

TENDER SPECIFICATION

No. - BHE/PW/PUR/RGIT-STR/719

FOR

SUPPLY (EXCEPTING BHEL SUPPLIED MATERIALS), COLLECTION OF MATERIALS FROM BHEL/CLIENT'S STORES/STORAGE YARD; TRANSPORTATION TO FABRICATION YARD/ SITE; FABRICATION, ERECTION, ALIGNMENT, BOLTING/ WELDING/ FASTENING, GROUTING, TESTING AND HANDING OVER OF BUNKER STRUCTURES AND RAW COAL BUNKERS OF 4 x 600 MW UNIT # 1, 2, 3 & 4

AT

JINDAL POWER LIMITED PHASE-III

(4X600 MW JPL STPP) SALIBHATA

TAMNAR VILLAGE

DISTT: RAIGARH, CHATTISGARH

PART-I - TECHNICAL BID

(VOLUME- I)

SPECIAL & GENERAL CONDITIONS OF CONTRACT, QR, NIT

BOOK NO.:



BHARAT HEAVY ELECTRICALS LIMITED
(A GOVERNMENT OF INDIA UNDERTAKING)
POWER SECTOR: WESTERN REGION
345, KINGSWAY: NAGPUR 440 001

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#: ATTACHED AT THE END OF HARD COPY OF TENDER SPECIFICATION. ALSO HOSTED IN WEB PAGE AS PART OF NOTICE INVITING TENDER.

@: ISSUED AS A SEPARATE BOOKLET AS HARD COPY. ISSUED AS A SEPARATE DOWNLOADABLE SOFT COPY IN WEB PAGE.

NOTE: Bidders must Visit BHEL web site www.bhel.com for NIT, Qualifying Requirement of this work(QR), GCC etc. Further all corrigenda, addenda, amendments and clarifications to Tender Specifications will be hosted in this web page. Bidders shall keep themselves updated with all such amendments.

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
POWER SECTOR - WESTERN REGION
SHREEMOHINI COMPLEX
345, KINGS WAY - NAGPUR 440 001

TENDER SPECIFICATION No. - BHE/PW/PUR/RGIT-STR/719

NAME OF THE WORK : SUPPLY (EXCEPTING BHEL SUPPLIED MATERIALS), COLLECTION OF MATERIALS FROM BHEL/CLIENT'S STORES/STORAGE YARD; TRANSPORTATION TO FABRICATION YARD/ SITE; FABRICATION, ERECTION, ALIGNMENT, BOLTING/ WELDING/ FASTENING, GROUTING, TESTING AND HANDING OVER OF BUNKER STRUCTURE AND RAW COAL BUNKER OF 4x600 MW UNIT # 1 , 2, 3 & 4 AT 4X600 MW RAIGARH THERMAL POWER PROJECT AT JINDAL POWER LIMITED PHASE-III,(4X600 MW JPL STPP) SALIBHATA,TAMNAR VILLAGE ,DISTT: RAIGARH, CHATTISGARH

EARNEST MONEY DEPOSIT: Rs.2, 00, 000/ (RUPEES TWO LAKHS ONLY) .
For more details refer Section-15 of this tender.

THIS TENDER CONTAINS THE FOLLOWING DOCUMENTS.

PART –1

- A) VOLUME - I (TECHNICAL BID /GENERAL & SPECIAL CONDITIONS OF CONTRACT)
- B) VOLUME -II (TECHNICAL BID /TECHNICAL SPECIFICATION)PART- 2
- C) VOLUME – III (PRICE BID-PART-2)

THESE TENDER DOCUMENTS CONTAINS: TECHNICAL BID VOLUME-I, VOLUME-II & VOLUME-III (PRICE BID) ARE ISSUED TO:

M/S.

(THESE TENDER DOCUMENTS ARE NOT TRANSFERABLE)

SENIOR MANAGER (PUR)

PLACE: NAGPUR
DATE:

BHARAT HEAVY ELECTRICALS LIMITED
(A GOVERNMENT OF INDIA UNDERTAKING)
POWER SECTOR - WESTERN REGION
SHREEMOHINI COMPLEX
345, KINGS WAY - NAGPUR 440 001

PROCEDURE FOR SUBMISSION OF SEALED TENDERS

THE TENDERERS MUST SUBMIT THEIR TENDERS AS REQUIRED IN TWO PARTS IN SEPARATE SEALED COVERS PROMINENTLY SUPERSCRIBED AS PART-I TECHNICAL BID AND PART-II PRICE BID AND ALSO INDICATING ON EACH OF THE COVERS THE TENDER SPECIFICATION NUMBER AND DUE DATE AND TIME AS MENTIONED ELSEWHERE.

A) PART-I: TECHNICAL BID

PART-I: TECHNICAL BID IS ISSUED IN TWO VOLUMES AS UNDER:

- a) VOLUME-I : SPECIAL AND GENERAL CONDITIONS OF CONTRACT
- VOLUME-II : STANDARD TECHNICAL SPECIFICATIONS OF BHEL
- b) VOLUME-III : PRICE BID (PART-2)

THESE TWO SEPARATE COVERS-I AND II SHALL TOGETHER BE ENCLOSED IN A THIRD ENVELOPE (COVER-III) ALONG WITH REQUISITE EMD AS INDICATED EARLIER AND THIS SEALED COVER SHALL BE SUPER SCRIBED AND SUBMITTED TO ADDL. GEN MANAGER (PURCHASE) AT THE ABOVE-MENTIONED ADDRESS BEFORE THE DUE DATE AS INDICATED.

THE QUALIFIED TENDERER WILL BE INTIMATED SEPARATELY ABOUT THE STATUS OF THEIR OFFER.

TENDERER ARE REQUESTED TO MAKE SPECIFIC NOTE OF THE FOLLOWING CONDITIONS:

CONTRACTOR SHOULD HAVE ADEQUATE RESOURCES INCLUDING MAJOR T&PS AT HIS DISPOSAL FOR THIS JOB.

CONTRACTOR SHOULD HAVE SOUND FINANCIAL STABILITY.

TENDERER SHOULD MEET QUALITY REQUIREMENT REGARDING WORKMANSHIP, DEPLOYMENT OF PERSONNEL, FABRICATION & ERECTION TOOLS AND NECESSARY INSPECTION, MEASUREMENT & TESTING INSTRUMENTS.

ALL INFORMATION AS CALLED FOR IN VARIOUS APPENDICES AND CLAUSES OF TENDER SPECIFICATION SHOULD BE FURNISHED IN COMPLETENESS. PLEASE REFER THE CHECKLIST.

THE TENDERER IF ANY, SHALL OBTAIN CLARIFICATION ON TENDER BEFORE SUBMITTING THEIR OFFER.

Offers must be submitted without any deviation.

Offers received with any deviation or without relevant information as described above are liable to be rejected. **Price bids received in the form other than specified in Part-II (Price Bid) are liable to be rejected.**

Bidder must sign & stamp all pages of this tender specification as an acceptance of tender conditions and must enclose this tender specification with their offer.

Bidder shall note that their offer will be considered subject to the approval of BHEL's customer.

Offer of bidder received after due date shall NOT be considered under any circumstances.

PROJECT INFORMATION

1. 4x600 MW JPL RAIGARH

Jindal Power Limited (JPL) a O.P. Jindal group company is setting up a Thermal Power Plant at Raigarh in the state of Chhattisgarh. 4X250 MW is already operational. . The capacity of plant is being augmented by installation of additional 4x600 mw set adjacent to the existing units.

Approach to site:

Site is located near village Tamnar in Raigarh District of Chhattisgarh State. The site is approachable from Raigarh by the state highway which branches off at Punjipathra about 12 Km from the site and 34 Km from Raigarh town. The nearest broad gauge rail link is at Raigarh which is about 35 Km (Raigarh is on Railway line of Howrah Section of South eastern railways)

Metrological Data

- a) Mean of daily max temp : 33.5 deg.C
- b) Mean of daily min temp : 21.5 deg.C
- c) Highest temp. Recorded : 47.2 deg.C (19 June 1960)
- d) Lowest temp. Recorded : 6.4 deg.C (24 Dec 1959)
- e) Relative Humidity : Varies from 19% to 88%
- f) Annual average rainfall : Between 1000-2000mm
- g) Wind load : 7.3Km/Hr (in the month of June)
- h) Seismic zone : zone III in accordance with IS: 1893, Para 3.

The bidder is advised to visit and examine the site of WORKS and its surroundings and obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into the CONTRACT. All costs for and associated with site visits shall be borne by the bidder.

Check List			
(Vide Para 1.3 Of Section-I of General Conditions Of Contract)			
1	Name of the Bidder with Postal Address for Correspondence		
2	Name of Contact Person with Telephone & Fax No.	Mr./Ms Tel No. Fax No.	
3	Nature of the firm	PROPRIETARY / PARTNERSHIP / LIMITED CO.	
4	Details of EMD Please Indicate whether 1) One Time EMD or, 2) Only for this Tender	DD No. DD Date..... Name of Bank..... Amount: Rs.....	
5	Validity of Offer (BHEL's Requirement: 180 days from Due Date)	Validity _____ days	
6	Mobilization Time (Please refer Section-11 of SCC)	Mobilization Time _____	
7	Whether any conditions stipulated?	Yes (vide Document reference:	No
		Bidder to note that tender with conditions unacceptable to BHEL shall be rejected.	
8	Bidder has visited the project site and acquainted with the site conditions	Yes	No
9	Details of concurrent jobs are furnished (Appendix-)	Yes	No
10	Headquarters organization is furnished	Yes	No
11	Proposed site organization is furnished	Yes	No
12	Names and particulars of directors/partners are furnished	Yes	No
13	Financial status of the firm (Annexure 'A' of GCC) is furnished	Yes	No
14	Copy of Audited Profit & Loss Account for preceding three years duly authenticated on each copy by bidders Chartered Accountants	Yes	No

Check List (Vide Para 1.3 Of Section-I of General Conditions Of Contract)			
15	Latest Certificate by Bidder's Banker for Overdraft & BG Limits is Furnished (Certificate shall not be older than six months from the Last Date for offer submission)	Yes	No
16	Latest copy of IT Return along with copy of PAN Card are Furnished	Yes	No
17	Month-wise Manpower Deployment Plan (Appendix –) is furnished	Yes	No
18	Analysis of Unit Rates quoted (Appendix-) is furnished	Yes	No
19	Month-wise deployment plan for major T&P (Appendix-) is furnished	Yes	No
20	Whether all the pages of the Tender Specification documents are read, understood and signed	Yes	No
21	Power of Attorney enclosed in favor of person making offer	Yes	No
22	Bidder has familiarized himself with all Relevant Local Laws & Local Conditions	Yes	No
23	Safety Requirement of this work in a Running plant Premises has been understood.	Yes	No
24	Erection and Commissioning programme furnished	Yes	No
25	List of Jobs completed in last seven years is furnished (Appendix-)	Yes	No
26	Whether copies of detailed Work Orders (with BOQ) and Completion Certificates in support of above furnished	Yes	No
27	Whether contractor has left any job unfinished? If so, give reasons.	Yes	No
28	Whether any client has terminated the contractor's work before completion? If so, furnish reasons for the same	Yes	No
29	BIDDER MUST FURNISH HERE THE FOLLOWING DETAIL FOR RELEASING EMD AND OTHER PAYMENTS DULY ENDORSED BY BANK (IE SIGN & STAMP BY BANK). 1 Name of the Company----- 2 Name of Bank----- 3 Name of Bank Branch----- 4 City/Place----- 5 Account Number----- 6 Account type----- 7 IFSC code of the Bank Branch----- 8 MICR Code of the Bank Branch-----	Yes	No

Note: strike off or tick '**yes**' or '**no**', as applicable

BIDDERS MUST SUBMIT ALL NECESSARY DOCUMENTS AS BEING ASKED IN ABOVE CHECK LIST.

DECLARATION BY BIDDER'S AUTHORIZED SIGNATORY

I, _____ HEREBY CERTIFY
THAT ALL THE INFORMATION AND DATA FURNISHED BY ME WITH REGARD TO THE
TENDER SPECIFICATION No. BHE/PW/PUR/RGIT-STR/719 IS TRUE AND COMPLETE TO
THE BEST OF MY KNOWLEDGE. I HAVE GONE THROUGH THE SPECIFICATIONS,
CONDITIONS AND STIPULATIONS IN DETAIL AND AGREE TO COMPLY WITH THE
REQUIREMENTS AND INTENT OF THE SPECIFICATION. I FURTHER CERTIFY THAT I
AM DULY AUTHORIZED REPRESENTATIVE OF THE UNDER-MENTIONED TENDERER
AND A VALID POWER OF ATTORNEY TO THIS EFFECT IS ALSO ENCLOSED.

AUTHORISED REPRESENTATIVE'S SIGNATURE WITH
NAME AND ADDRESS

DATE:

TENDERER'S NAME AND ADDRESS

CERTIFICATE OF NO DEVIATION

TENDER SPECIFICATION No.

BHE/PW/PUR/RGIT STR/719

I/WE, M/s

HEREBY CERTIFY THAT IN OUR OFFER I/WE HAVE NEITHER SET ANY TERMS AND CONDITIONS NOR THERE ANY DEVIATION TAKEN FROM THE TENDER CONDITIONS EITHER TECHNICAL OR COMMERCIAL AND I/WE AGREE TO ALL THE TERMS AND CONDITIONS MENTIONED IN THE TENDER SPECIFICATION.

DATE:

SIGNATURE OF THE TENDERER

SECTION-3
OFFER OF THE CONTRACTOR

SENIOR MANAGER (Purchase)
BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR - WESTERN REGION
SHREEMOHINI COMPLEX
345, KINGSWAY
NAGPUR- 440 001

DEAR SIR,

I/WE HEREBY OFFER TO CARRY OUT THE WORK DETAILED IN TENDER SPECIFICATION NO. BHE/PW/PUR/RGIT-STR/719 ISSUED BY BHARAT HEAVY ELECTRICALS LIMITED, POWER SECTOR-WESTERN REGION, NAGPUR, IN ACCORDANCE WITH THE TERMS AND CONDITIONS THEREOF.

I/WE HAVE CAREFULLY PERUSED THE FOLLOWING LISTED DOCUMENTS CONNECTED WITH THE ABOVE WORK AND AGREE TO ABIDE BY THE SAME.

1. INSTRUCTIONS TO TENDERERS
2. GENERAL CONDITIONS OF CONTRACT
3. SPECIAL CONDITIONS OF CONTRACT
4. OTHER SECTIONS, APPENDICES, SCHEDULES AND DRAWINGS.

I/WE HAVE DEPOSITED / FORWARDED HERewith THE EARNEST MONEY DEPOSIT FOR A SUM OF RS. 2,00,000/- (RUPEES TWO LAKH ONLY) DETAILS OF EMD PAYMENT ARE FURNISHED IN THE CHECK LIST.

EMD SHALL BE REFUNDED SHOULD OUR OFFER NOT BE ACCEPTED / EMD **NEED NOT BE REFUNDED AND THE AMOUNT MAY BE TREATED AS "ONE TIME EMD" FOR ERECTION AND COMMISSIONING TENDERS OF BHEL-PSWR, NAGPUR.** SHOULD OUR OFFER BE ACCEPTED, I/WE FURTHER AGREE TO DEPOSIT SECURITY DEPOSIT FOR THE WORK AS PROVIDED FOR IN THE TENDER SPECIFICATION WITHIN THE STIPULATED TIME AS MAY BE INDICATED BY BHEL, POWER SECTOR-WESTERN REGION, NAGPUR.

I/WE FURTHER AGREE TO EXECUTE ALL THE WORKS REFERRED TO IN THE SAID DOCUMENTS UPON THE TERMS AND CONDITIONS CONTAINED OR REFERRED TO THEREIN AND AS DETAILED IN THE APPENDICES ANNEXED THERETO.

PLACE:
DATE:

SIGNATURE OF TENDERER:
ADDRESS:

WITNESSES WITH THEIR ADDRESS

SIGNATURE	NAME	ADDRESS
1.		
2.		

SECTION-4 SPECIAL CONDITIONS OF CONTRACT

SCOPE OF WORK

4.0 GENERAL

THE WORK TO BE CARRIED OUT UNDER THE SCOPE OF THESE SPECIFICATIONS IS BROADLY AS UNDER:

- 1) SUPPLY (EXCEPTING BHEL SUPPLIED MATERIALS), FABRICATION, ERECTION, ALIGNMENT AND WELDING, BOLTING, FASTENING, GROUTING AS APPLICABLE
- 2) DESTRUCTIVE, NON-DESTRUCTIVE AND ANY OTHER TESTS AS PER REQUIREMENT
- 3) COMPLETION OF FACILITY AND HANDING OVER

THE FOLLOWING DOCUMENTS ARE ATTACHED ALONGWITH AS VOLUME -II AND FORM INTEGRAL PART OF THESE SPECIFICATIONS:

VOLUME	SECTION	TITLE	SEPCIFICATION NO.	REV. NO.
VOLUME IIB	SECTION - A	SCOPE OF WORK	PE-TS-329-616-C001	00
VOLUME IIB	SECTION - B	PROJECT INFORMATION	PE-TS-329-616-C001	00
VOLUME IIB	SECTION - C	SPECIFIC TECHNICAL REQUIREMENTS FOR STRUCTURAL WORKS	PE-TS-329-616-C001	00
VOLUME IIB	SECTION – D	TECHNICAL SPECIFICATIONS FOR STRUCTURAL STEEL WORKS	PE-TS-329-616-C001	00
VOLUME IIB	SECTION – D SUB-SECTION – D17	FABRICATION OF STRUCTURAL STEEL WORK	PE-TS-329-616-C001	00
VOLUME IIB	SECTION – D SUB-SECTION - D18	ERECTION OF STRUCTURAL STEELWORK	PE-TS-329-616-C001	00

BIDDERS SHALL TAKE NOTE OF AND ACCOUNT FOR THE CONTENTS OF ABOVE DOUCMENTS WHILE SUBMITTING THEIR OFFER. SPECIFIC ATTENTION IS DRAWN TO THE CLAUSES AND SUB-CLAUSES VIDE SERIAL NUMBERS 6.00.00 ENTITLED RATES AND MEASUREMENTS OF SUB-SECTION-D17.

FOLLOWING ARE CLARIFIED IN RESPECT OF THE ABOVE SPECIFICATIONS:

4.0.1

THESE SPECIFICATIONS INCLUDE SUPPLY OF MATERIALS FOR VARIOUS ITEMS OF WORK. **HOWEVER, BHEL WILL BE SUPPLYING ONLY FOLLOWING MATERIALS ON FREE-ISSUE-ACCOUNTABLE BASIS AND AS SUCH SUPPLY OF ONLY THESE SPECIFIC ITEMS IS EXCLUDED FROM THE SCOPE OF CONTRACTOR. THE ITEMS ARE:**

- (1) ALL ROLLED SECTIONS AS PER SPECIFICATION**
- (2) ALL PLATE SECTIONS AS PER SPECIFICATION FOR FABRICATION OF BUILT-UP STRUCTURES ETC**
- (3) CHEQUERED PLATES AS PER SPECIFICATION**

(4) 3.15MM THICK STAINLESS STEEL PLATES AS PER SPECIFICATION FOR BUNKER LINER

REST ALL OTHER MATERIALS INCLUDING PERMANENT AND TEMPORARY FASTENER WITH ASSOCIATED NUTS, WASHERS, ELECTRO FORGED GRATINGS, PRIMER AND PAINTS ETC ALL AS PER SPECIFICATIONS IS IN THE CONTRACTOR'S SCOPE. THE ITEM RATE OFFERED BY THE CONTRACTOR SHALL BE IN CONSIDERATION OF THE ABOVE.

4.0.2

BHEL IS PROVIDING CERTAIN MAJOR TOOLS AND PLANTS FOR THIS WORK ON SHARING BASIS AS INDICATED UNDER SECTION-7 IN THESE SPECIFICATIOES. REST ALL OTHER TOOL AND PLANTS AND MEASUREMENT AND MONITORING DEVICES SUCH AS ALCOMETER ETC ARE TO BE PROVIDED BY THE CONTRACTOR.

4.0.3

WITH RESPECT TO CLAUSE NO. 6.02.23 SUB-SECTION D-17 REGARDING PAYMENT OF PTFE BEARING IT IS CLARIFIED THE PAYMENT WILL BE MADE BASED ON ACTUAL QUANTITY IN NUMBERS EXECUTED AND SO CERTIFIED BY BHEL

4.0.4

WITH RESPECT TO CLAUSE NO. 2.06.02 SUB-SECTION D-18 REGARDING "YARD" IT IS CLARIFIED THAT ONLY A LIMITED SPACE FOR FABRICATION-CUM-STORAGE YARD FOR FABRICATED ITEMS WILL BE MADE AVAILABLE. THE CONTRACTOR SHALL ACCORDINGLY MAKE A VERY JUDICIOUS USE OF THE SAME SINCE BEGINNING TO AVOID ANY CONGESTION RELATED BOTTLENECK LATER ON.

4.1 SCOPE OF WORK IS FURTHER DETAILED IN VARIOUS CLAUSES HEREIN AFTER.

4.1.1 GENERAL REQUIREMENTS – COMMON TO ALL WORK

4.1.1.1

THE INTENT OF SPECIFICATION IS TO PROVIDE SERVICES ACCORDING TO THE MOST MODERN AND PROVEN TECHNIQUES AND CODES. THE OMISSION OF SPECIFIC REFERENCE TO ANY METHOD, EQUIPMENT OR MATERIAL NECESSARY FOR PROPER AND EFFICIENT EXECUTION OF THIS WORK SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF PROVIDING SUCH FACILITIES TO COMPLETE THE WORK WITHOUT ANY EXTRA COMPENSATION.

4.1.1.2

THE TERMINAL POINTS DECIDED BY BHEL SHOULD BE FINAL AND BINDING ON THE CONTRACTOR FOR DECIDING THE SCOPE OF WORK AND EFFECTING PAYMENT FOR THE WORK DONE.

4.1.1.3

THE WORK SHALL BE EXECUTED UNDER THE USUAL CONDITIONS AFFECTING MAJOR POWER PLANT CONSTRUCTION AND IN CONJUNCTION WITH NUMEROUS OTHER OPERATIONS AT SITE. THE CONTRACTOR AND HIS PERSONNEL SHALL COOPERATE WITH PERSONNEL OF BHEL, BHEL'S CUSTOMER, CUSTOMER'S CONSULTANTS AND OTHER CONTRACTORS, COORDINATING HIS WORK WITH OTHERS AND PROCEED IN A MANNER THAT SHALL NOT DELAY OR HINDER THE PROGRESS OF WORK OF THE PROJECT AS A WHOLE.

4.1.1.4

THE WORK COVERED UNDER THIS SPECIFICATION IS OF HIGHLY SOPHISTICATED NATURE, REQUIRING THE BEST QUALITY WORKMANSHIP, SUPERVISION, ENGINEERING AND CONSTRUCTION MANAGEMENT. THE CONTRACTOR SHOULD ENSURE PROPER PLANNING AND SUCCESSFUL & TIMELY COMPLETION OF THE WORK TO MEET THE OVERALL PROJECT SCHEDULE. THE CONTRACTOR MUST DEPLOY ADEQUATE QUANTITY OF TOOLS & PLANTS, MODERN / LATEST CONSTRUCTION AIDS ETC. HE MUST ALSO DEPLOY ADEQUATE TRAINED, QUALIFIED AND EXPERIENCED SUPERVISORY STAFF AND SKILLED PERSONNEL.

4.1.1.5

CONTRACTOR SHALL FABRICATE, ERECT ALL THE EQUIPMENTS AS PER THE SEQUENCE & METHODOLOGY PRESCRIBED BY BHEL DEPENDING UPON THE TECHNICAL REQUIREMENTS, AND AVAILABILITY OF MATERIALS AND FRONTS ETC. BHEL ENGINEER'S DECISION REGARDING CORRECTNESS OF THE WORK AND METHOD OF WORKING SHALL BE FINAL AND BINDING ON THE CONTRACTOR. NO CLAIMS FOR EXTRA PAYMENT FROM THE CONTRACTOR WILL BE ENTERTAINED ON THE GROUND OF DEVIATION FROM THE METHODS / SEQUENCE ADOPTED IN ERECTION OF SIMILAR SETS ELSEWHERE.

4.1.1.6

ALL NECESSARY CERTIFICATES AND LICENSES, PERMITS & CLEARANCES REQUIRED TO CARRY OUT THIS WORK FROM THE RESPECTIVE STATUTORY/ LOCAL AUTHORITIES ARE TO BE ARRANGED BY THE CONTRACTOR AT HIS COST IN TIME TO ENSURE SMOOTH PROGRESS OF WORK.

4.1.1.7

THE WORK SHALL CONFORM TO DIMENSIONS AND TOLERANCES SPECIFIED IN THE VARIOUS DRAWINGS / DOCUMENTS THAT WILL BE PROVIDED DURING VARIOUS STAGES OF ERECTION. IF ANY PORTION OF WORK IS FOUND TO BE DEFECTIVE IN WORKMANSHIP, NOT CONFORMING TO DRAWINGS OR OTHER STIPULATIONS DUE TO CONTRACTOR'S FAULT, THE CONTRACTOR SHALL DISMANTLE AND RE-DO THE WORK DULY REPLACING THE DEFECTIVE MATERIALS AT HIS COST, FAILING WHICH THE WORK WILL BE GOT DONE BY BHEL AND RECOVERIES WILL BE EFFECTED FROM THE CONTRACTOR'S BILLS TOWARDS EXPENDITURE INCURRED INCLUDING COST OF MATERIALS AND DEPARTMENTAL OVERHEADS OF BHEL.

4.1.1.8

THE CONTRACTOR SHALL PERFORM ANY SERVICES, TESTS ETC, WHICH MAY NOT BE SPECIFIED BUT NEVERTHELESS, REQUIRED FOR THE COMPLETION OF WORK WITHIN QUOTED RATES.

4.1.1.9

THE CONTRACTOR SHALL EXECUTE THE WORK IN THE MOST SUBSTANTIAL AND WORKMANLIKE MANNER. THE STORES SHALL BE HANDLED WITH CARE AND DILIGENCE.

4.1.1.10

BHEL RESERVES RIGHT TO RECOVER FROM THE CONTRACTOR ANY LOSS WHICH ARISES OUT OF UNDUE DELAY / DISCREPANCY / SHORTAGE / DAMAGE OR ANY OTHER CAUSES DUE TO CONTRACTOR'S LAPSE DURING ANY STAGE OF WORK. ANY LOSS TO BHEL DUE TO CONTRACTOR'S LAPSE SHALL HAVE TO BE MADE GOOD BY THE CONTRACTOR.

4.1.1.11

ALL CRANES, TRANSPORT EQUIPMENT, HANDLING EQUIPMENT, TOOLS, TACKLES, FIXTURES, EQUIPMENT, MANPOWER, SUPERVISORS/ENGINEERS, CONSUMABLES ETC, EXCEPT OTHERWISE SPECIFIED AS BHEL SCOPE ON FREE ISSUE, REQUIRED FOR THIS SCOPE OF WORK SHALL BE PROVIDED BY THE CONTRACTOR. ALL EXPENDITURE INCLUDING TAXES AND INCIDENTALS IN THIS CONNECTION WILL HAVE TO BE BORNE BY HIM UNLESS OTHERWISE SPECIFIED IN THE RELEVANT CLAUSES. THE CONTRACTOR'S QUOTED RATES SHOULD BE INCLUSIVE OF ALL SUCH CONTINGENCIES.

4.1.1.12

ALL WORKS SUCH AS CLEANING, LEVELING, ALIGNING, TRIAL ASSEMBLY, DISMANTLING OF CERTAIN EQUIPMENTS / COMPONENTS FOR CHECKING AND CLEANING, SURFACE PREPARATION, FABRICATION OF STRUCTURES, TUBES AND PIPES AS PER GENERAL ENGINEERING PRACTICE AND AS PER BHEL ENGINEER'S INSTRUCTIONS AT SITE, CUTTING, GOUGING, WELD DEPOSITING, GRINDING, STRAIGHTENING, CHAMFERING, FILING, CHIPPING, DRILLING, REAMING, SCRAPPING, LAPPING, FITTING UP ETC AS MAY BE APPLICABLE IN SUCH ERECTION WORKS AND WHICH ARE TREATED INCIDENTAL TO THE ERECTION WORKS AND NECESSARY TO COMPLETE THE WORK SATISFACTORILY, SHALL BE CARRIED OUT BY THE CONTRACTOR AS PART OF THE WORK WITHIN THE QUOTED RATES.

4.1.1.13

THE CONTRACTOR SHALL MAKE ALL FIXTURES, TEMPORARY SUPPORTS, STEEL STRUCTURES REQUIRED FOR JIGS & FIXTURES, ANCHORS FOR LOAD AND GUIDE PULLEYS REQUIRED FOR THE WORK. CONTRACTOR SHALL ARRANGE NECESSARY STEEL FOR SUCH USAGE.

4.1.1.14

THE CONTRACTOR SHALL TAKE DELIVERY OF THE MATERIALS FROM THE BHEL STORES/ STORAGE AREA AFTER GETTING THE APPROVAL OF BHEL ENGINEER ON STANDARD INDENT FORMS OF BHEL. COMPLETE AND DETAILED ACCOUNT OF THE MATERIALS AND EQUIPMENTS AFTER USAGE SHALL BE SUBMITTED TO THE BHEL AND RECONCILED PERIODICALLY.

4.1.1.15

CONTRACTOR SHALL PLAN AND TRANSPORT MATERIALS/ FABRICATED ITEMS FROM STORAGE TO FABRICATION YARD/ ERECTION SITE AND ERECT THEM IN SUCH A MANNER AND SEQUENCE THAT MATERIAL ACCUMULATION AT SUCH LOCATIONS DOES NOT LEAD TO CONGESTION IN THESE AREAS. MATERIALS SHALL BE STACKED NEATLY, PRESERVED AND STORED IN THE CONTRACTOR'S SHED AND AT WORK AREAS IN AN ORDERLY MANNER. IN CASE IT IS NECESSARY TO SHIFT AND RE-STACK THE MATERIALS KEPT AT WORK AREAS/ SITE TO ENABLE OTHER AGENCIES TO CARRY OUT THEIR WORK OR FOR ANY OTHER REASON, SAME SHALL BE DONE BY CONTRACTOR MOST EXPEDITIOUSLY. NO CLAIM FOR EXTRA PAYMENT FOR SUCH WORK WILL BE ENTERTAINED.

4.1.1.16

PLANT MATERIALS SHOULD NOT BE USED FOR ANY TEMPORARY SUPPORTS / SCAFFOLDING/ PREPARING PRE-ASSEMBLY BED ETC.

4.1.1.17

THE QUANTITIES OF VARIOUS ITEMS OF WORK TO BE EXECUTED UNDER THIS CONTRACT IS GENERALLY AS PER THE RATE SCHEDULE. THESE QUANTITIES ARE APPROXIMATE AND MEANT ONLY TO GIVE A GENERAL IDEA TO THE TENDERER ABOUT THE MAGNITUDE OF THE WORK INVOLVED. ACTUAL QUANTUM AND TYPE OF EQUIPMENTS WILL BE BASED ON THE RELEVANT ERECTION DOCUMENTS WHICH WILL BE FURNISHED TO THE CONTRACTOR IN DUE COURSE OF ERECTION AND THE WEIGHT AND QUANTITY AS PER THE RELEVANT ENGINEERING DOCUMENTS WILL ONLY BE ADMISSIBLE FOR THE BILLING PURPOSE.

4.1.1.18

THE WORK SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE TO THE "FIELD QUALITY PLAN" APPROVED BY BHEL/CLIENT. CONTRACTOR, JOINTLY WITH BHEL, SHALL PREPARE ALL NECESSARY RECORDS OF MEASUREMENTS/READINGS/ PROTOCOLS ETC.

4.2 WELDING, RADIOGRAPHY AND OTHER NON-DESTRUCTIVE TESTING, POST WELD HEAT TREATMENT

4.2.1 WELDING

4.2.1.1

INSTALLATION OF EQUIPMENT INVOLVES GOOD QUALITY WELDING, NDE CHECKS, POST WELD HEAT TREATMENT ETC. CONTRACTOR'S PERSONNEL ENGAGED SHOULD HAVE ADEQUATE QUALIFICATION ON THE ABOVE WORKS.

4.2.1.2

THE METHOD OF WELDING WILL BE INDICATED IN THE DETAILED DRAWING/DOCUMENTS. BHEL ENGINEER WILL HAVE THE OPTION OF CHANGING THE METHOD OF WELDING AS PER SITE REQUIREMENT.

4.2.1.3

BEFORE ANY WELDER IS ENGAGED ON WORK, HE SHALL BE TESTED AND QUALIFIED BY BHEL/ CUSTOMER, THOUGH THEY MAY POSSESS THE PREVIOUS CERTIFICATE. BHEL RESERVES THE RIGHT TO REJECT ANY WELDER WITHOUT ASSIGNING ANY REASON. ALL THE EXPENDITURE IN TESTING/QUALIFICATION OF THE CONTRACTOR'S WELDER SHALL BE BORNE BY CONTRACTOR.

4.2.1.4

UNSATISFACTORY AND CONTINUOUS POOR PERFORMANCE MAY RESULT IN DISCONTINUATION OF CONCERNED WELDER.

4.2.1.5

THE WELDED SURFACE SHALL BE CLEANED OF SLAG AND PAINTED WITH PRIMER PAINT TO PREVENT RUSTING, CORROSION. FOR THIS CONSUMABLES LIKE PAINT /PRIMER ETC WILL BE IN THE CONTRACTOR'S SCOPE.

4.2.1.6

WELDING ELECTRODES HAVE TO BE STORED IN ENCLOSURES HAVING TEMPERATURE AND HUMIDITY CONTROL ARRANGEMENTS. THIS ENCLOSURE SHALL MEET BHEL SPECIFICATIONS.

4.2.1.7

WELDING ELECTRODES, PRIOR TO THEIR USE, CALL FOR BAKING FOR SPECIFIED PERIOD AND WILL HAVE TO BE HELD AT SPECIFIED TEMPERATURE FOR SPECIFIED PERIOD. ALSO, DURING EXECUTION, THE WELDING ELECTRODES HAVE TO BE CARRIED IN PORTABLE OVENS.

4.2.2 NON DESTRUCTIVE EXAMINATION:

4.2.2.1

CONTRACTOR SHALL PROVIDE ALL RESOURCES AND MAKE ALL ARRANGEMENTS FOR THE RADIOGRAPHIC EXAMINATION OF WELDS FOR THIS WORK. FOR REASONS OF SAFETY, INVARIABLY THE RADIOGRAPHY WORK WILL BE CARRIED OUT AFTER THE NORMAL WORKING HOURS AND CLOSE OF OTHER SITE ACTIVITIES ONLY. IN THIS REGARD, THE CONTRACTOR HAS TO ADHERE TO THE SAFETY RULES / REGULATIONS LAID BY BARC AUTHORITIES FROM TIME TO TIME.

4.2.2.2

RADIOGRAPHY INSPECTION OF WELDS SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS AND RECOMMENDATION OF BHEL ENGINEER. THE MINIMUM QUANTUM OF RADIOGRAPHIC INSPECTION SHALL BE AS PER PROVISION OF BHEL'S ERECTION DOCUMENTS. THEY MAY, HOWEVER BE INCREASED DEPENDING UPON THE PERFORMANCE OF THE INDIVIDUAL WELDER AT THE DISCRETION OF BHEL ENGINEER/BOILER INSPECTING AUTHORITY. BIDDER SHALL ALSO ARRANGE THE UT EQUIPMENT WITH RECORDING FACILITY AT HIS OWN COST. UT SHALL BE DONE AS PER REQUIREMENT OF BHEL / CLIENT. RECORDS OF UT SHALL BE PRODUCED & SUBMITTED TO AS PER SITE REQUIREMENT.

4.2.2.3

ALL X-RAY / GAMMA RAY FILMS OF WELD JOINTS SHALL BE PRESERVED PROPERLY AND BE HANDED OVER TO BHEL.

4.2.2.4

THE FIELD WELDED JOINTS SHALL BE SUBJECT TO DYE-PENETRANT/MPT/RT/ OTHER NON-DESTRUCTIVE EXAMINATION AS SPECIFIED IN THE RESPECTIVE ENGINEERING DOCUMENTS/ AS INSTRUCTED BY BHEL.

4.2.2.5

WHERE REQUIRED, SURFACE PREPARATION, LIKE SMOOTH GRINDING OF WELDED AREA, PRIOR TO RADIOGRAPHY SHALL BE DONE. IT MAY ALSO BECOME NECESSARY TO ADOPT INTER-LAYER RADIOGRAPHY/MPT/UT DEPENDING UPON THE SITE/ TECHNICAL REQUIREMENT NECESSITATING INTERRUPTIONS IN CONTINUITY OF THE WORK AND MAKING NECESSARY ARRANGEMENTS FOR CARRYING OUT THE ABOVE WORK. THE CONTRACTOR SHALL TAKE ALL THIS INTO ACCOUNT IN HIS OFFER. THE REQUIRED NDT METHOD/PROCEDURE WILL BE DECIDED BY BHEL ENGINEER AT SITE.

4.2.2.6

FOR CARRYING OUT ULTRASONIC TESTING OF WELDING JOINTS OF LARGE SIZE, IT WILL BE NECESSARY TO PREPARE SURFACE BY GRINDING AND BUFFING A SMOOTH FINISH AND CONTOUR AS NECESSARY. THE CONTRACTOR'S SCOPE OF WORK INCLUDES SUCH PREPARATION AS INCIDENTAL TO WORK.

4.2.2.7

NO SEPARATE PAYMENT FOR ANY NDE ACTIVITIES IS ENVISAGED. ACCORDINGLY THE OFFERED RATE SHALL BE INCLUSIVE OF COST OF ALL NDE.

4.4.2 HEAT TREATMENT:

4.4.2.1

FOR THE PURPOSE OF TEMPERATURE RECORDING OF STRESS RELIEVING PROCESS, THERMOCOUPLES HAVE TO BE ATTACHED TO THE WELD JOINT. THE NUMBER OF TEMPERATURE MEASURING POINTS AND LOCATIONS SHALL BE AS PER THE STANDARDS OF BHEL. THERMOCOUPLES HAVE TO BE ATTACHED USING CAPACITOR DISCHARGE TYPE PORTABLE THERMOCOUPLE ATTACHMENT UNIT. CONTRACTOR SHALL ARRANGE SUFFICIENT NUMBER OF THERMOCOUPLE ATTACHMENT UNITS.

4.4.2.2

CONTRACTOR SHOULD PROVIDE TEMPERATURE INDICATOR / TEMPERATURE RECORDER FOR MEASURING TEMPERATURE DURING PRE-HEATING FOR WELDING OR FOR CONTROLLING TEMPERATURE OF METAL FOR HOT CORRECTION ETC. THE TEMPERATURE RECORDERS SHOULD BE PREFERABLY OF SOLID STATE TYPE.

4.4.2.3

HEAT TREATMENT MAY REQUIRE TO BE CARRIED OUT AT ANY TIME (DAY OR NIGHT) TO ENSURE THE CONTINUITY OF THE PROCESS. THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS INCLUDING LABOURER REQUIRED FOR THE SAME AS PER DIRECTIONS OF BHEL.

4.4.2.4

IN CERTAIN CASES ONLY THE PRE-HEATING OF WELD JOINTS MAY BE CALLED FOR.

4.4.2.5

FOR WELD JOINTS OF HEAVY STRUCTURAL SECTIONS, IF HEAT TREATMENT IS REQUIRED, THE SAME SHALL BE CARRIED OUT AS PART OF THE WORK.

4.4.2.6

CHECKING EFFECTIVENESS OF STRESS RELIEVING BY HARDNESS TESTS (BY DIGITAL HARDNESS TESTER OR OTHER APPROVED TEST METHODS AS PER BHEL ENGINEER'S INSTRUCTION) INCLUDING NECESSARY TESTING EQUIPMENTS IS WITHIN THE SCOPE OF THE WORK / SPECIFICATION.

4.4.2.7

PREHEATING, INTER-PASS HEATING, POST WELD HEATING AND STRESS RELIEVING AFTER WELDING ARE PART OF ERECTION WORK AND SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH BHEL ENGINEER'S INSTRUCTIONS. WHERE THE ELECTRIC RESISTANCE HEATING METHOD IS ADOPTED CONTRACTOR SHALL MAKE ALL ARRANGEMENT INCLUDING HEATING EQUIPMENT WITH AUTOMATIC RECORDING DEVICES, ALL HEATING ELEMENTS, THERMOCOUPLES AND ATTACHMENT UNITS, GRAPH SHEETS, THERMAL CHALKS, & INSULATING MATERIALS LIKE MINERAL WOOL, ASBESTOS CLOTH, CERAMIC BEADS, ASBESTOS ROPES ETC, REQUIRED FOR ALL HEATING AND STRESS RELIEVING WORKS.

4.4.2.8

ALL THE RECORDED GRAPHS FOR HEAT TREATMENT SHALL BE HANDED OVER TO BHEL/ IBR AUTHORITIES AND DUE CLEARANCES OBTAINED.

4.4.2.9

RESULTS OF THESE PROCESSES SHALL BE VERIFIED/ VALIDATED AS PER REQUIREMENTS OF BHEL/CLIENT.

4.3 GENERAL RESPONSIBILITY OF THE CONTRACTOR

4.3.1

THE CONTRACTOR SHALL HAVE TOTAL RESPONSIBILITY FOR ALL EQUIPMENT AND MATERIALS IN HIS CUSTODY AT CONTRACTOR'S STORES, LOOSE, SEMI-FABRICATED, FABRICATED OR ERECTED BY HIM AT SITE. HE SHALL EFFECTIVELY PROTECT THE FINISHED WORKS FROM ACTION OF WEATHER AND FROM DAMAGES OR DEFACEMENT AND SHALL ALSO COVER THE FINISHED PARTS IMMEDIATELY ON COMPLETION OF WORK AS PER BHEL ENGINEER'S INSTRUCTIONS. THE MACHINE SURFACES/FINISHED SURFACES SHOULD BE GREASED AND COVERED.

4.3.2 PRESERVATION & PROTECTION OF COMPONENTS

AT ALL STAGES OF WORK, EQUIPMENTS/MATERIALS IN THE CUSTODY OF CONTRACTOR, INCLUDING THOSE ERECTED, WILL HAVE TO BE PRESERVED AS PER THE INSTRUCTIONS OF BHEL. THE CONTRACTOR SHALL PROVIDE NECESSARY PRESERVATION AGENTS INCLUDING THE PRIMER & PAINT FOR THE ABOVE WORK.

4.3.3

THE CONTRACTOR SHALL MAKE SUITABLE SECURITY ARRANGEMENTS INCLUDING EMPLOYMENT OF SECURITY PERSONNEL AND ENSURE PROTECTION OF ALL MATERIALS/ EQUIPMENT IN THEIR CUSTODY AND INSTALLED EQUIPMENTS FROM THEFT/FIRE/PILFERAGE AND ANY OTHER DAMAGES AND LOSSES.

4.3.4

CONTRACTOR SHALL COLLECT ALL SCRAP/ WASTAGE MATERIALS PERIODICALLY FROM VARIOUS AREA OF WORK SITE, DEPOSIT THE SAME AT ONE PLACE EARMARKED AT SITE OR SHIFT THE SAME TO A PLACE EARMARKED IN BHEL/ CLIENT'S STORES. IN CASE OF FAILURE OF CONTRACTOR IN COMPLIANCE OF THIS REQUIREMENT, BHEL WILL MAKE SUITABLE ARRANGEMENT AT CONTRACTOR'S RISK AND COST.

4.3.5

THE CONTRACTOR SHALL NOT UNDULY WASTE ANY MATERIALS ISSUED TO HIM. IN CASE IT IS OBSERVED AT ANY STAGE THAT THE WASTAGE/EXCESS UTILISATION OF MATERIALS IS NOT WITHIN THE PERMISSIBLE LIMITS, RECOVERY FOR THE EXCESS QUANTITY USED OR WASTED WILL BE EFFECTED WITH DEPARTMENTAL CHARGES FROM THE CONTRACTOR. DECISION OF BHEL ON THIS WILL BE FINAL AND BINDING ON THE CONTRACTOR.

4.3.6

FOR ANY CLASS OF WORK FOR WHICH NO SPECIFICATIONS HAVE BEEN LAID DOWN IN THESE SPECIFICATIONS, WORK SHALL BE EXECUTED AS PER THE INSTRUCTIONS OF BHEL.

4.4

BHEL IS OPERATING WEB BASED COMPUTERIZED SITE OPERATION MANAGEMENT SYSTEM (SOMS) THAT INCLUDES, INTER-ALIA, ISSUE OF MATERIALS, DAILY PROGRESS REPORTING, CONTRACTOR'S RUNNING MONTHLY BILLING AND MATERIAL RECONCILIATION THROUGH A COMPUTERIZED DATA MANAGEMENT SYSTEM. CONTRACTOR SHALL INSTALL NECESSARY HARDWARE TO HOOK-UP WITH THE BHEL'S SYSTEM AND USE THE SAME FOR HIS SCOPE OF WORK.

IN THE EVENT THE COMPUTERIZED SOMS IS INOPERATIVE FOR ANY REASONS, THE CONTRACTOR SHALL TAKE DELIVERY OF MATERIALS FROM THE STORAGE AREA/SHEDS OF BHEL/CUSTOMER AFTER GETTING THE APPROVAL OF THE ENGINEER/CUSTOMER ON STANDARD INDENT FORMS TO BE SPECIFIED BY BHEL/CUSTOMER. ALL THESE RECORDS HOWEVER SHALL BE UPDATED IN THE SOMS AS AND WHEN THE SOMS IS REACTIVATED/ NORMALIZED.

5.5.0 MATERIAL

- 5.5.1 Materials such as rolled sections, all plate sections, chequered plates & 3.15mm thick stainless steel plates for bunker liners as per specification specified in CI no 4.01 above shall be issued at free of cost by BHEL for use in the work covered in this contract from BHEL Stores/Storage. The contractor shall collect these materials from BHEL stores at specified places at his own cost and store the same at the work site or in his stores as per standard norms. Materials issued will be used only for construction of permanent work.
- 5.5.2 BHEL reserves the right to recover from the contractor any loss arising out of damage/ theft or any other causes or during verification/stacking or at any time under the custody of the contractor.
- 5.5.3 The Contractor shall in no case be entitled for any compensation on account of any delay in supply or non-supply thereof for all or any such materials.
- 5.5.5 No material shall be issued to the contractor except as those indicated above. Contractor will have to make his own arrangement at his own cost for procurement of any other materials, consumables etc. as required for the works and of such quality as acceptable to BHEL.
- 5.5.6 The contractor shall maintain proper store account for all the BHEL issued Materials and shall give three copies of monthly-computerized statement of such account to the BHEL.
- 5.8.7 Contractor shall also carryout in complete association with BHEL, the material management functions and execution like day to day update of materials, issued to contractor, accounting for surplus/scrap material returned etc. These functions shall also be carried out through computerized system utilizing suitable software. Contractor shall engage experienced software personnel to associate on dedicated basis for efficient discharge of the same.
- 5.8.8 The contractor shall solely be responsible for the safety, quality & quantity of material after it is handed over and issued to contractor by the BHEL.
- 5.8.9 BHEL issued materials, shall not be taken out of the project site under any circumstances whatsoever unless otherwise permitted by BHEL.

4.6.0 (FOLLOW UP & HANDLING OF MATERIALS ISSUED BY BHEL)

- 4.6.1 BHEL will place purchase order on the manufactures for procurement of steel structures and successful bidders will provide all necessary supports for follow up/chase up with manufactures/supplies/vendors for speedy delivery of materials at site including posting a man for short duration at manufactures factory within their quoted rates.
- 4.6.2 Consignment of BHEL supplied Material will be issued to the contractor as received by BHEL i.e. on weighment basis/ Linear measurement basis from its supplier, as per the delivery challan of the supplier. It would be the responsibility of the contractor to keep in constant contact with BHEL site to

find out the delivery status, arrival of the consignments and arrange for escort to accompany the trucks/ trailers for transportation of above materials by BHEL'S supplier, **if necessary**.

4.6.3 All materials issued by BHEL shall be stacked, stored above ground level by use of concrete or wooden sleepers. No materials shall remain on ground at any time. All concrete or wooden sleepers required for stacking the materials shall be arranged by contractor (successful bidder of this package) at his own cost within the quoted rates. All other equipments like winches, d-shackles, slings of various sizes, max puller, pulley blocks, jacks, trucks, trailers etc. required for such handling of steel from BHEL stores/storage yard etc. shall be arranged by contractor within quoted/accepted rates.

4.6.4 The contractor shall take delivery of the materials from the designated place within premises of 4x600 MW JSP Raigarh at his own cost and store the same at his stores as per standard norms. Open land for such purposes shall be provided by BHEL on free of cost basis. Temporary barbed wire fencing of the open storage yard is to be done by the contractor and is included under the scope of his work. Contractor shall also remove grass, bushes, trees etc wherever required off the land provided to him and shall make proper continuous up keeping of the open yard /land by removing grass, bushes trees etc and same is included under the scope of his work & no extra payment shall be made to the contractor in this regard. The bidder shall make complete arrangement of necessary security personnel's to safeguard all such materials in his custody. Materials issued will be used only for construction of permanent work. The contractor shall take care of material issued by BHEL and shall protect the same from theft, damage and weathering.

4.6.5 Excessive rusting of steel in custody of agency/contractor must be avoided. In case, due to any cause attributable to the contractor, such rusting of steel occur rendering the same unusable, then such quantity of steel shall be recovered from the interim payment at the penal rate specified in the tender. No material shall be issued to the contractor except as those indicated above i.e. steel unless otherwise expressly provided for in the contract. Contractor will have to make his own arrangement at his own cost for procurement of any other material as required for the works and of such quality as acceptable to BHEL.

4.7.0 ISSUE OF BHEL MATERIALS

: -

The steel shall be issued to the contractor on the following basis:

- (1) ALL ROLLED SECTIONS AS PER SPECIFICATION: Weighment basis
- (2) ALL PLATE SECTIONS AS PER SPECIFICATION FOR FABRICATION OF BUILT-UP STRUCTURES ETC- : Weighment basis
- (3) CHEQUERED PLATES AS PER SPECIFICATION: Weighment basis

(4) 3.15 MM THICK STAINLESS STEEL PLATES AS PER SPECIFICATION FOR BUNKER LINER: Weighment basis

All these materials issued by the BHEL shall be properly accounted for. The total quantity of steel required for the work will be calculated from the approved fabrication drawings including laps, chairs and lugs. The measurement for payment as well as for accounting (reconciliation) shall be based on linear measurements as per the sectional unit weights as per relevant IS code/Standard unit weight provided by Manufacturer/supplier.

In case any such sectional weights are not available in the above documents, the manufacturer recommendation shall be binding.

The material issued to the contractor shall be mainly in standard length and sections as received from the supplier. However, the contractor shall be bound to accept the steel in length as available in the project stores no claims for extra payment because of issue of non-standard length will be entertained.

In case MS flats as required in the fabrication of structures are not available, the contractor shall cut such width out of the available MS plates to make flats at no extra cost till such material is available and procured by BHEL.

The contractor shall satisfy himself of the quality and quantity of the materials at the time of taking delivery from BHEL stores/Storage yard. No claims whatsoever will be entertained by BHEL because of quality or quantity after the materials are taken by the contractor from BHEL stores/Storage yard.

The contractor shall submit to the engineer, a statement indicating estimated quantity of steel required during a quarter at least two months in advance of the quarter. In addition, the contractor shall also furnish the estimated requirement of steel during a month by the third week of the previous month indicating his requirement.

Bidders to ensure that no lamination materials are taken over by them from BHEL stores. Fabrication wastage, if any due to above, shall not be compensated by BHEL.

Bidder to note that all the BHEL supplied material etc. shall be supplied by the bidder as per relevant items of BOQ.

4.8.0 RETURN OF MATERIALS

:-

All surplus steel and all wastage materials will be taken back on weighment Measurement basis.

Surplus, unused and un-tampered steel shall be sorted section-wise and returned separately for a place directed by BHEL/Engineer within the project area, Return of such materials will not be entitled to any handling and incidental charges.

All wastage / scrap (including melting scrap, wastage, unusable scrap) shall be returned item wise to the stores and a receipt obtained for material accounting

purposes. Return of such material will not be entitled to any additional cost due handling and transportation and incidental charge.

All Scrap for structural steel including melting scrap shall be returned separately.

4.9.0 STEEL CONSUMPTION AND WASTAGE:-

STRUCTURAL STEEL (ROLLED SECTIONS, MS FLATS ETC.), STAINLESS STEEL LINER CONSUMPTION & WASTAGE:-

CONSUMPTION STRUCTURAL STEEL: -

4.9.1

The theoretical consumption of various sections shall be based on approved drawings. Weights shall be calculated considering/based on linear measurements and the sectional weights as per Indian standard. No extra shall be payable to the contractor for any deviation in weights for the two different procedures adopted for issue and calculation of the theoretical consumption. **However, Rolling Margin/variation in standard unit weight w.r.t. actual unit weight (taken at site) shall be considered for reconciliation of steel & no panel recovery shall be done on this account.**

- i) Actual consumption = Issue – Surplus.
- ii) Surplus = Untampered, unused, uncut quantity of steel returned by the contractor to BHEL store.
- iii) Wastage = Actual consumption – Theoretical consumption.

WASTAGE OF STRUCTURAL STEEL:-

Allowable wastage: - (+) 5% (Plus five percent) of the theoretical consumption shall be considered. Wastage is further classified as serviceable cut pieces (pieces of rolled steel section length 3M and above) and unserviceable scrap (including pieces of rolled steel section length less than 3m & MS plate less than one sq. M Area width less than 100cm) measured as per actual weight basis. Invisible wastage (loss of materials due to gas cutting, straightening of edges etc) shall be limited to 0.5% (zero point five percent) of theoretical consumption and shall be considered for reconciliation purposes only. But this invisible wastage shall be considered to be included in allowable wastage (i.e. five percent).

SL. NO.	CONSUMPTION OF STRUCTURAL STEEL (ROLLED SECTION, PLATES & SS liner)	BASIS OF ISSUE & PENAL RECOVERY
S-1	Theoretical consumption (without Considering any wastage, scrap or loss)	Free
S-2	Wastage limited to plus five percent (+5%) of the aforesaid theoretical Consumption (S-1) towards allowable wastage.	Free

S-3	Wastage beyond five percent (5%) of the aforesaid theoretical consumption (S-1). (All wastage steel shall be returned to BHEL).	Penal Rate
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4.10.0 RECONCILIATION OF BHEL ISSUED MATERIALS: -

A) INTERIM RECONCILIATION (Quarterly)

The contractor shall submit a interim reconciliation statement of steel issued to them **once in three months** to BHEL engineer. In turn BHEL Engineer shall issue a Certificate indicating the status of materials for processing of further RA bills.

The purpose of quarterly reconciliation of steel is to have a track of status of materials & to control the misuse and over wastage of steel. During the progress of work section wise reconciliation with segregation of serviceable cut piece & un-serviceable scrap/cut-pieces is not required as these cut-pieces shall be used at later stage also for various purposes & hence the same cannot be declared as wastage before completion of job. During the progress of work, following action need to be taken for reconciliation of structural steel:

- (1) Qty. used in permanent job, measured & paid under various RA Bills.
- (2) Qty. available in full length with agency at site (to be jointly assessed by BHEL engineer & Contractor).
- (3) Assessment of cut pieces available at site.

Only Certification of BHEL Engineer for the above is enough for processing the RA bills.

B) FINAL RECONCILIATION

On completion of work, contractor shall properly account for the material issued to him as specified herein clause no. 4.9.1 to the satisfaction of BHEL certifying that the balance materials are available with contractor's custody at site.

At the time of submission of final bill by the contractor, if it is noticed by BHEL that the wastage is high and calls recovery at the penal rate, then BHEL will proceed for recovery for the excess wastage as per penal recovery rates as specified.

The approved drawings schedules are to be considered for the purpose of reconciliation of materials.

4.11.0 RECOVERY OF MATERIAL:-

If wastage exceeds the specified limit, the recovery of excess wastage shall be made from monthly R/A Bill at the Penal Rate.

PENAL RATE OF MATERIALS
A. STRUCTURAL STEEL

- | | |
|--|-----------------------|
| 1. Chqd. Plates/MS PLates | Rs. 50, 000/- per MT. |
| 2. Flats/ Beams/ Channel/
Angles etc. (Rolled sections) | Rs. 50000/- per MT. |
| 3. Stainless Steel liner | Rs 2,50,000/- per MT |

PROCUREMENT OF MATERIALS BY SUCCESSFUL CONTRACTORS AND TESTING:

MATERIAL REQUIRED FOR THE ENTIRE JOB OTHER THAN ISSUED BY BHEL AS EXPLAINED ABOVE REQUIRED FOR THE COMPLETION OF ENTIRE SCOPE, BOLTS, NUTS, WASHERS ETC HAVE TO BE ARRANGED BY THE CONTRACTOR, EXCEPTING THOSE SPECIFICALLY INDICATED AS BHEL SCOPE OF SUPPLY. BHEL RESERVES THE RIGHT TO REJECT ANY MATERIAL NOT FOUND SATISFACTORY. CONTRACTOR SHALL PRODUCE MANUFACTURER'S TEST CERTIFICATE .

SECTION-5

SPECIAL CONDITIONS OF CONTRACT

5.0 OBLIGATIONS OF THE CONTRACTOR (TOOLS, TACKLES, CONSUMABLES ETC.)

5.1 ACCOMMODATION, DRINKING WATER & LOCAL TRANSPORTATION FOR THE LABOUR OTHER EMPLOYEES

BHEL/CLIENT WILL BE PROVIDING ONLY THE SPACE FOR LABOUR COLONY OUTSIDE OF THE PLANT APPROX. 3-5 KM. FROM PLANT MAIN GATE. CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR ACCOMODATION WITH NECESSARY FACILITIES SUCH AS DRINKING WATER, SANITATION AND LIGHTING ETC FOR HIS WORKMEN AND THE STAFF. **BHEL WILL NOT PROVIDE ELECTRICITY FOR LABOUR COLONY.** ALSO, THE CONTRACTOR HAS TO MAKE HIS OWN ARRANGEMENT FOR TRANSPORTATION OF HIS WORKMEN AND OTHER EMPLOYEES. BHEL/CLIENT SHALL NOT PROVIDE ANY FACILITY IN THIS REGARD.

5.2 TOOLS AND TACKLES, MEASURING AND MONITORING DEVICES:

5.2.1

THE CONTRACTOR SHALL PROVIDE ALL (EXCEPTING THOSE INDICATED IN BHEL SCOPE) REQUIRED TOOLS AND PLANTS, MONITORING AND MEASURING DEVICES (MMD) AND HANDLING & TRANSPORTATION EQUIPMENTS FOR THE SCOPE OF WORK COVERED UNDER THESE SPECIFICATIONS. CONTRACTOR HAS TO PROVIDE SUITABLE CRANES FOR MATERIAL HANDLING AT BHEL/CLIENT'S STORES/STORAGE YARD. BHEL'S CRANE WILL NOT BE AVAILABLE FOR THIS PURPOSE. PLEASE REFER RELEVANT APPENDIX FOR THE LIST OF T&P BEING PROVIDED BY BHEL FREE OF CHARGES ON SHARING BASIS.

5.2.2

ALL TOOLS AND TACKLES TO BE DEPLOYED BY THE CONTRACTOR FOR THE WORK SHALL HAVE THE PRIOR APPROVAL OF BHEL ENGINEER WITH REGARD TO BRAND, QUALITY AND SPECIFICATION. INDICATIVE LIST OF MAJOR T&P TO BE ARRANGED BY THE CONTRACTOR HAS BEEN FURNISHED IN RELEVANT APPENDIX. CONTRACTOR SHALL ALSO MOBILIZE ALL OTHER T&P NECESSARY FOR TIMELY AND SATISFACTORY COMPLETION OF THE WORK IN SCOPE.

5.2.3

CONTRACTOR'S RESPONSIBILITIES WITH REGARD TO OPERATOR, FUEL, LUBRICANTS AND DAILY UPKEEP OF T&P PROVIDED BY BHEL IS FURTHER DETAILED IN SECTION-7.

5.2.4

TIMELY DEPLOYMENT OF ADEQUATE QUANTITY OF T&P IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE PREPARED TO AUGMENT THE T & P AT SHORT NOTICE TO MATCH THE PLANNED PROGRAMME AND TO ACHIEVE THE MILESTONES.

5.2.5

CONTRACTOR SHALL MAINTAIN AND OPERATE HIS TOOLS AND PLANTS IN SUCH A WAY THAT MAJOR BREAKDOWNS ARE AVOIDED. IN THE EVENT OF MAJOR BREAKDOWN, CONTRACTOR SHALL MAKE ALTERNATIVE ARRANGEMENTS EXPEDITIOUSLY SO THAT THE PROGRESS OF WORK IS NOT HAMPERED.

5.2.6

IN THE EVENT OF CONTRACTOR FAILING TO ARRANGE THE REQUIRED TOOLS, PLANTS, MACHINERY, EQUIPMENT, MATERIAL OR NON-AVAILABILITY OF THE SAME OWING TO BREAKDOWN, BHEL WILL MAKE THE ALTERNATIVE ARRANGEMENT AT THE RISK AND COST OF THE CONTRACTOR.

5.2.7

THE T&P TO BE ARRANGED BY THE CONTRACTOR SHALL BE IN PROPER WORKING CONDITION AND THEIR OPERATION SHALL NOT LEAD TO UNSAFE CONDITION. THE MOVEMENTS OF CRANES, AND OTHER EQUIPMENT SHOULD BE SUCH THAT NO DAMAGE/BREAKAGE OCCURS TO FOUNDATIONS, OTHER EQUIPMENTS, MATERIAL, PROPERTY AND MEN. ALL ARRANGEMENTS FOR THE MOVEMENT OF THE T&P ETC SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE NECESSARY TEST CERTIFICATES FOR EQUIPMENTS TO BE SUBMITTED.

5.2.8

USE OF WELDING GENERATORS/ RECTIFIERS FOR WELDING ONLY SHALL BE PERMITTED. USE OF WELDING TRANSFORMERS WILL BE SUBJECT TO SPECIFIC APPROVAL OF BHEL ENGINEER.

5.2.9

THE CONTRACTOR AT HIS COST SHALL CARRY OUT PERIODICAL TESTING OF HIS CONSTRUCTION EQUIPMENTS AND CALIBRATION OF MEASURING & MONITORING DEVICES (MMD). TEST/ CALIBRATION CERTIFICATES SHALL BE FURNISHED TO BHEL. MMDS SHALL BE CALIBRATED ONLY AT ACCREDITED LABORATORY AS PER THE LIST AVAILABLE WITH BHEL OR ANY OTHER LABORATORY APPROVED BY BHEL.

5.2.10

BHEL T&P WILL BE ISSUED IN BASIC ASSEMBLED CONDITION; CONTRACTOR SHALL TRANSPORT THESE T&P TO & FRO BETWEEN BHEL STORES AND SITE. ADDITIONAL LOOSE COMPONENTS/ SUB-ASSEMBLIES / ATTACHMENTS AS AND WHEN NECESSARY, WILL BE ISSUED BY BHEL, TO & FRO MOVEMENT BETWEEN BHEL STORES AND SITE OF SUCH ITEMS SHALL ALSO BE DONE BY THE CONTRACTOR. ASSEMBLY OF SUCH ADDITIONAL LOOSE COMPONENTS/SUB-ASSEMBLIES/ ATTACHMENTS IS IN CONTRACTOR'S SCOPE. ANY BOOM REDUCTION/ EXTENSION OF BHEL CRANES FOR CONTRACTOR'S USE AND RESTORATION TO PREVIOUS STATE OR AS DIRECTED BY BHEL SHALL BE THE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR SHALL PROVIDE ALL ENABLING SERVICES WITH TOOLS AND TACKLES FOR ASSEMBLY/DISMANTLING AND BOOM EXTENSION/REDUCTION AS ABOVE.

5.3 CONSUMABLES

5.3.1

THE CONTRACTOR SHALL PROVIDE ALL CONSUMABLES REQUIRED FOR CARRYING OUT THE WORK COVERED UNDER THESE SPECIFICATIONS EXCEPTING THOSE SPECIFICALLY INDICATED AS BHEL SCOPE.

5.3.2

ALL CONSUMABLES TO BE USED FOR THE WORK SHALL HAVE PRIOR APPROVAL OF BHEL ENGINEER WITH REGARD TO BRAND AND QUALITY SPECIFICATIONS. TEST REPORTS / CERTIFICATES IN RESPECT OF THESE CONSUMABLES, WHEREVER APPLICABLE, SHALL BE SUBMITTED TO BHEL ENGINEER.

5.3.3 PRIMERS & PAINTS

ALL PRIMERS AND PAINTS IS IN THE CONTRACTOR'S SCOPE UNLESS PROVIDED OTHERWISE IN BHEL SCOPE AS FREE ISSUE.

5.3.4 COSUMABLIS FOR BHEL SUPLLIED EQUIPMENTS (CRANES, T &P ETC)

REFER RELEVANT CLAUSE OF SECTION-7 SPECIAL CONDITIONS OF CONTRACT IN THIS REGARD.

5.4 WELDING ELECTRODES

CONTRACTOR, AT HIS COST, SHALL ARRANGE ALL THE REQUIRED WELDING ELECTRODES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN PRIOR APPROVAL OF BHEL, BEFORE PROCUREMENT, REGARDING MANUFACTURER, TYPE OF ELECTRODES ETC. ON RECEIPT

OF THE ELECTRODES AT SITE, IT SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY BHEL REGARDING TYPE OF ELECTRODES, BATCH NUMBER, DATE OF EXPIRY ETC. BATCH TEST CERTIFICATES SHALL BE MADE AVAILABLE FOR VERIFICATION & RECORD BEFORE THE ACTUAL USE OF THE WELDING CONSUMABLES.

BHEL RESERVES THE RIGHT TO REJECT THE USE OF ANY ELECTRODES, IF FOUND NON-ACCEPTABLE BECAUSE OF BAD QUALITY, DETERIORATION IN QUALITY DUE TO IMPROPER STORAGE, SHELF LIFE EXPIRY, UNAPPROVED TYPE / BRAND ETC.

5.5 FIELD OFFICE

5.5.1

THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR FIELD OFFICE AND STORES FOR ACCOMMODATING NECESSARY EQUIPMENTS, TOOLS ROOM FOR EXECUTION OF THE WORK. ONLY OPEN SPACE WILL BE PROVIDED BY BHEL / CUSTOMER, FREE OF CHARGES WITHIN THE PROJECT PREMISES AS PER THE AVAILABILITY OF SPACE.

5.5.2

ON COMPLETION OF WORK, ALL THE TEMPORARY BUILDINGS, STRUCTURES, PIPELINES, CABLES, ETC SHALL BE DISMANTLED AND LEVELED AND DEBRIS SHALL BE REMOVED AS PER INSTRUCTION OF BHEL BY THE CONTRACTOR AT HIS COST. IN THE EVENT OF HIS FAILURE TO DO SO, BHEL WILL ARRANGE TO REMOVE AND EXPENDITURE THEREOF INCLUDING BHEL OVERHEARD EXPENSES (PRESENTLY @30%) WILL BE RECOVERED FROM THE CONTRACTOR. THE DECISION OF BHEL ENGINEER IN THIS REGARD SHALL BE FINAL. HOWEVER, THE SCOPE OF DISMANTLING AND LEVELING THE AREA IS LIMITED ONLY TO THE CONTRACTOR'S SITE OFFICE, YARD AND OTHER SPACES OCCUPIED BY THE CONTRACTOR.

5.6 AREA LIGHTING

CONTRACTOR SHALL ARRANGE ADEQUATE FLOODLIGHTS, HAND LAMPS AND AREA LIGHTING. CONTRACTOR SHALL USE HIS OWN MATERIALS LIKE CABLES, FUSES, AND SWITCHBOARDS ETC. BHEL/CLIENT WILL NOT PROVIDE ANYTHING IN THIS REGARD.

5.7 CONSTRUCTION POWER & WATER

5.7.1

CONSTRUCTION POWER (THREE PHASE, 415V / 440V) WILL BE PROVIDED AT ONE POINT NEAR THE SITE APPROXIMATELY 500 METERS FROM ERECTION SITE **FREE OF CHARGE**. HOWEVER TAXES, DUTIES, LEVIES IF ANY SHALL BE BORNE BY THE CONTRACTOR. REQUIRED ENERGY METER, ALL CABLES, FUSES, DISTRIBUTION BOARDS, SWITCHES, SWITCHBOARDS, BUS BARS, EARTHING ARRANGEMENTS, PROTECTION DEVICES e.g. ELCB, IF ANY, AND ANY OTHER INSTALLATION AS SPECIFIED BY STATUTORY AUTHORITY, CLIENT IN THIS REGARD, FOR DRAWL OF CONSTRUCTION POWER SHALL BE ARRANGED BY THE CONTRACTOR. OBTAINING APPROVALS, PAYMENT OF NECESSARY FEES, DUTIES ETC. TOWARDS THE CLEARANCE OF SUCH INSTALLATIONS, PRIOR TO THESE BEING PUT TO USE OR AS MAY BE SPECIFIED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

5.7.2

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE, MAINTAIN THE COMPLETE INSTALLATION ON THE LOAD SIDE OF THE SUPPLY WITH DUE REGARD TO THE SAFETY REQUIREMENTS AT SITE. ALL CABLING AND INSTALLATIONS SHALL COMPLY IN ALL RESPECTS WITH THE APPROPRIATE STATUTORY REQUIREMENTS. LICENSED AND EXPERIENCED ELECTRICIAN SHALL DO THE INSTALLATION AND MAINTENANCE OF THIS.

5.7.3

THE CUSTOMER WILL PROVIDE WATER FOR CONSTRUCTION PURPOSE AT A SINGLE POINT FREE OF CHARGE. HOWEVER, TAXES, DUTIES, LEVIES, CHARGES, IF ANY, SHALL BE BORNE BY THE CONTRACTOR. ALL ARRANGEMENTS FOR FURTHER DISTRIBUTION BEYOND THIS POINT HAVE TO BE MADE BY THE CONTRACTOR.

5.7.4

CONTRACTOR SHALL BE WELL EQUIPPED WITH BACK-UP POWER SUPPLY ARRANGEMENT LIKE DG SET AND DIESEL OPERATED WELDING MACHINE ETC. TO TACKLE SITUATIONS ARISING DUE TO FAILURE OF CUSTOMER SUPPLIED POWER, SO AS TO ENSURE CONTINUITY AND COMPLETION OF CRITICAL PROCESSES THAT ARE UNDERWAY AT THE TIME OF POWER FAILURE OR IMPORTANT ACTIVITIES PLANNED IN IMMEDIATE FUTURE.

5.7.5

BHEL IS NOT RESPONSIBLE FOR ANY LOSS OR DAMAGE TO THE CONTRACTOR'S EQUIPMENT AS A RESULT OF VARIATIONS IN VOLTAGE OR FREQUENCY OR INTERRUPTIONS IN POWER SUPPLY.

5.8 RESPONSIBILITIES WITH REGARD TO LABOUR EMPLOYMENT ETC.

REFER CLAUSE 2.8 OF GENERAL CONDITIONS OF CONTRACT ALSO IN THIS REGARD.

5.8.1

CONTRACTOR SHALL ALSO COMPLY WITH THE REQUIREMENTS OF LOCAL AUTHORITIES/ PROJECT AUTHORITIES CALLING FOR POLICE VERIFICATION OF ANTECEDENTS OF THE WORKMEN, STAFF ETC.

5.8.2

BHEL / CUSTOMER MAY INSIST FOR WITNESSING THE REGULAR PAYMENT TO THE LABOUR. THEY MAY ALSO LIKE TO VERIFY THE RELEVANT RECORDS FOR COMPLIANCE WITH STATUTORY REQUIREMENTS. CONTRACTOR SHALL ENABLE SUCH FACILITIES TO BHEL / CUSTOMER.

5.8.3

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE GATE PASS FOR ALL HIS EMPLOYEES, T&P ETC FOR ENTERING THE PROJECT PREMISES. NECESSARY COORDINATION WITH CUSTOMER OFFICIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO FOLLOW ALL THE PROCEDURES LAID DOWN BY THE CUSTOMER FOR MAKING GATE PASSES. WHERE PERMITTED, BY CUSTOMER / BHEL, TO WORK BEYOND NORMAL WORKING HOURS, THE CONTRACTOR SHALL ARRANGE NECESSARY WORK PERMITS FOR WORKING BEYOND NORMAL WORKING HOURS.

5.8.4.

CONTRACTOR SHALL PROVIDE AT DIFFERENT ELEVATION SUITABLE ARRANGEMENT FOR URINAL AND DRINKING WATER FACILITY WITH NECESSARY PLUMBING & DISPOSAL ARRANGEMENT INCLUDING CONSTRUCTION OF SEPTIC TANK. THESE INSTALLATIONS SHALL BE MAINTAINED IN HYGINIC CONDITION AT ALL TIMES.

5.9

IF AT ANY TIME DURING THE EXECUTION OF WORK, IT IS NOTICED THAT THE WORK IS SUFFERING ON ACCOUNT OF NON-AVAILABILITY/SHORTFALL IN PROVISION OF RESOURCES FROM THE CONTRACTOR'S SIDE, BHEL WILL MAKE SUITABLE ALTERNATE ARRANGEMENTS AT THE RISK AND COST OF CONTRACTOR. THE EXPENDITURE INCURRED WITH OVERHEADS THEREON SHALL BE RECOVERED FROM THE CONTRACTOR.

5.9.0 TAXES, DUTIES, LEVIES

Refer to Clause 2.8.4 of General Conditions of Contract. Notwithstanding anything contained therein, the following provisions shall be applicable for this contract.

5.9.1

The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes, BHEL shall have the

right to recover the same from his bills or otherwise as deemed fit. **However, provisions regarding Service Tax and Value Added Tax (VAT) on output services and goods shall be as per following clauses.**

5.9.2 Service Tax & Cess on Service Tax

Service Tax and Cess on Service Tax as applicable on output Services are excluded from contractor's scope; therefore contractor's price/rates shall be **exclusive** of Service Tax and Cess on Output Services. In case, it becomes mandatory for the contractor under provisions of relevant act/law to collect the Service Tax & Cess from BHEL and deposit the same with the concerned tax authorities, such applicable amount will be paid by BHEL.

Contractor shall submit to BHEL documentary evidence of Service Tax registration certificate specifying name of services covered under this contract. Contractor shall submit serially numbered Service Tax and Cess Invoice, signed by him or a person authorized by him in respect of taxable service provided, and shall contain the following, namely,

**The name, address and the registration number of the contractor,
The name and address of the party receiving taxable service,
Description, classification and value of taxable service provided and,
The service tax payable thereon.**

All the four conditions shall be fulfilled in the invoice before release of service tax payment.

Contractor shall obtain prior written consent from BHEL before billing the amount towards such taxes.

With introduction of Cenvat Credit Rules 2004, which came into force w.e.f. 10.09.2004, Excise Duty paid on Input Goods including Capital Goods and Service Tax paid on Input Services that are used for providing the output services can be taken credit of against the Service Tax payable on output services. However BHEL may opt for availing the abatement provision in which case cenvat credit may not be available on input duty.

5.9.3 VAT (Sales Tax /WCT)

As regards Value Added Tax (VAT) on transfer of property in goods involved in Works Contract (previously known as Works Contract Tax) applicable as per local laws, the price quoted by the contractor shall be **exclusive** of the same. Where such taxes are required to be paid by the contractor, this will be reimbursed on production of proof of payment made to the authorities by the Contractor. In any case the Contractor shall register himself with the respective Sales Tax authorities of the state and submit proof of such registration to BHEL along with the first RA bill. The contractor has to take all necessary steps to **minimize tax on input goods** by purchasing the materials from any registered dealer of the concerned state only. In case contractor opts for composition, it will be with the prior express consent of BHEL. Deduction of tax at source shall be made as per the provisions of law unless otherwise found exempted. In case tax is deducted at source as per the provisions of law, this is to be construed as an advance tax paid by the contractor and no reimbursement thereof will be made unless specifically agreed to.

5.9.4 Modalities of Tax Incidence on BHEL

Wherever the relevant tax laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor.

5.9.5 New Taxes/Levies

In case the Government imposes any new levy/tax on the output service/goods/work after award of the contract, the same shall be reimbursed by BHEL at actual.

In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer, the Bidder/Contractor must convey its impact on his price duly substantiated by documentary evidence in support of the same **before opening of Price Bid**. Claim for any such impact after opening the Price Bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

No reimbursement/recovery on account of increase/reduction in the rate of taxes, levies, duties etc. on input goods/services/work shall be made. Such impact shall be taken care of by the Price Variation/Adjustment Clause (PVC) if any. In case PVC is not applicable for the contract, Bidder has to make his own assessment of the impact of future variation if any, in rates of taxes/duties/ levies etc. in his price bid.

5.10.0 SUBMISSION OF PERIODICAL REPORTS

CONTRACTOR SHALL SUBMIT PERIODICAL REPORTS IN RESPECT OF FOLLOWING ASPECTS OF OPERATION:

CONSUMPTION OF WELDING ELECTRODES AND GASES
CONSUMPTION OF CONSTRUCTION POWER
AVAILABILITY AND UTILIZATION OF BHEL'S CRANES
MANPOWER REPORTS
PROGRESS REPORTS - PERIODICALLY
FIELD CALIBRATION REPORTS

BHEL AT SITE WILL SUGGEST FORMATS FOR THESE REPORTS.

SECTION-6

SPECIAL CONDITIONS OF CONTRACT

6.0 CONTRACTOR'S OBLIGATION IN REGARD TO EMPLOYMENT OF SUPERVISORY STAFF AND WORKMEN

6.1

THE CONTRACTOR SHALL DEPLOY ALL THE SKILLED/SEMISKILLED/ UNSKILLED LABOUR INCLUDING HIGHLY SKILLED WORKMEN ETC. THESE WORKMEN SHOULD HAVE PREVIOUS EXPERIENCE ON SIMILAR JOB. THEY SHALL HOLD VALID CERTIFICATES WHEREVER NECESSARY. BHEL RESERVES THE RIGHT TO INSIST ON REMOVAL OF ANY EMPLOYEE OF THE CONTRACTOR AT ANY TIME IF HE IS FOUND TO BE UNSUITABLE AND THE CONTRACTOR SHALL FORTHWITH REMOVE HIM. CONTRACTOR SHOULD FURNISH A TENTATIVE DEPLOYMENT PLAN OF HIS MANPOWER AS REQUIRED VIDE RELEVANT APPENDIX. ALSO THE ACTUAL DEPLOYMENT WILL BE SO AS TO SATISFY THE ERECTION AND COMMISSIONING TARGETS SET BY BHEL.

6.2

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENGAGE HIS WORKMEN IN SHIFTS AND OR ON OVERTIME BASIS FOR ACHIEVING THE TARGETS SET BY BHEL. THIS TARGET MAY BE SET TO SUIT BHEL'S COMMITMENTS TO ITS CUSTOMER OR TO ADVANCE DATE OF COMPLETION OF EVENTS OR DUE TO OTHER REASONS. THE DECISION OF BHEL IN REGARD TO SETTING THE ERECTION AND COMMISSIONING TARGETS WILL BE FINAL AND BINDING ON THE CONTRACTOR.

6.3

CONTRACTOR SHALL DEPLOY ONLY QUALIFIED AND EXPERIENCED ENGINEERS/ SUPERVISORS. THEY SHALL HAVE PROFESSIONAL APPROACH IN EXECUTING THE WORK.

6.4

THE CONTRACTOR'S SUPERVISORY STAFF SHALL EXECUTE THE WORK IN THE MOST PROFESSIONAL MANNER IN THE STIPULATED TIME. ACCURACY OF WORK AND AESTHETIC FINISH ARE ESSENTIAL PART OF THIS CONTRACT. THEY SHALL BE RESPONSIBLE TO ENSURE THAT THE ASSEMBLY AND WORKMANSHIP CONFORM TO DIMENSIONS AND TOLERANCES GIVEN IN THE DRAWINGS/INSTRUCTIONS GIVEN BY BHEL ENGINEER FROM TIME TO TIME.

6.5

THE SUPERVISORY STAFF EMPLOYED BY THE CONTRACTOR SHALL ENSURE PROPER OUTTURN OF WORK AND DISCIPLINE ON THE PART OF THE LABOUR PUT ON THE JOB BY THE CONTRACTOR. ALSO IN GENERAL THEY SHOULD SEE THAT THE WORKS ARE CARRIED OUT IN A SAFE AND PROPER MANNER AND IN COORDINATION WITH OTHER LABOUR AND STAFF EMPLOYED DIRECTLY BY BHEL OR OTHER CONTRACTORS OF BHEL OR BHEL'S CLIENT.

6.7

IF AT ANY TIME, IT IS FOUND THAT THE CONTRACTOR IS NOT IN A POSITION TO DEPLOY THE REQUIRED ENGINEERS/SUPERVISORS/WORKMEN DUE TO ANY REASON, BHEL SHALL HAVE THE OPTION TO MAKE ALTERNATE ARRANGEMENTS AT THE CONTRACTOR'S RISK AND COST.

6.8 SITE ORGANISATION

THE CONTRACTOR SHALL PROVIDE ADEQUATE STAFFING IN THE FOLLOWING AREAS IN ADDITION TO THE STAFFING REQUIREMENTS OF EXECUTION AS INSTRUCTED/INFORMED BY BHEL FROM TIME TO TIME:

OVERALL PLANNING, MONITORING & CONTROL

QUALITY CONTROL AND QUALITY ASSURANCE

MATERIALS MANAGEMENT

SAFETY, FIRE & SECURITY

INDUSTRIAL RELATIONS AND FULFILLMENT OF LABOUR LAWS AND OTHER STATUTORY OBLIGATIONS.

SECTION-7

SPECIAL CONDITIONS OF CONTRACT

7.0 OBLIGATIONS OF BHEL

7.1 FACILITIES TO BE PROVIDED BY BHEL

7.1.1 SPACE FOR SITE OFFICE / STORES
REFER SECTION-5 IN THIS REGARD.

7.1.2 CONSTRUCTION POWER & WATER
REFER SECTION-5 IN THIS REGARD.

7.1.3 OTHER MATERIALS AND CONSUMABLES:
BHEL SHALL NOT PROVIDE ANY MATERIAL / CONSUMABLES EXCEPTING THOSE SPECIFICALLY MENTIONED AS BHEL SCOPE IN THESE SPECIFICATIONS.

7.1.4 MATERIALS FOR IBR WELDER SITE QUALIFICATION TEST

CONTRACTOR SHALL ARRANGE ALL THE MATERIALS AND PREPARE TEST COUPONS FOR SITE QUALIFICATION TEST OF ALL HIS WELDERS.

7.2 EQUIPMENTS – TOOLS & PLANTS

BHEL WILL MAKE AVAILABLE T&P LISTED IN THE RELEVANT APPENDIX FREE OF CHARGE. FURTHER DETAILS ARE AS UNDER:

7.2.1 CRANES TO BE PROVIDED BY BHEL

7.2.1.1

BHEL WILL MAKE AVAILABLE THE CRANES AS LISTED IN RELEVANT APPENDIX, FREE OF CHARGE TO THE CONTRACTOR ON SHARING BASIS MAINLY FOR THE PURPOSES ENUMERATED VIDE NOTES THEREIN. THESE HAVE TO BE SHARED WITH OTHER AGENCIES / CONTRACTORS OF BHEL. THE ALLOCATION OF CRANES SHALL BE THE DISCRETION OF BHEL ENGINEER, WHICH SHALL BE BINDING ON THE CONTRACTOR.

7.2.1.2

CONTRACTOR SHALL LAY NECESSARY SLEEPER BEDS, BACKFILLING OF APPROACHES WHEREVER NECESSARY FOR SAFE MOVEMENT OF THE CRANES AS DIRECTED BY BHEL. THE CONTRACTOR SHALL ARRANGE NECESSARY SLEEPERS FOR THIS. CONTRACTOR SHALL TRANSPORT THE EQUIPMENTS AND COMPONENTS/SUB ASSEMBLIES/ATTACHMENTS OF BHEL/ BHEL HIRED EQUIPMENTS TO & FRO BETWEEN BHEL STORES AND SITE.

7.2.1.3

CRANES, INCLUDING THE CRANE HIRED BY BHEL, WILL BE INITIALLY ISSUED IN BASIC ASSEMBLED CONDITION. ANY ALTERATION/ADDITION LIKE BOOM REDUCTION/EXTENSION, ASSEMBLY OF COMPONENTS/SUB-ASSEMBLIES NEEDED FOR MODULATING THE CAPACITY/ REACH/OTHER FEATURES OF CRANES AND RESTORATION TO THE STATE AS DIRECTED BY BHEL SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

7.2.1.4

THE DAY-TO-DAY UPKEEP AND RUNNING MAINTENANCE LIKE FILLING / TOPPING UP OF LUBRICANTS, CHANGING FILTERS ETC, OF BHEL CRANES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SPARES IF ANY, REQUIRED IN NORMAL COURSE WILL BE PROVIDED BY BHEL. MAJOR BREAKDOWNS WILL BE ATTENDED TO BY BHEL. FOR HIRED CRANES THESE RESPONSIBILITIES WILL BE IN THE SCOPE OF CRANE HIRING AGENCY. THE CRANES PROVIDED BY BHEL (INCLUDING THE HIRED CRANES) WILL BE WITHDRAWN FOR REGULAR AND CAPITAL MAINTENANCE AS PER THE RESPECTIVE SCHEDULE OF MAINTENANCE. AS FAR AS POSSIBLE SUCH SCHEDULES WILL BE INTIMATED TO THE CONTRACTOR IN ADVANCE AND MAY BE ADJUSTED

DEPENDING ON THE WORK REQUIREMENTS AT SITE. HOWEVER NO CLAIM WHATSOEVER WILL BE ENTERTAINED ON ACCOUNT OF NON-AVAILABILITY OF CRANE(S).

7.2.1.5

LUBRICANTS LIKE ENGINE OIL, CARDIUM COMPOUND, HYDRAULIC OIL, GEAR OIL, GREASE ETC FOR BHEL'S CRANES WILL BE PROVIDED BY BHEL FREE OF CHARGE. SIMILARLY FILTERS FOR CRANES WILL BE PROVIDED FREE OF CHARGE BY BHEL. ALL OTHER CONSUMABLES LIKE COTTON WASTE, CLEANING AGENTS ETC SHALL BE IN THE CONTRACTOR'S SCOPE.

7.2.1.6

CONTRACTOR SHALL PROVIDE THE FUEL FOR ALL THESE CRANES (INCLUDING THE HIRED CRANES). OPERATORS FOR THE CRANES HIRED BY BHEL WILL BE PROVIDED BY THE CRANE HIRING AGENCY OF BHEL. BHEL SHALL PROVIDE THE OPERATORS FOR BHEL CRANES AS REMARKED IN THE RELEVANT APPENDIX.

7.2.1.7

WHERE THE SERVICES OF THE CRANES PROVIDED BY BHEL ARE TO BE SHARED BY OTHER AGENCIES/ CONTRACTORS OF BHEL, THE CONTRACTOR'S RESPONSIBILITIES DEFINED ABOVE WILL ALSO BE APPORTIONED ACCORDINGLY TO THE BENEFICIARY AGENCY. WORKING ARRANGEMENTS IN THIS REGARD WILL BE DONE AT SITE BY BHEL ENGINEER AND IN ANY CASE HIS DECISION SHALL BE FINAL AND BINDING.

7.3 GENERAL

THE CONTRACTOR MUST NOT USE THESE EQUIPMENTS FOR ANY PURPOSE OTHER THAN WHAT THEY ARE INTENDED FOR. IF THE ABOVE ITEMS ISSUED TO CONTRACTOR ARE FOUND NOT UTILISED / NOT MAINTAINED TO THE SATISFACTION OF BHEL ENGINEER OR MISUSED, THESE WILL BE WITHDRAWN AND NO REPLACEMENT WILL BE DONE FOR SUCH ITEMS.

SECTION-8 (Rev 01, 24/01/2009)
SPECIAL CONDITIONS OF CONTRACT

8.0 Inspection/Quality Assurance/Quality Control/ Statutory Inspection

8.1 Various inspection/quality control/quality assurance procedures/methods at various stages of erection and commissioning will be as per BHEL/customer quality control procedure/codes and other statutory provisions and as per BHEL engineer's instructions.

8.2 Preparation of quality assurance log sheets and protocols with customer/consultants/statutory authority, welding logs, NDE records, testing & calibration records and other quality control and quality assurance documentation as per BHEL engineer's instructions, is within the scope of work/specification. These records shall be submitted to BHEL/customer for approval from time to time.

The protocols between contractor and customer/ BHEL shall be made prior to installation for correctness of foundations, materials, procedures, at each stage of installation, generally as per the requirement of customer/ BHEL. This is necessary to ensure elimination of errors or keeping them within tolerable limits and to avoid accumulation and multiplication of errors.

8.3 A daily log book should be maintained by every supervisor/engineer of contractor on the job in duplicate (one for BHEL and one for contractor) for detailing and incorporating alignment/clearance / centering / leveling readings and inspection details of various equipments etc.

High pressure welding details like serial number of weld joints, welders name, date of welding, details of repair, heat treatment etc. will be documented in welding log as per BHEL Engineer's instructions.

Record of radiography containing details like serial number of weld joints, date of radiography, repairs, if any, re-shots etc shall also be maintained as per BHEL Engineer's instructions.

Record of heat treatments performed shall be maintained as prescribed by BHEL.

8.4 The performance of welders will be reviewed from time to time as per the BHEL standards. Welders' performance record shall be periodically furnished for scrutiny of BHEL's Engineer. Corrective action as informed by BHEL shall be taken in respect of those welders not conforming to these standards. This may include removal/ discontinuance of concerned welder(s). Contractor shall arrange for the alternate welders immediately.

8.5 All the welders shall carry identity cards as per the proforma prescribed by BHEL/Customer/Consultant. Only welders duly authorized by BHEL/customer/consultant shall be engaged on the work.

8.6 Contractor shall provide all the measuring monitoring devices (MMDs) required for completion of the work satisfactorily. These MMDs shall be of brand, quality and accuracy specified by BHEL Engineer and should have necessary calibration and other certificates as per the requirement of BHEL Engineer. Decision of BHEL Engineer regarding acceptance or otherwise of the measuring instruments/gauges/tools for the work under this specification, is final and binding on the contractor. The indicative list of MMDs required for this work and to be made available by the contractor is given in relevant appendix. The list will be reviewed by BHEL and the contractor shall meet any augmentation needed wherever required.

8.7 It is the responsibility of the contractor to prove the accuracy of the testing/measuring/calibrating equipments brought by him based on the periodicity of calibration as called for in the BHEL's quality assurance standards/BHEL Engineer's instructions.

8.8

Any re-laying or re-termination of cables/re-erection of instruments/ recalibration of instruments etc. required due to contractor's mistake or design requirement and found at any stage inspection, shall be carried out by the contractor at no extra cost.

8.9 BHEL, Power Sector – Western Region (PSWR) has already been accredited with ISO 9002 certification and as such this work is subject to various audits to meet ISO 9002 requirements. One particular aspect which needs special mention is about arrangement of calibration of instruments by the contractor. Contractor shall ensure deployment of reliable and calibrated MMDs (Instrument Measuring and Test Equipment). The MMDs shall have test / calibration certificates from authorised / Government approved / Accredited agencies traceable to National / International Standards. Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract price. The contractor will also have alternate arrangements for such MMDs so that work does not suffer when the particular equipment / instrument is sent for calibration. Also if any MMDs not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall ie repeat the readings taken by that instrument, failing which BHEL may deploy MMD and retake the readings at Contractor's cost.

8.10 Re-work necessitated on account of use of invalid MMDs shall be entirely to the contractor's account. He shall be responsible to take all corrective actions, including resource augmentation if any, as specified by BHEL to make-up for the loss of time.

8.11 In the courses of erection, it may become necessary to carry repeated checks of the work with instruments recently calibrated, re-calibrated. BHEL may counter/ finally check the measurements with their own MMDs. Contractor shall render all assistance in conduct of such counter/final measurements.

8.12 Vibration indicators / vibration recorders / vibration analysers will be provided by BHEL for checking and analysing vibration levels of rotating equipments with necessary operators. Contractor shall provide necessary labour for carrying out such tests.

8.13 Total Quality is the watchword of the work and Contractor shall strive to achieve the Quality Standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and Quality Standards. Contractor shall provide the services of Quality Assurance Engineer.

8.14 Stage Inspection By FES/QA Engineers

Apart from day-to-day inspection by BHEL Engineers stationed at Site and Customer's Engineers, stage inspection of equipments under erection and commissioning at various stages shall also be conducted by teams of Engineers from Field Engineering Services of BHEL's Manufacturing Units, Quality Assurance teams from field Quality Assurance, Unit/Factory Quality Assurance and Commissioning Engineers from Technical Services etc. Contractor shall arrange all labour, tools and tackles etc for such stage inspections free of cost.

8.15 Any modifications suggested by BHEL FES and QA Engineers' team shall be carried out. Claims of contractor, if any, shall be dealt as per Section 13, and provided such modifications have not arisen for reasons attributable to the contractor.

Statutory Inspection of Work

8.16 The work to be executed under these specifications has to be offered for inspection, at appropriate stages of work completion, to various statutory authorities for compliance with applicable regulations.

The work related statutory inspections, though not limited to, are as under:

- 1) Inspectorate of steam boilers and smoke nuisance
- 2) Factory Inspector, Labour Commissioner, Electrical Inspector PF Commissioner and other authority connected to this project work

The scope includes getting the approvals from the statutory authorities, which includes arranging for inspection visits of statutory authority periodically as per BHEL Engineer's instructions, arranging materials for ground inspection, taking rub outs for the pressure parts to be offered for inspection, submitting co-related inspection reports, documents, radiographs etc and following up the matter with them. Contractor shall also make all arrangements for offering the Products / Systems for inspection at location, as applicable, to the concerned authority.

- 8.17 Contractor should be qualified to execute pressure parts & piping work coming under the purview of IBR, for which he should register himself with CIB of state concerned. contractor also should be aware of the latest IBR regulations and Electricity Act, including the amendments thereof.
- 8.18 All fees connected with the contractors for testing his welders / men / workers and testing, inspection, calibrating of his instruments and equipments, shall be paid by the contractor. It shall be contractor's responsibility to obtain approval of Statutory Authorities, wherever applicable, for the conducting of any work which comes under the purview of these authorities.
- 8.19 Other fees like fees for periodic visits, hydraulic test fees, light up inspection fees etc. shall be borne by the contractor.
- 8.20 Payment of Registration fees for Boiler is excluded from the scope.
- 8.21 BHEL shall pay the ground inspection fees of Boiler Inspectorate. All other arrangements for site visits periodically by Boiler Inspector to site, for obtaining Inspection certificate etc, will have to be made by contractor.
- 8.22 The quality management system of BHEL, Power Sector – Western Region (PSWR) has already been certified and accredited under ISO 9002 standards in this regard. The basic philosophy of the quality management system is to define the organizational responsibility, work as per documented procedures, verify the output with respect to acceptance norms, identify the non-conforming product/ procedure and take corrective action for removal of non-conformance specifying the steps for avoiding recurrence of such non-conformities, & maintain the relevant quality records. The non-conformities are to be identified through the conduct of periodical audit of implementation of quality systems at various locations/stages of work. Suppliers/vendors of various products/services contributing in the work are also considered as part of the quality management system. as such the contractor is expected not only to conform to the quality management system of BHEL but also it is desirable that they themselves are accredited under any quality management system standard.

Field Quality Assurance

- 8.23 Contractor shall carry out all activities conforming to the approved Field Quality Plan (FQP) as revised from time to time. Total quality shall be the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and quality standards. Contractor shall provide the services of quality assurance engineer as per the relevant clauses.

SECTION-9

SPECIAL CONDITIONS OF CONTRACT

Safety, Occupational Health and Environmental Management

BHEL PSWR has been certified for Environmental Management under ISO 14001:1996 standard and Occupational Health & Safety under OHSAS 18001 by DNV. In order to comply with the above standards, it shall be the endeavour of BHEL and all its subcontractors to meet and implement the requirements by following the guidelines issued under Environmental, Occupational Health and Safety Management (EHS) manual a copy of which will be available with the BHEL Site-in-charge.

Contractor shall also enter into a "Memorandum of Understanding" as given in clause 9.9 in case of award of contract.

9.0 Responsibility of the Contractor in Respect of Safety of Men, Equipment, Material and Environment.

9.1 The Contractor shall:

9.1.1

Abide by the Safety Regulations applicable for the Site/Project and in particular as mentioned in the booklet "Safe Work Practices" issued by BHEL. Contractors are also to ensure that their employees and workmen use safety equipments as stipulated in the Factories Act (Latest Revision) during the execution of the work. Failure to use safety equipment as required by BHEL Engineer will be a sufficient reason for issuance of memo, which shall become part of Safety evaluation of the contractor at the end of the Project. Also all site work may be suspended if it is found that the workmen are employing unsafe working practice and all the costs/losses incurred due to suspension of work shall be borne by contractor. A comprehensive list of National Standards from which the contractor can draw references for complying with various requirements under this section is given under 9.10

9.1.2

Hold BHEL harmless and indemnified from and against all claims, cost and charges under Workmen's Compensation Act 1923 and 1933 and any amendment thereof and the contractor shall be solely responsible for the same.

9.1.3

Abide by the Procedure governing entry/exit of the contractor's personnel within the Customer/Client premises. All the contractors employees shall be permitted to enter only on displaying of authorized Photo passes or any other documents as authorized by the Customer/Client.

9.1.4

Be fully responsible for the identity, conduct and integrity of the personnel/workers engaged by them for carrying out the contract work and ensure that none of them are ever engaged in any anti national activity

9.1.5

Prepare a signboard giving the following information and display it near work site:

- i) Name of Contractor
- ii) Name of Contractor Site-in-charge & Telephone number

- iii) Job Description in short
- iv) Date of start of job
- v) Date of expected completion
- vi) Name of BHEL Site-in-charge.

9.1.6

Abide by the rules and regulations existing during the contract period as applicable for the contractors at the Project premises.

9.1.7

Observe the timings of work as advised by BHEL Engineer-in-charge for carrying out the contract work.

9.2 **SPECIAL CONDITIONS**

9.2.1 **Safety**

9.2.1.1 **Safety Plan**

Before commencing the work, contractor shall submit a "safety plan" to the authorized BHEL official. The safety plan shall indicate in detail the measures that would be taken by the contractor to ensure safety to men, equipment, material and environment during execution of the work. The plan shall take care to satisfy all requirements specified hereunder.

The contractor shall submit "safety plan" before start of work. During negotiations, before placing of work order and during execution of the contract, BHEL shall have right to review and suggest modifications in the safety plan. Contractor shall abide by BHEL's decision in this respect.

9.2.1.2

The contractor shall take all necessary safety precautions and arrange for appropriate appliances and/or as per direction of BHEL or its authorized person to prevent loss of human lives, injuries to men engaged and damage to property and environment.

9.2.1.3

The contractor shall provide to his work force and also ensure the use of Personnel Protection Equipment (PPE) as found necessary and/or as directed and advised by BHEL officials without which permission is liable to be denied.

- Safety helmets conforming to IS 2925/1984 (1990)
- Safety belts conforming to IS 3521/1989
- Safety shoes conforming to IS 1989 part-II /1986(1992)
- Eye and face protection devices conforming to IS 2573/1986(1991), IS 6994 (1973), part-I (1991), IS 8807/1978 (1991), IS 8519/1977(1991).
- Other job specific PPEs of standard ISI make as may be prescribed

9.2.1.4

All tools, tackles, lifting appliances, material handling equipment, scaffolds, cradles, cages, safety nets, ladders, equipment, etc used by the contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorized BHEL official who shall have the right to ban the use of any item found to be unsafe.

9.2.1.5

All electrical equipment, connections and wiring for construction power, its distribution and use shall conform to the requirements of Indian Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the contractor to carryout all types of electrical works. All electrical appliances including portable electric tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed.

9.2.1.6

The contractor shall not use any hand lamp energized by electric power with supply voltage of more than 24 volts. For work in confined spaces, lighting shall be arranged with power source of not more than 24 volts.

9.2.1.7

The contractor shall adopt all fire safety measures as per relevant Indian Standards

9.2.1.8

Where it becomes necessary to provide and/or store petroleum products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the contractor shall be responsible for carrying out such provisions and/or storage in accordance with the rules and regulations laid down by the relevant government acts, such as petroleum act, explosives act, petroleum and carbides of calcium manual of the chief controller of explosives, Government of India etc. The contractor in all such matters shall also take prior approval of the authorized BHEL official at the site.

9.2.1.9

Proper means of access must be used e.g. ladders, scaffolds, platforms etc. No makeshift access such as oil drums or pallets shall be used. Design of these will be in accordance with relevant standards and certified by competent persons before use.

9.2.1.10

Temporary arrangements made at Site for lifting , platforms, approach access etc should be properly designed and approved before being put to use.

9.2.1.11

All excavations and openings must be securely and adequately fenced/barricaded and warning signs erected when considered necessary as per relevant code of practice.

9.2.1.12

No persons shall remove guardrails, covers or protective devices unless authorized by a responsible supervisor and alternative precautions have been taken

9.2.1.13

Access ways, means of escape and fire exits shall be clearly marked, kept clear and unobstructed at all times

9.2.1.14

Only authorized persons holding relevant license will drive and operate site plant and equipments e.g. cranes, dumpers, excavators, transport vehicles etc

9.2.1.15

Only authorized personnel are allowed to repair, commission electrical equipments.

9.2.1.16

Gas Cylinders shall be handled and stored as per Gas Cylinders Rules and relevant safe working practices

9.2.1.17

All wastes generated at Site shall be segregated and collected in a designated place so as to prevent spillage/contamination/scattering at Site, until the waste is lifted for disposal to designated disposal area as advised by BHEL official.

9.2.1.18

The contractor shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working when natural day light is not adequate for clear visibility.

9.2.1.19

The contractor shall train adequate number of workers/supervisors for administering "FIRST AID". List of competent first aid administrators should be prominently displayed.

9.2.1.20

The contractor shall display at strategic places and in adequate numbers the following in fluorescent markings

- Emergency telephone numbers
- Exit, Walkways
- Safe working load charts for wire ropes, slings, D shackles etc
- Warning signs

9.2.1.21

The contractor shall be held responsible for any violation of statutory regulations (local, state or central) and BHEL instructions that may endanger safety of men, equipment, material and environment in his scope of work or other contractors or agencies. Cost of damage, if any, to life and property arising out of such violation of statutory regulations and BHEL instructions shall be borne by the contractor.

9.2.1.22

In case of a fatal or disabling injury/accident to any person at construction sites due to lapses by the contractor, the victim and/or his/her dependents shall be compensated by the contractor as per statutory requirements. However, if considered necessary, BHEL shall have the right to impose appropriate financial penalty on the contractor and recover the same from payments due to the contractor for suitably compensating the victim and/or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by BHEL giving opportunity to the contractor to present his case.

9.2.1.23

In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover cost of such damages from payments due to the contractor after holding an appropriate enquiry.

9.2.1.24

In case of any delay in the completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have the right to recover cost of such delay from payments due to the contractor after notifying the contractor suitably and giving him opportunity to present his case.

9.2.1.25

If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given a reasonable opportunity to do so, and/or if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorized BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor after giving a notice of not less than seven days indicating the steps that would be taken by BHEL.

9.2.1.26

Emergency Response

BHEL will have an Emergency Response Plan for each Project Site in consultation with the Owner as the case may be, detailing the procedure for mobilization of personnel and equipment, and defining the responsibilities of the personnel indicated, in order to prepare for any emergency that may arise in order to ensure the priorities of

- Safeguard of life
- Protect assets under construction or neighbouring
- Protect environment
- Resumption of normal operations as soon as the emergency condition is called off

All Contractors shall also be part of the Emergency response Plan and the personnel so nominated shall be aware of their duties and responsibilities in an emergency response situation.

9.2.1.27

At least 5% Contractors supervisors and workmen shall undergo training in administering 'First Aid'. The trained persons should represent for all categories of work and for all areas of work. Adequate number of trained persons should be available for each shift. These first aides shall be included in the emergency response team. Contractor employees and workmen are encouraged to participate in first aid training programmes whenever organized by BHEL.

9.2.2 OCCUPATIONAL HEALTH

9.2.2.1

Specific occupational health hazards will be identified through the hazard evaluation processes in consultation with BHEL engineers and the necessary prevention/reduction/elimination methods implemented.

9.2.2.2

All personnel working in an activity with a potential risk to health shall be made aware of all those risks and the actions they must take to reduce/control/eliminate the risk

9.2.2.3

Safety coordinator shall conduct periodic checks to ensure that every group of workers engaged in similar activities are aware of potential risks to health and the actions required to be taken to mitigate the risk

9.2.2.4

In order to protect personnel from associated health hazards, the following main areas will be focused

- Issue of approved Personnel Protective Equipment
- Verification that the PPE are adequate/maintained and worn by all staff involved in operations that are potentially hazardous to their health
- Ensure that the personnel deployed are physically fit for the operation/work concerned
- Provide hygienic and sanitary working conditions

9.2.2.5

Contractor workers employees engaged in noise risk areas shall be issued with hearing protection aids and the use of the same will be enforced. Further, these workers will be educated on the hazards of noise

9.2.2.6

Contractor workers engaged in dust environment shall be issued with necessary dust protection aids and the use of the same shall be enforced

9.2.2.7

Workers engaged in exposure to bright light/rays as in welding or radiation shall be issued with eye protection devices and the use of the same shall be enforced

9.2.2.8

Adequate arrangements shall be made to provide safe drinking water

9.2.2.9

Health monitoring records on at least sample basis for contractor employees & workmen shall be maintained for persons engaged in specified categories of work. These shall include

- Noise induced hearing loss
- Lung Function test
- Ergonomic Test
- Eye Test for Welders, Grinders, Drivers etc

9.2.3.0 HYGIENE and HOUSEKEEPING

9.2.3.1

Good house keeping and proper hygiene is one of the key requirements of Occupational Health Safety and Environment management. Towards this the contractor shall encourage his workers and supervisors to maintain cleanliness in their area of work.

9.2.3.2

The Contractor shall arrange to place waste bins/chutes at convenient locations for the collection of scrap and other wastes. The bins shall be clearly marked and segregated for metal, non-metal, hazardous and non hazardous wastes.

9.2.3.3

BHEL may take up appropriate remedial measures at the cost of the contractors if the contractors fail in good house keeping and if there is an imminent risk of pollution

9.2.4 ENVIRONMENT MANAGEMENT

9.2.4.1

BHEL has a sound environmental management system, which is to be maintained and implemented by all the contractors. The system allows for project specific objectives to be set and developed sensitive to client requirements, applicable environmental legislation and BHEL's own objectives and policy. BHEL engineers will assess and monitor the environmental impact of their work and lay out objectives for their minimization. The contractors shall implement the objectives for continual improvement of environmental performance. BHEL shall regularly audit environmental impacts and their improvements.

9.2.4.2 WASTE MANAGEMENT

9.2.4.3.1

The objective of waste management is to ensure the safe and responsible disposal of waste, ensuring that it is correctly disposed of and being able to audit the process to ensure compliance.

9.2.4.3.2

Chemical wastes if any shall be collected separately and disposed of to BHEL designated refuse yard as per BHEL advice.

9.2.4.3.3

No dangerous chemicals, noxious waste products or materials will be disposed off on or off site without approval obtained through BHEL.

9.2.4.3.4

All disposal of wastes generated during construction shall be in accordance with all relevant legislation.

9.2.4.3.5

Acid and alkali cleaning wastes shall be neutralized to acceptable norms before disposal to the designated area.

9.2.4.3.6

All necessary measures shall be taken to ensure safe collection and disposal of waste oils. In particular to ensure the prevention of their discharge into surface waters, ground waters, coastal waters or drainages

9.3 SUPERVISION

9.3.1

Contractor must provide at least one full time on site safety coordinator when the manpower engaged is in excess of 50 for the contract activities in the premises. If the manpower is less than 50, the on site safety coordination responsibilities shall be assumed by any one of the contractor's other supervisory staff; however in both the cases, the contractor must specify in writing the name of such persons to the BHEL Engineer in Charge.

9.3.2

Contractor's safety coordinator or his supervisor responsible for safety as the case may be shall conduct at his work site, and document formal safety inspection and audits at least once in a week. Such documents are to be submitted to BHEL Engineer in Charge for his review and record.

Contractor, supervisor must attend all schedule safety meetings as would be intimated to him by the BHEL Engineer in Charge.

9.3.3

Before starting work under any contract, the contractor must ensure that a job specific safety procedures/field practices as required over and above the safety permit conditions are prepared and followed .He should also ensure that all supervisors and workers involved understand and follow this procedures /field practices.

9.3.4

Contractor must ensure that in his work site appropriate display boards are put displaying signs for site safety, potential hazards and precautions required.

9.4.0 **TRAINING & AWARENESS**

9.4.1

Contractor shall deploy experienced supervisors and other manpower who are well conversant with the safety and environment regulations of the Project. The electricians to be deployed on the job should have wireman license.

9.4.2

All Supervisors & Workmen of the Contractor shall undergo Fire safety training/ demonstration whenever arranged by BHEL with the help of either Customer's Fire and Safety department or outside faculty so as to acquire knowledge of fire prevention and also to be able to make use of appropriate fire extinguishers.

9.4.3

Contractor must familiarize himself from BHEL Engineer in Charge about all known potential fire, explosion or toxic release hazards related to the contract. He in turn will ensure that same information has been passed to the supervisors and workmen

9.4.4

Contractor must ensure that all his supervisors are properly trained and each employee has received and understood from his supervisor necessary training and briefing about the safety requirement. Necessary document as a means to verify that employees have understood the training is to be maintained.

9.4.5

The contractor supervisors shall also give a small safety briefing to all the workmen under his charge before undertaking any new work and specially understand the safety requirements that are mandatory

9.5.0 REPORTING

9.5.1

The contractor shall submit report of all accidents, fires and property damage, dangerous occurrences to the authorized BHEL official immediately after such occurrence but in any case not later than twelve hours of the occurrence. Such report shall be furnished in the manner prescribed by BHEL and also to meet statutory requirement.

9.5.2

Any injury sustained by any of the contractor's employees within the Project premises must be reported to BHEL supervisor and FIRST AID should be immediately administered. The Contractor shall be responsible for keeping and maintaining proper records of Accidents to his personnel.

9.5.3

Contractor must arrange to immediately investigate, properly document and report any injury, accident or near miss involving any of his employees and take appropriate follow up action. He must furnish within 12 hours of the incident a written report to BHEL Engineer in charge and the Safety Section.

9.5.4

According to the Factory Act and the Employees state Insurance Act & regulation, any person sustaining any injury within the project premises and absenting himself from work for more than 46 hours, his accident report has to be sent to the respective Government Authorities. Therefore contractor shall inform the owner's representative such matter immediately for their needful action.

9.5.5

In addition, contractor shall submit periodic reports on safety to the authorised BHEL official from time to time as prescribed.

9.5.6

Before commencing the work, the contractor shall appoint/nominate a responsible officer to supervise implementation of all safety measures and liaison with his counterpart of BHEL.

9.6 AUDIT REVIEW AND INSPECTION

9.6.1

BHEL shall conduct audit on the contractor performance and compliance with the project specific requirements of the Environment and Occupational Health & Safety Management systems. The programme of audit shall cover all activities under the contract but will focus particularly on high-risk activities. The Construction Manager shall decide the schedule of audit. The audit findings shall be communicated to the

contractors and necessary remedial action as advised by BHEL Engineers shall be under taken within the stipulated time.

9.6.2

Inspections shall be carried out regularly by the contractors and by BHEL Engineers on activities, facilities, equipment, documentation, to cover the following aspects.

- Compliance with procedures and systems
- Availability, condition and use of PPE
- Condition of maintenance tools, equipments, facilities
- Availability of fire fighting equipments and its condition
- Use of fire fighting equipments and first aid kit
- Awareness of occupational health hazard
- Awareness of safe working practices
- Presence of quality supervision
- Housekeeping

The Safety coordinator shall visit and inspect work sites daily. All unsafe acts, unsafe conditions that have imminent potential for causing harm/injury/damage will be immediately corrected. He shall maintain a daily logbook giving details of unsafe acts or conditions observed and the corrective action taken and recommendations for preventing recurrence. Adequacy of corrective actions will be verified

The contractor shall take remedial measures as per the findings of each inspection
Besides the above, the contractor shall be required to carry out the following inspections

Sl no	Equipment	Scope of inspection	Inspection by	Schedule
1	Hand tools	To identify unsafe/defective tool	User	Daily
2	Power tools	To identify unsafe/defective tool	User	Daily
3	Fire Extinguishers	To check pressure and any defect	User / Safety Coordinator	Daily Every month
4	Lifting equipment/tackles	To check for defects and efficacy of brakes	User Third party	Daily Every Year
5	PPE	To check for defects	User	Daily

9.7 **NON COMPLIANCE:-**

9.7.1

NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND THE BHEL HAS RIGHT TO IMPOSE FINES ON THE CONTRACTOR AS UNDER **for every instance of violation noticed:**

Sl. No	Instance of Violation	Fine (in Rs)
01.	Not Wearing Safety Helmet	50/-
02.	Not wearing Safety Belt	100/-
03.	Grinding Without Goggles	50/-
04.	Not using 24 V Supply For Internal Work	500/-
05.	Electrical Plugs Not used for hand Machine	100/-
06.	Not Sliding property	200/-
07.	Using Damaged Sling	200/-
08.	Lifting Cylinders Without Cage	500/-
09.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
10.	Not Removing Small Scrap From Platforms	200/-
11.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	200/-
12.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
13.	Improper Earthing Of Electrical T&P	500/-
	Major Accident or Accidents causing partial loss of earning to the victim	50,000/- per victim
14	Fatal Accident or Accidents causing permanent loss of earning to the victim	1,00,000/- per victim

Any other non-conformity noticed not listed above will also be fined as deemed fit by BHEL. The decision of BHEL engineer is final on the above. The amount will be deducted from running bills of the contractor. The amount collected above will be utilised for giving award to the employees who could avoid accident by following safety rules. Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.

9.8

CITATION:-If safety record of the contractor in execution of the awarded job is to the satisfaction of safety department of BHEL, issue of an appropriate certificate to recognize the safety performance of the contractor may be considered by BHEL after completion of the job

9.9 Memorandum of Understanding

After Award Of Work, Contractors Are Required To Enter Into A Memorandum Of Understanding As Given Below:

Memorandum of Understanding

WR is committed to Health, Safety and Environment Policy (EHS Policy) as given in the booklet titled “ Safe Working Practices” issued to all contractors.

M/s _____ do hereby also commit to the same EHS Policy while executing the Contract Number _____

M/s _____ shall ensure that safe work practices not limited to the above booklet are followed by all construction workers and supervisors. Spirit and content therein shall be reached to all workers and supervisors for compliance.

BHEL will be carrying out EHS audits twice a year and M/s _____ shall ensure to close any non-conformity observed/reported within fifteen days.

Signed by authorized representative of M/s-----

Name :

Place & Date:

9.10

Comprehensive list of National Standards for reference and use wherever applicable in the execution of Civil, Erection and Commissioning Contracts.

IS No	YEAR	Amd upto	DESCRIPTION
IS 10204	1982		PORTABLE FIRE EXTINGUISHERS MECHANICAL FOAM TYPE
IS 10245	1994		SPECIFICATION FOR BREATHING APPARATUS
IS 10291	1982		SAFETY CODE FOR DRESS DRIVERS IN CIVIL ENGINEERING WORKS
IS 10658	1983		HIGHER CAPACITY DRY POWDER FIRE EXTINGUISHERS (TROLLEY MOUNTED)
IS 10662	1992		COLOUR TELEVISION
IS 10667	1983		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR PROTECTION OF FOOT AND LEG
IS 11037	1984		ELECTRONIC FAN REGULATORS
IS 11057	1984		INDUSTRIAL SAFETY NETS
IS 11451	1998		RECOMMENDATION FOR SAFETY AND HEALTH REQUIREMENT RELATING TO OCCUPATION EXPOSURE TO ASBESTOS
IS 1169	1967		PEDESTAL FANS
IS 1179	1967		SPECIFICATION FOR EQUIPMENT FOR EYE AND FACE PROTECTION DURING WELDING
IS 11833	1986		DRY POWDER FIRE EXTINGUISHERS FOR METAL FIRES
IS 11972	1987		CODE OF PRACTICE FOR SAFETY PRECAUTION TO BE TAKEN WHEN ENTERING A SEWAGE SYSTEM
IS 1287	1986		ELECTRIC TOASTER
IS 13063	1991		STRUCTURAL SAFETY OF BUILDINGS ON SHALLOW FOUNDATIONS ON ROCKS
IS 13385	1992		SPECIFICATIONS FOR FIRE EXTINGUISHERS 50 LITRE WHEEL MOUNTED WATER TYPE (GAS CARTRIDGES)
IS 13386	1992		SPECIFICATIONS FOR FIRE EXTINGUISHERS 50 LITRE MECHANICAL FOAM TYPE

IS No	YEAR	Amd upto	DESCRIPTION
IS 13415	1992		CODE OF SAFETY FOR PROTECTIVE BARRIERS IN AND AROUND BUILDINGS
IS 13416	1992		RECOMMENDATIONS FOR PREVENTIVE MEASURES AGAINST HAZARDS AT WORKING PLACE PART 1 TO PART 5
IS 13430	1992		CODE OF PRACTICE FOR SAFETY DURING ADDITIONAL CONSTRUCTION AND ALTERATION TO EXISTING BUILDINGS
IS 13849	1993		PORTABLE FIRE EXTINGUISHERS DRY POWDER TYPE (CONSTANT PRESSURE)
IS 1446	1985		CLASSIFICATION OF DANGEROUS GOODS (FIRST REVISION)
IS 1476	1979		REFRIGERATORS
IS 1641	1988		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): GENERAL PRINCIPLES OF FIRE GRADING AND CLASSIFICATION
IS 1642	1989		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS- DETAILS OF CONSTRUCTION
IS 1643	1988		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): EXPOSURE HAZARD
IS 1646	1997		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): ELECTRICAL INSTALLATIONS
IS 1904	1986		CODE OF PRACTICE FOR DESIGN AND CONSTRUCTION OF FOUNDATIONS IN SOIL
IS 1905	1987		STRUCTURAL SAFETY OF BUILDINGS MASONARY WALLS
IS 2082	1985		ELECTRICAL GEYSERS
IS 2171	1985		PORTABLE FIRE EXTINGUISHERS DRY POWDER TYPE (CARTRIDGE)
IS 2309	1989		PRACTICE FOR THE PROTECTION OF BUILDINGS AND ALLIED BUILDINGS AGAINST LIGHTENING
IS 2312	1967		EXHAUST FANS
IS 2361	1994		SPECIFICATION FOR BUILDING GRIPS - FIRST REVISION
IS 2418	1977		TUBULAR FLUORSCENT LAMPS IS 2418 (FT-1)
IS 2750	1964		STEEL SCAFFOLDINGS
IS 2762	1964		SAFE WORKING LOADS IN KGS FOR WIRE ROPE SLINGS
IS 2878	1986		FIRE EXTINGUISHERS CARBON DIOXIDE TYPE (PORTABLE AND TROLLEY MOUNTED)
IS 2925	1984		SPECIFICATION FOR INDUSTRIAL SAFETY HELMETS
IS 3016	1982		CODE OF PRACTICE FOR FIRE PRECAUTIONS IN WELDING AND CUTTING OPERATIONS- FIRST REVISION
IS 3315	1974		DESERT COOLERS
IS 3521	1989		INDUSTRIAL SAFETY BELTS AND HARNESS
IS 368	1983		IMMERSION WATER HEATERS
IS 3696	1991		SAFETY CODE OF SCAFFOLDS AND LADDERS PART 1 TO 2
IS 3737	1996		LEATHER SAFETY BOOTS FOR WORKERS IN HEAVY METAL INDUSTRIES
IS 374	1979		CEILING FANS INCLUDING REGULATORS
IS 3764	1992		EXCAVATION WORK - CODE OF SAFETY

IS No	YEAR	Amd upto	DESCRIPTION
IS 3786	1983		METHOD FOR COMPUTATION OF FREQUENCY AND SEVERITY RATES FOR INDUSTRIAL INJURIES AND CLASSIFICATION OF INDUSTRIAL ACCIDENTS
IS 3935	1966		CODE OF PRACTICE FOR COMPOSITE CONSTRUCTION
IS 4014	1967		CODE OF PRACTICE FOR STEEL TUBULAR SCAFFOLDING
IS 4081	1986		SAFETY CODE FOR BLASTING AND RELATED DRILLING OPERATIONS
IS 4082	1977	1996	STACKING AND STORAGE OF CONSTRUCTION MATERIALS AND COMPONENTS AT SITE
IS 4130	1991		DEMOLITION OF BUILDINGS - CODE OF SAFETY PART 1 TO 2
IS 4138	1977		SAFETY CODE FOR WORKING IN COMPRESSED AIR (FIRST REVISION)
IS 4155	1966		GLOSSARY OF TERMS RELATING TO CHEMICAL AND RADIATION HAZARDS AND HAZARDOUS CHEMICALS
IS 4209	1967		CODE OF SAFETY FOR CHEMICAL LABORATORY
IS 4250	1980		FOOD MIXERS
IS 4262	1967		CODE OF SAFETY FOR SULFURIC ACID
IS 4756	1978		SAFETY CODE FOR TUNNELING WORK
IS 4912	1978		SAFETY REQUIREMENTS FOR FLOOR AND WALL OPENINGS, RAILINGS AND TOE BOARDS
IS 5121	1969		SAFETY CODE FOR PILING AND OTHER DEEP FOUNDATIONS
IS 5182	1969	1982	METHODS FOR MEASUREMENT OF AIR POLLUTION
IS 5184	1969		CODE OF SAFETY FOR HYDROFLUORIC ACID
IS 5216	1982	2000	RECOMMENDATIONS ON SAFETY PROCEDURES AND PRACTICE IN ELECTRICAL WORK PART I AND II
IS 555	1979		TABLE FANS
IS 5557	1995		INDUSTRIAL AND SAFETY LINED RUBBER BOOTS (SECOND REVISION)
IS 5916	1970		SAFETY CODE FOR CONSTRUCTION INVOLVING USE OF HOR BITUMINOUS MATERIALS
IS 5983	1980		SPECIFICATION FOR EYE PROTECTORS - FIRST REVISION
IS 6234	1986		PORTABLE FIRE EXTINGUISHERS WATER TYPE (STORED PRESSURE)
IS 692	1994		CRITERIA FOR SAFETY AND DESIGN OF STRUCTURES SUBJECTED TO UNDERGROUND BLASTS
IS 6994	1973		SPECIFICATION FOR SAFETY GLOVES
IS 7155	1986		CODE OF RECOMMENDED PRACTICE FOR CONVEYOR SAFETY (PART 1 TO 8)
IS 7205	1974		SAFETY CODE FOR ERECTION OF STRUCTURAL STEEL WORK
IS 7293	1974		SAFETY CODE FOR WORKING WITH CONSTRUCTION MACHINERY
IS 7323	1994		GUIDELINES FOR OPERATIONS OF RESERVOIRS
IS 7812	1975		CODE OF SAFETY FOR MERCURY
IS 7969	1975		SAFETY CODE FOR HANDLING AND STORAGE OF BUILDING MATERIALS

IS No	YEAR	Amd upto	DESCRIPTION
IS 8089	1976		CODE OF SAFE PRACTICE FOR LAYOUT OF OUTSIDE FACILITIES IN AN INDUSTRIAL PLANT
IS 8091	1976		CODE OF PRACTICE FOR INDUSTRIAL PLANT LAYOUT
IS 8095	1976		ACCIDENTS PREVENTION TAGS
IS 818	1968	1997	CODE OF PRACTICE FOR SAFETY AND HEALTH REQUIREMENTS IN ELECTRIC AND GAS WELDING, AND CUTTING OPERATIONS
IS 8448	1989		AUTOMATIC LINE VOLTAGE CORRECTOR (STABILISER)
IS 8519	1977		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR BODY PROTECTION
IS 8520	1977		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR EYE, FACE AND EAR PROTECTION
IS 875	1987		STRUCTURAL SAFETY OF BUILDING: LOADING STANDARD PART 1 TO 5
IS 8807	1978		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR PROTECTION OF ARMS AND HANDS
IS 8978	1985		INSTANTANEOUS WATER HEATERS
IS 8989	1978		SAFETY CODE FOR ERECTION OF CONCRETE FRAMED STRUCTURES
IS 940	1989		PORTABLE FIRE EXTINGUISHERS WATER TYPE (GAS CARTRIDGE)
IS 9457	1980		SAFETY COLOURS AND SIGNS
IS 9679	1980		CODE OF SAFETY FOR WORK ENVIRONMENTAL MONITORING
IS 9706	1997		CODE OF PRACTICE FOR THE CONSTRUCTION OF AERIAL RPEWAYS FOR THE TRANSPORTATION OF MATERIAL
IS 9759	1981		GUIDELINES FOR DEWATERING DURING CONSTRUCTION
IS 9815	1989		SERVO MOTOR OPERATED LINE VOLTAGE CORRECTOR (SERVO STABILISER)
IS 9944	1992		RECOMMENDATIONS ON SAFE WORKING LOAD FOR NATURAL AND MAN-MADE FIBRE ROPE SLINGS
IS 996	1979		SINGLE PHASE ELECTRIC MOTORS
ISO 3873	1977		SAFETY HELMET

SECTION-10

DRAWINGS AND DOCUMENTS

10.1

THE DETAILED DRAWINGS, WILL BE ISSUED TO THE CONTRACTOR DURING THE EXECUTION AT SITE. WORK SHALL BE CARRIED OUT AS PER THE “**RFC**” RELEASED FOR CONSTRUCTION DRAWINGS

10.2

TWO SETS OF NECESSARY DRAWINGS/DOCUMENTS TO CARRY OUT THE WORK WILL BE FURNISHED TO THE CONTRACTOR BY BHEL ON LOAN, WHICH SHALL BE RETURNED TO BHEL AFTER COMPLETION OF THE WORK. CONTRACTOR'S PERSONNEL SHALL TAKE CARE OF THESE DOCUMENTS GIVEN TO THEM.

10.3

The data furnished in various sections and appendices and the drawings enclosed with this tender specification describe the equipment to be installed, tested and commissioned under this specification, briefly. However, the changes in the design and in the quantity may be expected to occur as is usual in any such large scale of works.

10.4

If any error or ambiguity is discovered in the specification/information contained in the documents/drawings and tender, the contractor shall forthwith bring the same to the notice of BHEL before submission of offer.

10.5

In case an ambiguity is detected after award of work, the same must be brought to the notice of BHEL before commencement of the work/activity. BHEL's interpretation in such cases will be final and binding on the contractor.

10.6

In case of any conflict between general instructions to tenderness, general conditions of contract contained in sections 1 & 2 respectively and special conditions of contract contained in sections 4 to 15 and appendices, provisions contained in special conditions of contract in sections 4 to 15 and appendices shall prevail.

10.7

In case of discrepancy between quoted item rate and corresponding amount in the rate schedule, the **quoted item rates shall be reckoned as correct and amount recalculated**. Quoted item rates shall also prevail for arriving at the total price quoted for offer evaluation. Offers will be evaluated on the total amount for the entire Rate Schedule and the work will be awarded without splitting the scope.

10.8

Bank Guarantees to be furnished by the contractor towards Security Deposit and Performance Guarantee (last 5% payment against workmanship warranty/defect liability) shall have a claim period of six months over and above the validity period required for the respective cases. BG for advance payment shall be kept valid for a period of two more months beyond the recovery period of the advance with interest thereof.

SECTION-11

SPECIAL CONDITIONS OF CONTRACT

TIME SCHEDULE, MOBILIZATION, PROGRESS MONITORING, OVER RUN, VARIATION ETC.

11.1 TIME SCHEDULE & MOBILIZATION

11.1.1 INITIAL MOBILIZATION AND TENTATIVE SCHEDULE

CONTRACTOR SHALL REACH SITE, MAKE HIS SITE ESTABLISHMENT AND BE READY TO COMMENCE THE WORK WITHIN FOUR WEEKS FROM THE DATE OF FAX LETTER OF INTENT OR AS PER DIRECTIONS OF CONSTRUCTION MANAGER OF BHEL.

THE CONTRACTOR HAS TO SUBSEQUENTLY AUGMENT HIS RESOURCES IN SUCH A MANNER THAT THE ENTIRE WORK IS COMPLETED TO ACHIEVE THE FOLLOWING TENTATIVE SCHEDULE:

SN	MAJOR MILESTONE	COMPLETION PERIOD FOR EACH UNIT
01	FABRICATION OF BUNKER STRUCTURES AND BUNKER, ERECTION, TESTING AND COMPLETION	12 MONTHS

TIME GAP BETWEEN THE EACH UNIT IS 4 MONTHS.

IN ORDER TO MEET ABOVE SCHEDULE IN GENERAL, AND ANY OTHER INTERMEDIATE TARGETS SET, TO MEET CUSTOMER/PROJECT SCHEDULE REQUIREMENTS, CONTRACTOR SHALL ARRANGE & AUGMENT ALL NECESSARY RESOURCES FROM TIME TO TIME ON THE INSTRUCTIONS OF BHEL.

11.1.2 CONTRACT PERIOD

THE TOTAL CONTRACT PERIOD FOR COMPLETION OF ENTIRE WORK UNDER SCOPE SHALL BE **24 (TWENTY FOUR) MONTHS** FROM THE START OF CONTRACT PERIOD.

ACTUAL START OF FABRICATION OF ANY COMPONENT AS DIRECTED AND ACCEPTED BY BHEL SHALL BE RECKONED FOR START OF CONTRACT.

11.1.3 GRACE PERIOD

GRACE PERIOD OF **4 (FOUR)** MONTHS BEYOND THE CONTRACT PERIOD OF 24 (TWENTY FOUR) MONTHS MAY BE PROVIDED FOR THIS CONTRACT AT THE DISCRETION OF BHEL.

11.1.4 CONSEQUENCE OF DELAY

IT MAY BE NOTED THAT IN THE EVENT DELAY IN COMPLETION IS ATTRIBUTABLE TO THE CONTRACTOR AND LEADS TO IMPOSITION OF LIQUIDATED DAMAGES BY BHEL'S CLIENT, BHEL WILL IMPOSE LD ON THE CONTRACTOR AS PER GCC.

11.2 PROGRESS MONITORING, CONTRACT EXTENSION AND OVERRUN

11.2.1 PROGRESS MONITORING

PROGRESS WILL BE REVIEWED PERIODICALLY (DAILY/WEEKLY/MONTHLY) INCLUDING MONTH END REVIEW VIS-A-VIS THE PLANS DRAWN AS ABOVE. THE CONTRACTOR SHALL SUBMIT PERIODICAL PROGRESS REPORTS AND OTHER REPORTS/INFORMATION INCLUDING MANPOWER, CONSUMABLES ETC AS DESIRED BY BHEL.

11.2.2 ASCERTAINING AND ESTABLISHING THE REASONS FOR SHORTFALL

THE ONUS PROBANDI THAT THE CAUSES LEADING TO EXTENSION OF THE CONTRACT PERIOD IS NOT DUE TO ANY REASONS ATTRIBUTABLE TO THE CONTRACTOR IS ON HIM (THE CONTRACTOR). REVIEW OF THE PERFORMANCE AS STATED VIDE CL. 11.2.1 ABOVE WILL BE MADE CONSIDERING THE AVAILABILITY OF COMPONENTS TO BE ERECTED AND OTHER INPUTS / CONSTRAINTS OVER WHICH THE CONTRACTOR HAS NO CONTROL. THE PROGRAMME WILL BE REVIEWED AREA-WISE AND THE FOLLOWING FACTS WILL BE RECORDED IN CASE OF SHORTFALL AT THE END OF EVERY MONTH:

- A) PLANNED OUTPUT NOT ACHIEVED OWING TO NON-AVAILABILITY OF FRONTS.
- B) PLANNED OUTPUT NOT ACHIEVED OWING TO NON-AVAILABILITY OF MATERIALS.
- C) PLANNED OUTPUT NOT ACHIEVED OWING TO NON-AVAILABILITY OF TOOLS AND PLANTS, MANPOWER AND CONSUMABLES BY THE CONTRACTOR OR ANY OTHER REASON ATTRIBUTABLE TO THE CONTRACTOR.
- D) PLANNED OUTPUT NOT ACHIEVED DUE TO ANY OTHER REASONS NOT ATTRIBUTABLE TO THE CONTRACTOR.

11.2.3 CONTRACT EXTENSION

IF THE COMPLETION OF WORK AS DETAILED IN THESE SPECIFICATION GETS DELAYED BEYOND THE END OF CONTRACT PERIOD AND GRACE PERIOD THEN DEPENDING ON THE BALANCE WORK LEFT OUT, BHEL AT ITS DISCRETION MAY EXTEND THE CONTRACT.

11.2.4

A JOINT PROGRAMME SHALL BE DRAWN FOR THE WORK TO BE COMPLETED DURING THE EXTENDED CONTRACT PERIOD. REVIEW OF THE PROGRAM AND RECORD OF SHORTFALL AS DESCRIBE VIDE CLAUSE NO. 11.2.2 SHALL BE DONE DURING THE EXTENDED PERIOD. THE OVER RUN CHARGES WILL BE PAID IN PROPORTION TO THE ACHIEVEMENT OF THE RESPECTIVE MONTH VIS-À-VIS THE PLAN FOR THE MONTH (FOR ASSESSING THE PERFORMANCE, THE AGREED PLAN SHALL BE REDUCED BY SHORTFALL ATTRIBUTABLE TO THE BHEL). BHEL MAY DISALLOW CONTRACTOR'S CLAIM FOR OVER RUN CHARGES IF THE MONTHLY PROGRAMME AS MENTIONED IN THESE SPECIFICATIONS ARE NOT MADE BY HIM.

11.2.5

THE PART OF EXTENSION ATTRIBUTABLE TO THE CONTRACTOR, IF ANY, IN TOTAL CONTRACT EXTENSION SHALL BE EXHAUSTED FIRST i.e., IMMEDIATELY AFTER END OF GRACE PERIOD. THIS SHALL BE FOLLOWED BY THE EXTENSION ON ACCOUNT OF FORCE MAJEURE CONDITIONS, IF ANY, AND LASTLY ON ACCOUNT OF BHEL.

11.2.6 OVERRUN COMPENSATION

IF THE CONTRACT IS EXTENDED BEYOND THE CONTRACT AND GRACE PERIOD FOR ANY REASON OTHER THAN THOSE ATTRIBUTABLE TO THE CONTRACTOR OR FORCE MAJEURE CONDITIONS, THE CONTRACTOR WILL BE COMPENSATED BY PAYMENT OF OVERRUN CHARGES

AT THE RATE OF **RS.2,00,000/-** (RUPEES TWO LAKHS ONLY) PER MONTH. OVERRUN COMPENSATION WILL BE PAID FOR THE EXTENSION ATTRIBUTABLE TO BHEL ONLY. NO OVERRUN COMPENSATION WILL BE PAYABLE FOR THE EXTENSION ON ACCOUNT OF REASONS ATTRIBUTABLE TO CONTRACTOR AND/OR FORCE MAJEURE CONDITIONS. OVERRUN COMPENSATION FOR ELIGIBLE PERIOD SHALL BE IN PROPORTION TO THE PROGRESS ACHIEVED AGAINST THE PLAN FOR RESPECTIVE PERIOD.

11.3 PRICE VARIATION

In order to take care of variation in cost of execution of work on either side, due to variation in the index of LABOUR, DIESEL and ELECTRODE, Price Variation Formula as described herein shall be applicable.

11.3.1

85% component of Contract Value shall be permitted to be adjusted for variation in various relevant indices during execution of work. The remaining 15% shall be treated as fixed component.

11.3.2

The basis for calculation of price variation in each category, their component, Base Index, Base Date of accounting shall be as under:

SL. NO.	CATEGORY	COMPONENT ('K')	BASE INDEX	BASE DATE
A)	LABOUR (ALL CATEGORIES)	40%	CONSUMER PRICE INDEX FOR INDUSTRIAL WORKERS (GENERAL), APPLICABLE TO 'ALL INDIA' AS PUBLISHED BY LABOUR BUREAU, SHIMLA	Base date shall be calendar month of last date of submission of Tender (including extended date of submission if any)
B)	H.S. DIESEL OIL	5%	WHOLE SALE PRICE INDEX (FOR COMMODITY :HIGH SPEED DIESEL) PUBLISHED BY MINISTRY OF COMMERCE AND INDUSTRY (www.eaindustry.nic.in)	...DO...
C)	WELDING ELECTRODE	40%	WHOLE SALE PRICE INDEX (FOR COMMODITY:ELECTRODES) PUBLISHED BY MINISTRY OF COMMERCE AND INDUSTRY (www.eaindustry.nic.in)	...DO...

11.3.3

Payment/recovery due to variation in index shall be determined on the basis of the following notional formula without any initial absorption, in respect of the identified components viz LABOUR, HS DIESEL and ELECTRODE

$$A = K \times R \times \frac{(X_N - X_0)}{X_0}$$

Where

A = Amount to be paid/recovered due to variation in the Index for Labour, Electrode and HS Diesel

K = Percentage component applicable for Labour, Electrode and HS Diesel

R = Value of work done for the billing month

XN = Revised Index No for Labour, Electrode and HS Diesel for the billing month under consideration

Xo = Index no for Labour, Electrode and HS Diesel as on the Base date. Base date for each of the category is defined in the table above

11.3.4

The above Price Variation formula is applicable for the entire Contract period, Grace period, and the extended contract period if any. However for the period extended on account of reasons attributable to the contractor and/or Force Majeure conditions, the price variation will be applied based on the respective indices/prices frozen at the calendar month preceeding the start of such extended period.

11.3.5

The price Variation is not applicable to Over Run Charges, Manday rates for extra works etc.

Similarly Price Variation shall not be applicable for the respective % assigned to milestone activities viz Oil Flushing, Barring Gear, Commissioning of Condensate System, Commissioning of Feed Water System and Synchronisation

11.3.6

The contractor shall furnish necessary monthly bulletins for WHOLE SALE PRICE INDEX (for Commodity :ELECTRODES and HS DIESEL) Published by Ministry of Commerce and Industry (www.eaindustry.nic.in) and CONSUMER PRICE INDEX for INDUSTRIAL WORKERS (GENERAL), applicable to 'All India' as published by Labour Bureau, Shimla.

11.3.7

The contractor will be required to raise the bills for price variation payments on a monthly basis along with the running bills irrespective of the fact whether any increase/decrease in the consumer price index for Labour, HS Diesel and Electrode has taken place or not. In case there is delay in publication of bulletins (final figure), the provisional values as published can be considered for payments and arrears shall be paid/recovered on getting the final values.

11.3.8

The Total Quantum of **Price Variation shall not exceed fifteen percentage (15%) of executed Contract Value**. Executed Contract value for this 15% cap shall not include Overrun charges, Extra works.

11.3.9

With the above provision, the clause no. 2.15 of General Conditions of Contract section-2 is not applicable.

11.4 CONTRACT VARIATIONS

11.4.1 VARIATION IN WEIGHT

WEIGHT OF VARIOUS EQUIPMENTS, QUANTITIES OF VARIOUS ITEMS OF WORK COVERED UNDER THESE SPECIFICATIONS, & INDICATED IN RELEVANT APPENDICES ARE LIKELY TO VARY. FOR ANY UPWARD OR DOWNWARD VARIATION IN THE QUANTITIES, THE RATES ACCEPTED SHALL BE APPLICABLE WITHOUT ANY VARIATION.

11.5 INTEREST BEARING RECOVERABLE ADVANCE

Interest bearing (rate of interest shall be prime leading rate of SBI plus 2% per annum, on monthly reducing balance basis) recoverable advance limited to 5% of the contract value may be paid by BHEL at its discretion depending on the merit of the case against receipt & acceptance of bank guarantee from the contractor for the amount sought. This bank guarantee (BG) shall be valid at least for one year or the recovery duration. In case recovery of dues does not get completed within the aforesaid BG validity period, the contractor must renew the validity of BG or submit fresh BG for the outstanding amount and remaining recovery period. BHEL is entitled to make recovery of the entire outstanding amount in case the contractor fails to comply with the BG requirement as above.

Recovery of dues will be made minimum @ 10% of the admitted gross running bill amount from the first applicable running bill onwards till entire due (principal plus interest) is recovered. In the event sufficient time duration is not left for recovery @10%, the rate of recovery shall be suitably enhanced so that entire due is recovered by the time contractor reaches 90% billing of total value of work executed & within the contract period (including extensions granted or foreclosure if any).

11.6 DEFINITION OF WORK COMPLETION

THE CONTRACTOR'S SCOPE OF WORK UNDER THESE SPECIFICATIONS WILL BE DEEMED TO HAVE BEEN COMPLETED IN ALL RESPECT, ONLY WHEN ALL THE ACTIVITIES ARE COMPLETED SATISFACTORILY AND SO CERTIFIED BY BHEL SITE IN CHARGE. THE DECISION OF BHEL IN THIS REGARD SHALL BE FINAL AND BINDING ON THE CONTRACTOR.

SECTION-12

SPECIAL CONDITIONS OF CONTRACT

12.0 TERMS OF PAYMENT

12.0.1

The contractor shall submit his monthly RA account bills with all the details required by BHEL on specified date every month covering progress of work in all respects and areas for the previous calendar month. However, first RA Bill shall be released only after signing of Contract Agreement.

12.0.2

Clause 2.6 of general conditions of contract shall be referred to as regards mode of payment, and measurement of the work completed.

12.0.3

Release of payment in each running bill will be restricted to 95% of the value of work admitted, as per the percentage break-up for the stage of work completion stipulated vide clauses hereinafter.

The 5% thus remaining shall be on account of workmanship guarantee of work executed. The same will be released after completion of the guarantee period of **12 months** from the date of completion of entire work as certified by BHEL.

However, on specific request of vendor, this amount may be released on pro rata basis for the value of work executed and accepted by BHEL, along with any RA Bill and onwards, subject to receipt and acceptance of bank guarantee of equal amount in BHEL's prescribed format. The BG shall be kept valid till completion of such guarantee period and an additional six months claim period. This is also subject to the condition that the contractor has started the work and also furnished/remitted the initial Security Deposit as per contract.

12.0.4

The payment for running bills will normally be released within around 30 days of submission of running bill with measurement sheets. Contractor shall make his own arrangement for making payment of impending labour wages and other dues in the meanwhile.

12.0.5

BHEL will release payment through Electronic Fund Transfer (EFT)/RTGS. In order to implement this system, the following details are to be furnished by the Contractor pertaining to his Bank Accounts where proceeds will be transferred through BHEL's banker:

1. Name of the Company
2. Name of Bank
3. Name of Bank Branch
4. City/Place
5. Account Number
6. Account type
7. IFSC code of the Bank Branch
8. MICR Code of the Bank Branch

BHEL may also choose to release payment by other alternative modes as suitable.

12.1 STAGES OF PROGRESSIVE PRO-RATA PAYMENTS

100% OF ITEM RATE ON PRORATA BASIS AGAINST MONTHLY RA BILLS AS FOLLOWS.

AS PER SCHEDULE OF RATE FOR ITEM NO. 2301 (b) FOR ERECTION, ALIGNMENT & WELDING CAN BE FURTHER BREAK UP AS FOLLOWS

- (A) ERECTION : 80% OF QUOTED RATE UNDER ITEM 2301 (b)**
- (B) WELDING & ALIGNMENT : BALANCE 20% OF QUOTED RATE UNDER ITEM 2301(b)**

12.3 GENERAL

12.3.1

WEIGHT OF PACKERS AND SHIMS FABRICATED AT SITE WHICH BECOME PERMANENT PART OF EQUIPMENT, WILL BE PAID FOR BASED ON ACTUAL WEIGHT.

12.4 MEASUREMENT OF THE WORK COMPLETED

- A) WHERE PAYMENT IS TO BE MADE ON THE BASIS OF WEIGHT, THE WEIGHT PER UNIT GIVEN IN THE BHEL DOCUMENT ONLY SHALL BE TAKEN IN TO CONSIDERATION. IN CASE SUCH INFORMATION IS NOT AVAILABLE IN BHEL DOCUMENTS, THEN THE LATEST RELEVANT INDIAN STANDARDS IN THIS REGARD MAY BE APPLIED.
- B) SPARES, SURPLUS QUANTITY, ERECTION CONTINGENCY MATERIALS WILL NOT BE PAID FOR UNLESS THE SAME HAS BEEN CONSUMED IN PLACE OF REGULAR ITEM OF MEASURABLE WORK AS PER THE RATE SCHEDULE.
- C) WHERE THE PAYMENT IS MADE ON THE BASIS OF ITEM RATE, ACTUAL EXECUTED QUANTITY MEASURED JOINTLY SHALL ONLY BE PAID FOR.
- D) IT IS CLARIFIED THAT AS FAR AS WEIGHT CONSTITUTED BY WELDING CONSUMABLES AND OTHER CONSUMABLES SUPPLIED BY BHEL AS WELL AS BY THE CONTRACTOR, SHALL NOT BE CONSIDERED FOR PAYMENT.
- E) BHEL ENGINEER'S DECISION REGARDING STAGE OF PAYMENT CORRESPONDING TO PROGRESS OF WORK, CALCULATION OF WEIGHT ETC WILL BE FINAL AND BINDING ON THE CONTRACTOR.
- F) NO SEPARATE PAYMENT SHALL BE MADE FOR PROVIDING GROUT MATERIALS AND GROUTING OF STRUCTURES ETC SPECIFIED ELSEWHERE IN THESE SPECIFICATIONS.

SECTION-13

SPECIAL CONDITIONS OF CONTRACT

13.0 EXTRA CHARGES FOR RECTIFICATION AND MODIFICATION

13.1

IF EXTRA WORKS (REQUIRING LESS THAN **100 MAN-HOURS**) FOR MODIFICATION, REWORK, REVAMPING, IN BRIEF, ANY WORK DONE TO CHANGE THE STATE EXISTING TO A STAGE DESIRED AND ALSO FABRICATION, ALL OR ANY, ARE NEEDED DUE TO ANY CHANGE IN OR DEVIATION FROM THE DRAWINGS AND DESIGN OF EQUIPMENT, OPERATION/ MAINTENANCE REQUIREMENTS, MISMATCHING, TRANSIT DAMAGES AND OTHER ALLIED WORKS WHICH ARE NOT VERY SPECIFICALLY INDICATED IN THE DRAWINGS, BUT ARE FOUND ESSENTIAL FOR SATISFACTORY COMPLETION OF THE WORK, ARE DONE, NO EXTRA CHARGES WILL BE PAID. THE TENDERERS ARE REQUESTED TO TAKE THIS ASPECT INTO ACCOUNT AND THE QUOTED RATE SHOULD INCLUDE ALL SUCH CONTINGENCIES.

13.2

IT MAY ALSO BE NOTED THAT IF ANY SUCH SAID EXTRA WORKS ARISE ON ACCOUNT OF THE CONTRACTOR'S FAULT, IRRESPECTIVE OF TIME CONSUMED IN RECTIFICATION OF THE DAMAGE/LOSS, IT WILL HAVE TO BE CARRIED OUT BY THE CONTRACTOR FREE OF COST. UNDER SUCH CIRCUMSTANCES, ANY MATERIAL AND CONSUMABLE REQUIRED FOR THIS PURPOSE WILL ALSO HAVE TO BE ARRANGED BY THE CONTRACTOR AT HIS COST.

13.3

HOWEVER, BHEL MAY CONSIDER FOR PAYMENT AS EXTRA, FOR SUCH OF THOSE WORKS DETAILED IN CLAUSE 13.1 WHICH REQUIRE MORE THAN **100 MAN-HOURS** AND SUCH PAYMENT WILL BE REGULATED BY THE TERMS, CONDITIONS AND STIPULATIONS CONTAINED IN THE CLAUSES 13.4 TO 13.8 AND/OR 14.2.1 TO 14.2.10 AS THE CASE MAY BE. IT MAY BE SPECIFICALLY NOTED THAT THE DECISION OF BHEL AS TO WHETHER SUCH PAYMENT IS DUE SHALL BE FINAL AND BINDING ON THE CONTRACTOR. IT MAY ALSO BE NOTED THAT ONLY THOSE WORKS THAT ARE IDENTIFIED AS MAJOR AND WARRANT EXTRA PAYMENT AND CERTIFIED AS SUCH BY THE SITE ENGINEER AND ACCEPTED BY THE DESIGNERS AND/OR COMPETENT AUTHORITY OF BHEL, WILL BE CONSIDERED FOR EXTRA PAYMENT.

13.4

FOR EXTRA WORKS ARISING OUT OF TRANSIT, STORAGE AND ERECTION DAMAGES, PAYMENT, IF FOUND DUE, WILL BE REGULATED BY CLAUSES 14.2.1 TO 14.2.10.

13.5

ALL THE EXTRA WORK SHOULD BE CARRIED OUT BY A SEPARATELY IDENTIFIABLE GANG, WITHOUT AFFECTING ROUTINE ACTIVITIES. DAILY LOG SHEETS IN THE PRO-FORMA PRESCRIBED BY BHEL SHOULD BE MAINTAINED AND SHALL BE SIGNED BY THE CONTRACTOR'S REPRESENTATIVE AND BHEL ENGINEER. NO CLAIM FOR EXTRA WORK WILL BE CONSIDERED/ENTERTAINED IN THE ABSENCE OF THE SAID SUPPORTING DOCUMENTS I.E. DAILY LOG SHEETS. IT MAY, HOWEVER BE NOTED THAT SIGNING OF LOG SHEETS BY BHEL ENGINEER DOES NOT MEAN THE ACCEPTANCE OF SUCH WORKS AS EXTRA WORKS. ALL ADMISSIBLE CLAIMS SHALL BE SUBMITTED TO BHEL

13.6

BHEL RETAINS THE RIGHT TO AWARD OR NOT TO AWARD ANY OF THE MAJOR REPAIR/ REWORK/MODIFICATION/RECTIFICATION/FABRICATION WORKS UNDER CLAUSES 13.1 TO 13.6 TO THE CONTRACTOR, AT THEIR DISCRETION WITHOUT ASSIGNING ANY REASON FOR THE SAME.

13.7

EXTRA WORKS THAT ARISE ON ACCOUNT OF CONTRACTOR'S FAULT WILL HAVE TO BE CARRIED OUT BY THE CONTRACTOR FREE OF COST INCLUDING THE SUPPLY OF MATERIAL AND CONSUMABLES

13.8

AFTER ELIGIBILITY OF EXTRA WORKS IS ESTABLISHED AND FINALLY ACCEPTED BY BHEL ENGINEER/DESIGNER, PAYMENT WILL BE RELEASED ON COMPETENT AUTHORITY'S APPROVAL AT THE FOLLOWING RATE.

MAN-DAY RATE FOR ELIGIBLE EXTRA WORKS :

SINGLE AVERAGE MAN-DAY RATE, INCLUDING OVERTIME IF ANY, AND OTHER SITE EXPENSES AND INCIDENTALS, INCLUDING CONSUMABLES, TOOLS AND TACKLES, FOR CARRYING OUT ANY MAJOR REWORK/ REPAIRS/ RECTIFICATION/ MODIFICATION/ FABRICATION OF 8 HOURS AS MAY ARISE DURING THE COURSE OF ERECTION. (REFER CLAUSES 13.1 TO 13.8 AND 14.2.1 TO 14.2.10) WILL BE **RS. 320/- (RUPEES THREE HUNDRED AND TWENTY ONLY).**

NO PAYMENT WILL BE MADE IF AN ITEM OF WORK LASTS LESS THAN 100 MANHOURS.

SECTION-14 (rev:01 dated 02/02/2009)

SPECIAL CONDITIONS OF CONTRACT

INSURANCE

14.1 Marine, Storage cum Erection (MCE) Insurance and Repairing Damages

BHEL/client has an MCE insurance cover, inter-alia, for all the permanent project equipments/components supplied by BHEL under scope of this work by way of a transit and storage cum erection policy covering liability against damages/ losses etc.

14.2

The contractor has to arrange on his own, insurance cover for all the T&P and other construction equipments deployed at site. Such assets are not covered in insurance policy taken by BHEL.

14.3

It shall also be the responsibility of the contractor to arrange for accident risk policy/workmen compensation policy for the staff and workmen.

14.4

The contractor has to provide assistance in lodging and realizing the insurance claims covered by the MCE insurance policy that is taken by BHEL. Scope shall include receipt inspection (shortage/damage/loss reporting) immediately on arrival of consignment, recording such damage/loss/shortage intimation on the LR/RR/LWB duly countersigned by the driver/transporter's representative while acknowledging receipt of consignment to the concerned transporter, intimating the loss/damage/shortage to BHEL, providing assistance for inspection of the reported consignment at the time of insurance survey, liaising with the transporter and insurance company etc.

14.5

In case of theft / damage / loss of materials due to **repeated/continued instances of negligence/failure** attributable to the contractor, the expenses incurred on account of repair/ replacement of such components including BHEL's overhead expenses as applicable (presently @ 30%) in excess of the amount realized from the underwriters, if any, shall be recovered from the contractor. Recovery will be limited to Normal Deductible Franchise (DF)/Excess for every incidence of loss/damage.

14.6

In case any insurance claim does not become tenable due to **willful** negligence/ damage/loss attributable to the contractor, the total cost of repair/replacement including BHEL overhead expenses shall be recovered from the contractor.

SECTION-15 (Rev dated 12/1/2009)
SPECIAL CONDITION OF CONTRACT

15.0 EARNEST MONEY DEPOSIT, SECURITY DEPOSIT & BANK GUARANTEE

15.1 Earnest Money Deposit:

i) EMD for this tender is Rs. 2,00,000/- (Rupees Two lakhs only).

- ii) Bidders who have already deposited One Time EMD of Rs. 2.00 lakh are exempted from submission of EMD for this tender. However a copy of 'One Time EMD' certificate issued by BHEL/PSWR, Nagpur shall be enclosed along with the Offer.
- iii) EMD is to be paid in cash (as permissible under Income Tax Act), Pay order or Demand Draft in favour of Bharat Heavy Electricals Limited and payable at Nagpur.
- iv) No other form of EMD remittance shall be acceptable to BHEL.

15.1.1 EMD by the bidder will be forfeited as per Tender Documents if

- i) After opening the tender, the bidder revokes his tender within the validity period or increases his earlier quoted rates.
- ii) The bidder does not commence the work within the period as per LOI/Contract. In case the LOI / contract is silent in this regard then within 15 days after award of contract.

15.1.2 EMD shall not carry any interest.

15.1.3 In the case of unsuccessful bidders, the Earnest Money will be refunded to them after acceptance of tender by successful bidder

15.2 Security Deposit

15.2.1 Security Deposit shall be furnished by the successful bidder. The rate of Security Deposit will be as below:

SN	Contract Value	Security Deposit Amount
1	Up to Rs. 10 lakhs	10% of Contract Value
2	Above Rs. 10 lakhs upto Rs.50 lakhs	1 lakh + 7.5% of the Contract Value exceeding Rs. 10 lakhs.
3	Above Rs. 50 lakhs	Rs 4 lakhs + 5% of the Contract Value exceeding Rs. 50 lakhs.

The security Deposit should be furnished before start of the work by the contractor.

15.2.2 Security Deposit may be furnished in any one of the following forms

- i. Cash (as permissible under the Income Tax Act)
- ii. Pay Order, Demand Draft in favour of BHEL.
- iii. Local cheques of scheduled banks, subject to realization.

- iv. Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc. (Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).
- v. Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
- vi. Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.
- vii. Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit should be remitted (either by cash/DD or **BG for maximum 50%** of total SD) before start of the work and the balance 50% may be recovered from the running bills.
- viii. EMD of the successful bidder shall be converted and adjusted against the cash Security Deposit excepting for such bidder who has remitted One Time EMD.
- ix. The Security Deposit shall not carry any interest.

NOTE: Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

15.2.3 SECURITY DEPOSIT SHALL NOT BE REFUNDED TO THE CONTRACTOR EXCEPT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT

15.3 BANK GUARANTEE

- i. It is the responsibility of the bidder to get the Bank Guarantees revalidated/extended for the required period as per the advice of BHEL Site Engineer / Construction Manager. BHEL shall not be held liable for issue of any reminders regarding expiry of the Bank Guarantees.
- ii. In case extension/further extensions of any Bank Guarantees are not required, the bidders shall ensure that the same is explicitly conveyed through the Construction Manager to BHEL PSWR/HQ, Nagpur
- iii. In case the Bank Guarantees are not extended before the expiry date, BHEL reserves the right to invoke the same by informing the concerned Bank in writing, without any advance notice/communication to the concerned bidder.
- iv. **Bidders to note that any corrections to Bank Guarantees shall be done by the issuing Bank, only through an amendment in an appropriate non judicial stamp paper.**

- v. Bidders to ensure that the Bank Guarantees submitted are exactly as per format given in the Tender documents.
- vi. The Original Bank Guarantee shall be sent directly by the Bank to BHEL under Registered Post (Acknowledgement Due). However, in exceptional cases, where guarantee is directly received by Vendor, the Vendor shall instruct the Bank to send an unstamped duplicate copy of the guarantee directly to BHEL under Registered Post (Acknowledgement Due).

15.3.1 Guidelines for acceptance of Bank Guarantees are as follows :

- Vendors are advised to obtain BG from any of the following BHEL consortium banks

State Bank of India	The Hongkong and Shanghai banking Corporation Ltd.
ICICI Bank Ltd	ABN Amro Bank N.V
Bank of Baroda	IDBI Ltd
Canara Bank	Punjab National Bank
Citi bank N.A	Standard Chartered Bank
Corporation Bank	State Bank of Travancore
Detshe Bank	State Bank of Hyderabad
HDFC Bank Ltd	Syndicate Bank

- The Bank Guarantees of all Public sector banks shall be accepted (Other than consortium banks also).
- The Bank Guarantees of Co-operative banks shall not be accepted.
- Bank Guarantees of other banks (banks other than consortium bank, public sector bank, & Co-operative banks) can be accepted subject to an overall exposure limit (at BHEL, PSWR, Nagpur) of RS. 10 crores for banks with net worth of more than Rs. 500 crores as on last balance sheet date and Rs 5 crores for banks with net worth between Rs. 350 to Rs 500 crores (A certificate and copy of latest Balance Sheet to be given at the time of submission of bank guarantees .
- In case Bank Guarantees given by non consortium banks (Private sector or Public sector), the bank Guarantees shall be enforceable at Nagpur, Maharastra.

SECTION 16
SUSPENSION OF BUSINESS DEALING WITH CONTRACTORS

16.1 A bidder may be put on HOLD for a period of 6 months, for future tenders for specific works on the basis of one or more of the following reasons:

- I. Bidder does not honour his own offer or any of its conditions within the validity period.
- II. Bidder fails to respond against **three consecutive** enquires of BHEL.
- III. After placement of order, Bidder fails to execute a contract.
- IV. Bidder fails to settle sundry debt account, for which he is legitimately liable, within one year of its occurrence.
- V. Bidder's performance rating falls below 60% in specific category.
- VI. Bidder works are under strike/ lockout for a long period.

16.2 A Bidder may be de-listed from the list of registered Bidders of the region for a period of 1 year on the basis of one or more of the following reasons:-

- I. Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics.
- II. Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL.
- III. Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.

16.3 A Bidder can be banned from doing any business with all Units of BHEL for a period of 3 years on the basis of one or more of the following reasons:

- I. Bidder is found to be responsible for submitting fake/ false/ forged documents, certificates, or information prejudicial to BHEL's interest.
- II. In spite of warnings, the Bidder persistently violates or circumvents the provisions of labour laws/ regulations/ rules and other statutory requirements.
- III. Bidder is found to be involved in cartel formation.
- IV. The Bidder has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage etc which are contrary to business ethics.
- V. The Bidder is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings.
- VI. The Bidder is declared bankrupt, insolvent, has wound up or been dissolved; i.e ceases to exist for all practical purposes.
- VII. Bidder is found to have obtained Official Company information/ documentation by questionable means.
- VIII. Communication is received from the administrative Ministry of BHEL to ban the Bidder from business dealings.

SECTION-17
IMPLEMENTATION OF INTEGETY PACT IN BHEL

INTEGRITY PACT (I P)

- 1.0** The IP shall be a part of tender document and shall be returned by bidder along with techno-commercial bid duly signed by the authorized signatory who signs the bid. The IP duly signed by bidder and authorized official of BHEL will form a part of purchase order/contract.
- 2.0** Only those bidders who have entered into such IP would be competent to participate in the bidding. In other words, entering into this pact would be preliminary qualification.
- 3.0** Independent External Monitor (IEM)- BHEL has appointed IEM as detailed below to oversees the compliance of obligations under IP.

Sh J M LYNGDOH (IAS) Retd

Between

Bharat Heavy Electricals Ltd. (BHEL). A company registered under the Companies Act 1956 and having its registered office at “BHEL house” Sir Fort, New Delhi – 110049 (India) hereinafter referred to as “The Principal” which expression unless repugnant to the context of meaning hereof shall include its successors or assigns of the ONE PARE

And

_____ (description of the party along with address) hereinafter referred to as “The Bidder/ Contractor” which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for

_____ The Principal values full compliance with all relevant laws of the land, rules and regulations and the principles of economic use of resources and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 17.1 - Commitment of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand take a promise for or accept, for itself or third person any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with enquiry and reason. The Principal will in particular before and during the tender process provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 17.2 – Commitment of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - 2.1.1 the Bidder(s)/ Contractor(s) will not directly or through any other person or firm offer promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

- 2.1.2 The bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding whether formal or informal. This applies in particular to prices, specification, certifications , subsidiary contracts submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/PC Act: further the Bidder(s)/ Contractor(s) will not use improperly, for purpose of competition or personal gain or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, transmitted electrically.
- 2.1.4 The Bidders (s)/ Contractor(s) will. When presenting his bid, disclose any and all payments he has made and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third person to commit offences outlined above or be an accessory to such offences.

Section 17.3 – Disqualification from tender process and execution from future contracts

If the Bidder(s)/Contractor(s) before award or during execution has committed a transgression through a violation of Section 2 above or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per separate “Guidelines for Suspension of Business Dealing with Suppliers/ Contractors” framed by the Principal.

Section 17.4 Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3 or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

Section 17.5 – Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country confirming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on his subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 17.6 – Equal treatment of all Bidders/ Contractors/ Sub-Contractors

- 6.1 The Bidder(s)/ Contractor(s) undertake(s) to demand from his sub-contractors a commitment consistent with this Integrity Pact. This commitment shall be taken only from those sub-contractors whose contract value is more than 20% of Bidder's/ Contractor's contract value with the Principal.
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section -17.7 Criminal Charges against violating Bidders/ Contractors/ Sub-contractors

If the Principal obtains knowledge of conduct of a Bidder. Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder. Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regards, the Principal will inform the Vigilance Office.

Section – 17.8 Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.

- 8.3 The Bidder(s)/ Contractors(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest. Unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s)/ Sib-contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meeting could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 8.5 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or heal the situation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right demand from the parties that they act in a specific manner, refrain from action or tolerate action.\
- 8.6 The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposal for correcting problematic situations.
- 8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC/PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.10 The word 'Monitor' would include both singular and plural.

Section 17.9 – Pact Duration

- 9.1 This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.
- 9.2 If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this Pact as specified as above, unless it is discharged/ determined by the CMD, BHEL

Section 17.10 – Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those Bidders/ Contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On Behalf of the Principal
(Office Seal)

For & On Behalf of the Bidder/ Contractor
(Office Seal)

Place: _____

Date: _____

Witness: _____
(Name & Address) _____

Witness: _____
(Name & Address) _____

APPENDIX-I

LIST OF T&P TO BE PROVIDED BY BHEL FREE OF CHARGES ON SHARING BASIS

SL.NO.	DESCRIPTION & CAPACITY OF T&P	QUANTITY	REMARKS
01	250 MT CRAWLER CRANE	02 No.	BHEL OWNED CRANES. OPERATOR FOR THIS WILL BE PROVIDED BY BHEL.

NOTE: 1. FUEL FOR THE ABOVE CRANES SHALL BE IN CONTRACTOR'S SCOPE.

2. ABOVE CRANES ARE CONSIDERED MAINLY FOR BOILER ERECTIONS, HOWEVER ON NEED BASED FOR HEAVY LIFT AND/OR HIGH REACH IN BUNKER BAY STRUCTURE ERECTION THESE CRANES SHALL BE MADE AVAILABLE. THE ALLOCATION OF THESE CRANES WILL BE DECIDED BY BHEL SITE ENGINEER, BASED ON ITS AVAILABILITY AND OTHER IMMINENT NEEDS, WHICH SHALL BE BINDING ON CONTRACTOR. THESE CRANES (i.e. 250 T MT) SHALL NOT BE AVAILABLE FOR USE IN FABRICATION YARD.

3. FURTHER, USE OF ABOVE CRANES MAY BE ALLOWED FOR ANY OTHER ERECTION RELATED ACTIVITY AT THE DISCRETION & APPROVAL OF BHEL SITE INCHARGE.

APPENDIX-II
LIST OF T&P AND MMD TO BE DEPLOYED BY THE CONTRACTOR

A: TOOL & PLANTS

SN	DESCRIPTION OF EQUIPMENTS	CAPACITY (MINIMUM)	Remarks/MINIMUM QUANTITY
	180 T CRAWLER CRANE	01 No.	THE CONTRACTOR SHALL PROVIDE THE OPERATOR FOR THIS.
	75 T CRAWLER CRANE	02 No.	THE CONTRACTOR SHALL PROVIDE THE OPERATOR FOR THIS.
	40/45 T CRAWLER CRANE	02 No.	THE CONTRACTOR SHALL PROVIDE THE OPERATOR FOR THIS
	8/10 T HYDRA CRANE	03 No.	THE CONTRACTOR SHALL PROVIDE THE OPERATOR FOR THIS
	3 Ph DISTRIBUTION BOARD WITH COMPLETE SET UP FOR DRAWL OF CONSTRUCTION POWER	800 Amp, 415 Volt	AS PER REQMT
	ELECTRIC CABLE FOR DRAWAL & DISTRIBUTION OF CONSTRUCTION POWER	AS PER SITE REQUIREMENT	AS PER SITE REQUIREMENT
	GANTRY FOR FABRICATION YARD	ADEQUATE	01
	PICK AND CARRY MOBILE CRANE	14 – 18 T	02
	TRAILER WITH HORSE - TO HANDLE HEAVY AND LONG COMPONENTS ETC	ADEQUATE CAPACITY & SUFFICIENT BED LENGTH	02
	TRACTOR TROLLEY - TO HANDLE REGULAR COMPONENTS OF BOILER ETC	ADEQUATE CAPACITY	02
	DRILLING MACHINES : ASSORTED TYPES AND SIZES	TO MEET ALL REQUIREMENT	TO MEET ALL REQUIREMENT
	GRINDING MACHINES : ASSORTED TYPES AND SIZES	TO MEET ALL REQUIREMENT	TO MEET ALL REQUIREMENT
	WELDING GENERATOR (ELECTRIC & DIESEL)	300 AMPS	AS REQUIRED
	SUBMERGED ARC WELDING M/C	SUITABLE FOR APPLICATION	ADEQUATE TO MEET COMPLN SCHEDULES
	MIG WELDING M/C	-DO-	-DO-
	WELDING RECTIFIER	SUITABLE FOR APPLICATION	ADEQUATE
	PUG CUTTING M/C	SUITABLE FOR APPLICATION	ADEQUATE
	PLASMA CUTTING M/C	SUITABLE FOR	ADEQUATE

SN	DESCRIPTION OF EQUIPMENTS	CAPACITY (MINIMUM)	Remarks/MINIMUM QUANTITY
		APPLICATION	
	OXY-ACETELYNE GAS CUTTING SET	SUITABLE FOR APPLICATION	ADEQUATE
	BAKING OVEN AND HOLDING OVEN WITH THERMOSTAT AND TEMPERATURE GAUGE FOR BAKING COATED WELDING ELECTRODES	AS PER REQUIREMENT	ADEQUATE
	PORTABLE OVEN FOR COATED WELDING ELECTRODES	AS PER SITE REQUIREMENT	30
	PRE HEATING / STRESS RELIEVING SET (HEATING CONTROL PANEL, CABLES, HEATING ELEMENTS ETC.)	AS PER REQUIREMENT	ADEQUATE
	RADIOGRAPHY ARRANGEMENT INCLUDING THE SOURCE	IR 192	2 SETS
	ARRANGEMENT FOR UT OF HIGHER THICKNESS JOINTS WITH RECORDING FACILITY.	SUITABLE FOR APPLICATION	01 SET
	RADIOGRAPHY FILM VIEWER	HI INTENSITY	2 NOS.
	SAND BLASTING SET WITH AIR COMPRESSOR	SUITABLE FOR APPLICATION	ADEQUATE
	HSFG BOLT TORQUE WRENCH & CALIBRATOR	SUITABLE FOR APPLICATION	ADEQUATE
	ELECTRIC WINCHES	3T/ 5T	ADEQUATE
	HAND WINCHES	½ / 1 T	ADEQUATE
	HOISTING & PULLING DEVICES/ PULLEYS ETC	ASSORTED CAP	ADEQUATE
	MECH & HYD JACKS	AS PER REQMT	ADEQUATE
	THEODOLITE OF REQUIRED ACCURACY	-	01No.

B: MEASURING AND MONITORING DEVICES (MMD):

AS PER REQUIREMENT TO BE FINALIZED AT SITE, SHALL MEET THE REQUIREMENTS AS PER FIELD QUALITY PLAN AND OTHER ERECTION, TESTING RELATED ACTIVITIES.

NOTE:

THE LIST INDICATED ABOVE IS ONLY SUGGESTIVE AND NOT EXHAUSTIVE. CONTRACTOR SHALL DEPLOY ALL OTHER T&P AND MMD AS WELL THAT ARE NECESSARY FOR PROPER EXECUTION OF THE SCOPE OF WORK.

APPENDIX-III

ANALYSIS OF UNIT RATE QUOTED

SL.N O.	DESCRIPTION	% OF QUOTED RATE	REMARKS
01	SITE FACILITIES VIZ., ELECTRICITY, WATER OTHER INFRASTRUCTURE.		
02	SALARY AND WAGES + RETRENCHMENT BENEFITS		
03	CONSUMABLES		
04	T&P DEPRECIATION & MAINTENANCE		
05	ESTABLISHMENT & ADMINISTRATIVE EXPENSES		
06	OVERHEADS		
07	PROFIT		
TOTAL		100%	

SIGNATURE OF THE TENDERER

DATE:

APPENDIX-IV
 FORMAT FOR MONTH-WISE MANPOWER DEPLOYMENT PLAN
(CATEGORY-WISE NUMBERS TO BE INDICATED FOR EACH MONTH) FOR TOTAL CONTRCT PERIOD

SL. NO.	CATEGORY	MONTHS										
		1	2	3	4	5	6	7	8	9	10	SO ON
01	RESIDENT ENGINEER											
02	FABRICATION ENGINEERS											
03	FABRICATION SUPERVISORS											
04	ERECTION ENGINEERS											
05	ERECTION SUPERVISORS											
06	QUALITY ASSURANCE ENGINEER											
07	SAFETY ENGINEER											
08	MATERIALS MANAGEMENT SUPERVISORS											
09	STRUCTURAL & OTHER WELDERS											
10	FITTERS											
11	CRANE OPERATOR											
12	TRUCK/TRAILER DRIVERS											
13	STORE KEEPERS											
14	ELECTRICIANS											
15	SEMISKILLED/ UNSKILLED WORKERS											
SO ON												
	MONTH WISE TOTAL											

BIDDER MAY USE SEPARATE SHEET AS REQUIRED

APPENDIX-V

FORMAT FOR DEPLOYMENT PLAN FOR MAJOR TOOLS AND PLANTS FOR TOTAL CONTRCT PERIOD

SN	DESCRIPTION & CAPACITY OF T&P	MONTHS										
		1	2	3	4	5	6	7	8	9	10	SO ON
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												
SO ON												

BIDDER MAY USE SEPARATE SHEET AS REQUIRED

SIGNATURE OF THE TENDERER

DATE:

APPENDIX-VI

CONCURRENT COMMITMENTS

SL.N O.	FULL POSTAL ADRESS OF CLIENT AND NAME OF OFFICER IN- CHARGE	DESCRIPTION OF THE WORK	VALUE OF THE CONTRACT	COMMENC- EMENT DATE	SCHEDU- LED COMPLE- TION	% COMPL- TD. AS ON DATE	ANTICIPA- TED COMPLN. DATE	REMARKS

BIDDER MAY USE SEPARATE SHEET AS REQUIRED

DATE

SIGNATURE OF THE TENDERER

APPENDIX–VII

DETAILS OF SIMILAR WORK DONE DURING THE LAST SEVEN YEARS

SL. NO.	FULL POSTAL ADDRESS OF CLIENT & NAME OF OFFICER IN CHARGE	DESCRIPTION OF WORK	VALUE OF CONTRACT	DATE OF AWARD OF WORK	DATE OF COMMENCEMENT OF WORK	ACTUAL COMPLETION TIME (MONTHS)	DATE OF ACTUAL COMPLETION OF WORK	REMARKS
1								
2								
3								
4								
5								
6								

BIDDERS SHALL ENCLOSE COPIES OF DETAILED WORK ORDER (GIVING BILL OF QUANTITIES AND SCOPE OF WORK) AND COMPLETION CERTIFICATE IN SUPPORT OF THIS STATEMENT. BIDDER MAY USE SEPARATE SHEET AS REQUIRED

DATE

SIGNATURE OF TENDERER WITH SEAL