RM		
22.0	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. Unless specified otherwise, steel will be supplied by BHEL free of cost as per tender)			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
22.1	2301A	<p>Transport from store, fabrication and erection of structural steel with mild steel rolled section/ built up section/ combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS:3052, mild steel rounds, monorails, stays, ladders, etc in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection), connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating (min preheat and interpass temperature of 200 C for welding over 20 mm and upto 40 mm & 660 C for welding over 40 mm and upto 63 mm & 1100 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), return of surplus/ waste steel materials to store etc all complete including appointment of a separate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL for all structural steel items, excluding mill bay and bunker area. Structural steel will be supplied by BHEL free of cost as per tender.</p> <p>Payments terms - a). Fabrication - 65%; b) Erection - 25%; c) Alignment - 10%.</p>	5050 MT		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
22.2	2301B	<p>Transport from store, fabrication and erection of structural steel with mild steel rolled section/ built up section/ combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS:3052, mild steel rounds, monorails, stays, ladders, etc in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection), connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating (min preheat and interpass temperature of 200 C for welding over 20 mm and upto 40 mm & 660 C for welding over 40 mm and upto 63 mm & 1100 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), return of surplus/ waste steel materials to store etc all complete including appointment of a separate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL for structural steel work of mill bay and bunker. Structural steel will be supplied by BHEL free of cost as per tender.</p> <p>Payments terms - a). Fabrication - 65%; b) Erection - 25%; c) Alignment - 10%.</p>	3411 MT		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
22.3	2301D	<p>Transportation from fabrication yard and Erection of already fabricated structural steel members with mild steel rolled section/ built up section/ combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS:3052, mild steel rounds, monorails, stays, ladders, etc in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc,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, 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), return of surplus/ waste steel materials to store etc all complete in consultation with BHEL for all structural steel items, excluding mill bay and bunker area. Fabricated Structural steel members will be handed over by BHEL.</p> <p>Payments terms - a) Erection - 50%; b) Alignment - 50%.</p>	3330 MT		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
22.4	2301E	<p>Transportation from fabrication yard and Erection of already fabricated structural steel member with mild steel rolled section/ built up section/ combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS:3052, mild steel rounds, monorails, stays, ladders, etc in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc,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, 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), return of surplus/ waste steel materials to store etc all complete in consultation with BHEL for all structural steel items for mill bay and bunker area. Fabricated Structural steel members will be supplied by BHEL.</p> <p>Payment terms - a) Erection - 50%; b) Alignment - 50%.</p>	720 MT		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
22.5	2301F	<p>Alignment of already erected structure of mild steel rolled section/ built up section/ combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS:3052, mild steel rounds, monorails, stays, ladders, etc in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc.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, 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), return of surplus/ waste steel materials to store etc all complete in consultation with BHEL for all structural steel items, excluding mill bay and bunker area.</p> <p>Payment terms - a) Erection - 50%; b) Alignment - 50%.</p>	2175 MT		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
22.6	2301G	Complete fabrication of incomplete fabricated structural steel members (either in fit up stage or welding stage or finishing stage) with mild steel rolled section/ built up section/ combination of both conforming to IS:2062, pipes conforming to IS:1161/IS:1239, chequered plate conforming to IS:3052, mild steel rounds, monorails, stays, ladders, etc in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection), connection design & preparation of fabrication drgs shall supplied by BHEL, collection of additional requirement of structural steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, assembly and 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, 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), return of surplus/ waste steel materials to store etc all complete including appointment of a separate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL for all structural steel items of Power House, Mill bay and Bunker area. Structural steel will be supplied by BHEL free of cost as per tender. Payment terms - a) Balance fabrication - 15%; b) Erection - 35%; b) Alignment - 50%.	200 MT		
22.7	2302	Extra over ST NO 2301A/ 2301B/ 2301D/ 2301E/ 2301F/ 2301G for blast cleaning of steel structures to near white metal surface (Sa 2 1/2) and applying epoxy based zinc phosphate primer in coats of minimum 25 micron (DFT) at shop and 25 micron (DFT) after erection, instead of primer coat of red oxide zinc-chromate, including touch-up painting etc all complete.	5 MT		
22.8	2303	Extra over ST NO 2301A/ 2301B/ 2301D/ 2301E/ 2301F/ 2301G for providing and application of two coats of primer consisting of chemical resistant epoxy resin and hardener (Minimum 1 kg of primer mix shall be consumed for priming of 4 to 5 sqmm area of surface) instead of primer coat of red oxide zinc-chromate, including touch up painting etc all complete.	5 MT		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
22.9	2304	Providing and applying two coats of synthetic enamel 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.	5780 MT		
22.10	A2304	Providing and applying two coats of anti corrosive synthetic enamel 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.	6743 MT		
22.11	2305	Providing 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.	5 MT		
22.12	2306	Providing, laying and clamping of crane rails over the crane girder at all elevations as per IS:3443 including all fixtures, clamps, testings etc all complete as per drawing and specification.	24 MT		
22.13	2307	Receipt, 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, packing, grinding, drilling, welding, edge preparation, etc all complete.	48 MT		
22.14	2308	Receipt, erection and alignment of factory made 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.	18 MT		
22.15	2309	Extra over above ST NO 2301A/ 2301B/ 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.	11 MT		
22.16	2310	Receipt, 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 300 mm long for structural steel work etc all complete.	2 MT		
22.17	2311	Receipt, 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.	42 MT		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
22.18	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.	96 MT		
22.19	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.			
22.19.1	a	In erected position.	16 MT		
22.19.2	b	In fabrication yard.	40 MT		
22.20	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.	32 MT		
22.21	A2316	Transportation from store, fabrication and erection of minimum 3.0 mm thick stainless steel liner of grade AISI-304; finish grade 2B (Cold rolled, annealed & pickled and skin passed) on MS plate for inside surfaces of hopper & mouth of hopper 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. Stainless steel plate will be supplied by BHEL free of cost as per tender.	36 MT		
22.22	2317	Providing 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.			
22.22.1	a	20 Tons.	8 NO		
22.22.2	b	25 Tons.	8 NO		
22.22.3	c	40 Tons.	8 NO		
22.22.4	d	50 Tons.	8 NO		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
22.22.5	e	60 Tons.	4 NO		
22.23	2318	Providing and fixing flexible open ended bellow strap of neoprene of minimum thickness 2 mm and minimum width 200 mm with aluminium stripped edges as sealing below top of bunker and bottom of tripper floor to avoid the coal dust nuisance all complete. Payments terms - a) On receipt of materials at site - 65%; b) Erection & fixing - 35%.	161 RM		
22.24	2319	Supply, fabrication and fixing of stainless steel 304 grade pipe hand railing of 32 mm/ 40 mm dia including transportation, loading/unloading etc all complete. Payments terms - a) On receipt of materials at site - 65%; b) Erection & fixing - 35%.	5 MT		
22.25	2320	Supply, fabrication and fixing of GI pipe hand railing (900 mm high) of 32 mm/ 40 mm dia (Medium Grade) including transportation, loading/ unloading, painting etc all complete. Payments terms - a) On receipt of materials at site - 65%; b) Erection & fixing - 35%.	40 MT		
22.26	2321	Conducting radiography test on welds wherever specified including equipments, measuring devices, gauges, test report etc all complete as per instruction of BHEL engineer in writing.	8 RM		
22.27	2322	Conducting ultrasonic test on welds wherever specified including equipments, measuring devices, gauges, test report etc all complete as per instruction of BHEL engineer in writing.	8 RM		
22.28	2323	Conducting ultrasonic test on steel plates as per ASTM-A435 or equivalent wherever specified including equipments, measuring devices, gauges, test report etc all complete as per instruction of BHEL engineer in writing.	8 SQM		
22.29	2324	Conducting magnetic particle test on welds wherever specified including equipments, measuring devices, gauges, test report etc all complete as per instruction of BHEL engineer in writing.	8 RM		
22.30	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 as per instruction of BHEL engineer in writing.	8 RM		
22.31	2326	Supply, fixing lightning arrester and air terminal over roof of power house building, pump house and other structures including all materials, labour, electrodes etc complete (all materials to be supplied by the contractor).	16 NO		
23.0	2400	ROAD WORKS (Providing road work including necessary material, labour, machinery, transportation etc as per specification, drawing, relevant IRC & IS codes and as directed by the engineer for the following)			
23.1	2401	Preparation of sub grade by excavating earth to required depth for all types of soil/ rock, 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.	2444 CUM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
23.2	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 97% maximum dry density as per IS:2720 (Part-VII) including royalty/ seigniorage fee (if any), sorting, spreading, breaking clods, watering, ramming/ compaction by manual/ mechanical means, dressing, finishing to required lines, grades and slopes, tising etc all complete.	515 CUM		
23.3	2403	Providing, stacking & laying granular morrum for shoulder including watering, compaction with road roller to required camber etc all complete.	162 CUM		
23.4	2404	Providing & laying water bound macadam sub base course in layers of required thickness with crushed stone aggregates 90 to 40 mm down size, stone screening & blinding material including screening, sorting, spreading to template & consolidation with road roller including carriage, spreading & consolidation of blinding material moorum etc all complete.	809 CUM		
23.5	2405	Providing & laying water bound macadam base course in layers of required thickness with stone aggregate 63 mm to 40 mm 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.	607 CUM		
23.6	2406	Providing & laying water bound macadam base course with stone aggregate 50 mm to 20 mm 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.	163 CUM		
23.7	2407	Providing & applying tack coat of low viscosity liquid bitumen of grade 80/ 100 conforming 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.	4372 SQM		
23.8	2408	Providing & applying tack coat of low viscosity liquid bitumen of grade 80/ 100 conforming to IS:73, 217 or 454 as applicable @ 6 kg/ 10 sqm for bituminous surface including cleaning with compressed air etc all complete.	1195 SQM		
23.9	2409	Providing, mixing & laying of bituminous macadam course of specified thickness using bitumen of grade 60/ 70 conforming to IS:73, aggregates and binder material including hot mixing, hot laying, rolling etc all complete for the following.			
23.9.1	a	75 mm compacted thickness.	2405 SQM		
23.10	2410	Providing, mixing & laying 20 mm compacted open graded 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.	5395 SQM		
23.11	2411	Providing and applying liquid seal coat comprising of an application of a layer of bituminous binder using medium setting grade bitumen at the rate of 9.8 kg/ 10 sqm followed by a cover of stone chips at the rate of 0.09 cum/ 10 sqm including rolling etc all complete.	2697 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
23.12	2412	Supplying and laying 400 mm x 150 mm x 350 mm deep precast concrete kerb stone of grade M20 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.	815 RM		
23.13	2414	Supply and laying 150 mm dia RCC NP-2 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. Excavation & backfilling shall be paid separately as per relevant item.	195 RM		
23.14	2415	Dismantling of existing road consisting of premix carpet, kerb stone/ brick on edge, bitumen macadam course, WBM, preparing subgrade to receive new WBM including camber consolidation including disposal of debris within a lead of 1 km etc all complete.	702 SQM		
23.15	2416	Providing 25 mm 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.	717 SQM		
23.16	2417	Transportation of coal boulder of various sizes (400-900 mm), making the boulders into smaller sizes (200 mm & below), laying the boulders for making the sub-base of road, transportation & laying of coal mill rejects spreading to fill the voids after laying boulders, rolling and making the surface smooth prepared for laying of WBM, etc as per instruction of engineer, all complete. Area for picking of coal boulders & mill rejects shall be identified by BHEL within plant premises.	11921 CUM		
23.17	2418	Providing & laying of stone dust to fill the voids after laying boulders/ stone, rolling and making the surface smooth for laying of WBM etc as per instruction of engineer, all complete.	8028 CUM		
23.18	2418A	Supplying and filling sand for preparation of read sub-base/ sub-grade 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.	4817 CUM		
24.0	M	MISCELLANEOUS WORKS-2 (Miscellaneous works including all labour, material, equipment etc at any level unless otherwise specified as per specification, drawings and as directed by engineer)			
24.1	M1	Pumping out water by de-watering pump from CW pit, feed pool, cooling tower basin, water logged areas etc as an when required to facilitate erection & commissioning including provision of delivery pipe upto 150 m etc all complete as per site condition and instruction of engineer.	602 HP-HR		
24.2	M2	Engagement of manpower for cleaning and house keeping with all equipments, T&P etc from various floor of power house and other buildings, boiler, ESP, mill area and stacking at designated place at 0.0 M with a lead of 100 m.	2007 MAN-DAY		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
24.3	M3	Removal and disposal of scrap steel, scrap wood, broken packing crates, cable scrap, debris and other waste materials etc from project site to a designated place within 5 km range, with all manpower T&P etc including loading and unloading as directed by BHEL engineer.			
24.3.1	a	Steel.	60 MT		
24.3.2	b	Wood/ cable scrap.	261 CUM		
24.3.3	c	Debris & other waste materials.	401 CUM		
24.4	M4	Supply, fabrication and Installation of GSS Zinc cCoating 180 gms/m2 ducting of ducting for AC system in power house building area. All materials shall be supplied by contractor after obtaining prior approval.			
24.4.1	i	18G.	201 SQM		
24.4.2	ii	20G.	321 SQM		
24.4.3	iii	22G.	602 SQM		
24.4.4	iv	24G.	1204 SQM		
24.5	M5	Supply and installation of 50 mm thick glass wool with Al faced foil thermal insulation of supply air duct & return air duct with finish.	2408 SQM		
24.6	M6	Supply and installation of 25 mm thick resin bonded fibre glass for acoustic insulation with finish.	120 SQM		
24.7	M7	Supply and installation of MS Angle, Rods etc as specified for duct support	8 MT		
24.8	M8	Carrying out low strain pile integrity test on 600 mm dia pile including all arrangement for test equipment/ accessories, materials, labour, submission of test report etc but excluding the cost of installation of job pile all complete as per specification and as directed by the engineer.	100 NO		
24.9	M9	Earth work in stripping of top soil upto a minimum depth of 0.30 m 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.	10000 SQM		
24.10	M10	Earth work in excavation upto any depth below ground level in all types of soil including ash which can be excavated by any means for grading including setting out, levelling, dewatering (wherever required), shoring & strutting (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.	500 CUM		
24.11	M11	Pile dismantling below Cut Off Level	100 CUM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
25.0	LPP	LP PIPING (Miscellaneous works including all labour, material, equipment etc at any level unless otherwise specified as per specification, drawings and as directed by engineer)			
25.1	LPP1	Receipt & handling from storage, erection, welding, non-destructive testing, inspection, internal cleaning & painting (as per scope), final painting, testing & commissioning of circulation water piping system (CW (NB 3300)/ ACW (NB 700-800)) Carbon Steel (IS:2062) piping and associated material (including fittings, hardwares, instruments and valves etc) as applicable as per tender and drawings etc complete. Payment terms - (a) Erection - 30%; (b) Alignment - 5%; (c) Welding - 38%; (d) NDT/ hydraulic test/ any other test to confirm the integrity of welds (as per FQP) - 10% (e) Wrapping/ coating/ painting completion - 10%, (f) Charging of line - 5% and (g) As-built drawing submission - 2%.	482 MT		
25.2	LPP2	Receipt & handling from storage, fabrication, erection, welding, inspection, fixing/ embedding, painting etc of hangers, supports & structures, misc supporting material etc all complete. Payment terms - (a) Erection - 60%; (b) Welding - 35%; (c) Painting completion - 3% and (d) As-built drawing submission - 2%.	16 MT		
25.3	LPP3	Receipt & handling from storage, erection, welding, inspection, fixing/ embedding, etc of RE joints, expansion bellows, annubars & flow elements all complete.	5 MT		
25.4	LPP4	Payment terms - (a) Erection - 60%; (b) Welding - 38% and (c) As-built drawing submission - 2%. Fabrication of mitre bends, reducer, tees of various sizes for various carbon steel piping system etc from straight pipes. Straight pipes will be supplied by BHEL free of cost (Receipt & handling of the pipes are included). Payment terms - (a) Fabrication - 80%; (b) Erection - 15% and (c) Charging of the line where these items are used - 5%.	8 MT		
25.5	LPP5	Supply, application of wrapping/ coating materials of burried pipe as per the specification below - One coat of coal tar primer of approved quality followed by a final coating of epoxy resin & coal tar blend and then two layers, each 2 mm thick of coal tar tape as outer wrap shall be applied to the external surface of the coating. FRG reinforced plastic or coal tar wrap shall be used conforming to AWWA-C-203/IS:10221 or approved relevant codes/ standards. Contractor shall submit detailed protection procedure for approval. The pipes that will be buried underground shall be spark tested after completion of wrapping of each sections/ field jointing to check the quality of insulation that has been provided on the pipe (Quantity indicated is surface area of buried pipe in sqm). Payment terms - (a) Receipt of material at site - 50% and (ii) Application & completion - 50%.	3211 SQM		
26.0	TOTAL				
27.0	3300	NON-SCHEDULE ITEMS (For items not covered above schedule, quote % below/ above or at par of DSR-2007, Reprint 2010)			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
27.1	a	Rate of complete item.	___	% below/ above or at par	
27.2	b	Rate of supply of materials at site only.	___	% below/ above or at par	
27.3	c	Rate for execution complete excluding supply of materials.	___	% below/ above or at par	

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

Civil,Structural,Architectural , etc of Balance Civil Work of 1x500 MW Unit#4 for 2x500 MW units at Sagardighi STPP,WB.

TENDER NO - PSER:SCT:SDG-C1455:13

SCH-3 - SUPPLY PART

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.0	400	REINFORCEMENT			
1.1	401 & 406	Supplying, transportation to site, etc of mild steel reinforcements conforming to grade 1 of IS:432 Part 1 in concrete & brickwork as per specifications & drawings. Materials shall be supplied by contractor from RINL/ SAIL/ TISCO or BHEL/ customer approved manufacturer.	160	MT	
2.0	700	MS EMBEDMENTS			
2.1	704	Supply, transportation to site etc mild steel foundation bolt assembly conforming to IS:2062 and Grade 1 of IS:432 in concrete all complete.	30	MT	
3.0	1500	ROOFING/ SIDE CLADDING			
3.1	1501A	Designing, supply, transportation to site etc permanently color coated galvanised MS troughed metal sheet decking plate of approved colour and conforming to Class 3 of IS:14246 over roof purlins for cast-in-situ roof slab as per relevant IS code and specification. Bare metal thickness of deck plate shall be minimum 0.8mm with minimum trough depth of 44 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab 100 mm 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 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 @ 260 mm 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.			
3.1.1	a	Span upto 1800 mm.	9100	SQM	
3.1.2	b	Span exceeding 1800 mm and upto 2500 mm.	1676	SQM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
3.2	1503A	Designing, supply, transportation to site profiled external cladding sheet manufactured out of 0.55 mm TCT (Total coated thickness) of permanently colour coated zinc alumne steel (150 gsm zinc-aluminium alloy coating total of both sides as per AS:1397:1993) having 300 MPa yield strength. The colour coating shall comprise of 20 microns finish coat over a 5 micron primer coat on the exposed side and a back coat of 5 micron over a primer coat of 5 micron on reverse side. The sheet shall have 500 mm cover width, 47 mm height crests at 250 mm centres with special male/ female side laps and anti-siphoning features to prevent leakage.			
3.2.1	a)	For final painting with Silicon Modified Polyester (SMP).	8460 SQM		
3.2.2	b)	For final painting with Super Polyester XRW (as per AS/NZS-2728:1997 Category3).	4750 SQM		
3.3	1505A	Designing, supply, transportation to site profiled Internal Cladding sheet manufactured out of 0.6 mm TCT (Total coated thickness) of permanently colour coated zincalumne steel (150/ 180 gsm zinc-aluminium alloy coating mass total of both sides as per AS:1397:1993). The colour coating shall comprise of 20 microns finish coat over a 5 micron primer coat on the exposed side and a back coat of 5 micron over a primer coat of 5 micron on reverse side. The sheet shall have 980 mm cover width, 28 mm height crests at 195 mm centres with special male/ female side laps and anti-siphoning features to prevent leakage. The sheet shall be fixed to the structure by means of self drilling fasteners no 12-24 x 25 mm conforms to AS:3566 Class-3 long at valley. Sub- girts of size 50 mm x 50 mm x 50 mm manufactured out of 16G GI (1.6 mm GI) 'Z' shape would be fixed the inner sheeting on face side at runner locations all complete as per specification.			
3.3.1	a)	For final painting with Silicon Modified Polyester (SMP).			
3.3.1.1	i)	For zincalumne sheet 150 gsm and having 550 Mpa yield strength.	2580 SQM		
3.3.1.2	ii)	For zincalumne sheet 180 gsm and having 240 Mpa yield strength.	1270 SQM		
3.3.2	b)	For final painting with Super Polyester XRW (as per AS/ NZS-2728:1997 Category3).			
3.3.2.1	i)	For zincalumne sheet 150 gsm and having 550 Mpa yield strength.	1060 SQM		
3.3.2.2	ii)	For zincalumne sheet 180 gsm and having 240 Mpa yield strength.	620 SQM		
4.0	1600	FALSE CEILING			
4.1	1604	Supply, transportation to site 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 0.5 mm including 50 mm 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. AC ducts etc suitable MS channel (minimum MC75) 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.	2250 SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
4.2	1606A	Supply, transportation to site 12.5 mm thick glass fibre reinforced gypsum plastic borad in plan curve or in 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 MS 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 including 25 mm thick resin bonded mineral wool insulation (as per IS:8183) bound in polythene bags on top of ceiling.	280 SQM		
5.0	1700	RAIN WATER DOWN TAKE PIPES			
5.1	1707A	Supply, transportation to site GI down take pipes conforming to IS:1239/ IS:3589 of heavy duty all complete for following diameters.			
5.1.1	a	100 mm dia.	120 RM		
5.1.2	b	150 mm dia.	2600 RM		
5.1.3	c	200 mm dia.	900 RM		
6.0	1800	MISCELLANEOUS WORKS			
6.1	1810	Supplying, transportation to site rails, guide rails, fixtures, bolts, etc for transformer, rail track all complete.	50 MT		
7.0	2300	STRUCTURAL STEEL			
7.1	2307	Supply, fabrication, transportation to site 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.	60 MT		
7.2	2308	Supply, fabrication, transportation to site factory made 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.	22 MT		
7.3	2310	Supply, fabrication, transportation to site 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 300 mm long for structural steel work etc all complete.	2 MT		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
7.4	2311	Supply, fabrication, transportation to site 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.	43		
TOTAL					

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	Civil, Structural, Architectural, etc of Balance Civil Work of 1x500 MW Unit#4 for 2x500 MW units at Sagardighi STPP, WB.	
Ref	1.0	Tender no PSER:SCT:SDG-C1455:13.
	2.0	BHEL's NIT, vide reference no PSER:SCT: SDG-C1455:3238 Date: 08-04-2013
	3.0	BHEL's TCN-01, vide reference no PSER: SCT: SDG-C1455:TCN-01 Date: 19-04-2013
	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 offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

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