

TENDER SPECIFICATION

NO: BHE/PW/PUR/BST-PLT/586

FOR

HANDLING OF PAINTS AT SITE STORES/STORAGE YARD, TRANSPORTATION TO SITE OF WORK, **APPLICATION OF PAINTS** FOR BOILERS AND THEIR AUXILIARIES, TG & AUXILIARIES, LP PIPING, CW PIPING AND STRUCTURES AND HANGERS & SUPPORTS OF LP PIPINGS AND POWER CYCLE PIPING, TANKS AND VESSELS, AND OTHER EQUIPMENTS, PAINTING OF COLOUR BANDS, LETTERING, MARKING AND SIGNS FOR DIRECTION OF FLOW/ ROTATION, NAMEPLATES ETC OF 1 X 500 MW SGTPS UNIT NO .5

AT

SANJAY GANDHI THERMAL POWER STATION,
BIRSINGHPUR
MP



PART:I – TECHNICAL BID

BOOK NO.

BHARAT HEAVY ELECTRICALS LIMITED

(A Government Of India Undertaking)
POWER SECTOR - WESTERN REGION
SHREEMOHINI COMPLEX
345, KINGSWAY - NAGPUR 440 001

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#: Attached at the end of tender

@: issued separately

NOTE: Bidders must Visit BHEL web site www.bhel.com for NIT, Qualifying Requirement of this work (Q R), 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 amendment



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/BST-PLT/586

NAME OF WORK: HANDLING OF PAINTS AT SITE STORES/STORAGE YARD, TRANSPORTATION TO SITE OF WORK, **APPLICATION OF PAINTS** FOR BOILERS AND THEIR AUXILIARIES, TG & AUXILIARIES, LP PIPING, CW PIPING AND STRUCTURES AND HANGERS & SUPPORTS OF LP PIPINGS AND POWER CYCLE PIPING, TANKS AND VESSELS, AND OTHER EQUIPMENTS, PAINTING OF COLOUR BANDS, LETTERING, MARKING AND SIGNS FOR DIRECTION OF FLOW/ ROTATION, NAMEPLATES ETC OF 1 X 500 MW EXTN STAGE UNITS -5 , SGTPS, BIRSHINGHPUR, DIST- UMARIA (M P)

EARNEST MONEY DEPOSIT: RS.1,00, 000/ (RUPEES ONE LAKHS ONLY) Please see Section-15 of Special Conditions of Contract for more details.

LAST DATE AND TIME FOR

RECEIPT OF OFFERS:

Please visit web page www.bhel.com -> “Tender Notification” and “View Corrigendum”

THESE TENDER DOCUMENTS CONTAINING PART-I TECHNICAL BID AND PART-II PRICE BID, ARE ISSUED TO:

ABOVE DOCUMENTS ARE ISSUED TO:

M/S

.....
.....
.....

(THESE TENDER DOCUMENTS ARE NOT TRANSFERABLE)

FOR BHARAT HEAVY ELECTRICALS LIMITED

SENOIR MANAGER (PURCHASE)

PLACE: NAGPUR

DATE:



BHARAT HEAVY ELECTRICALS LIMITED

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

Procedure for Submission of Sealed Tenders & Instructions to Bidders

The bidder must submit their tenders as required in two parts in separate sealed covers prominently super scribed 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 in the tender notice.

Part-I (technical bid) cover-I:

Accepting rate schedule, all other schedules, data sheets and details called for in the specification shall be enclosed in part-I "Technical Bid" only.

EARNEST MONEY DEPOSIT (EMD)

EMD shall be included in the Technical Bid. **EMD shall be paid by bidders only in the form of account payee Demand Draft payable at Nagpur in favour of Bharat Heavy Electricals Limited.** No other mode of payment of EMD shall be acceptable. Provisions under clause no. 1.4 of the General Conditions of the Contract shall stand withdrawn for this tender.

Bidder may opt to deposit "One Time EMD" of Rs. 2.0 lakhs with this office (BHEL: PSWR: Nagpur) which will enable them to participate in all the future tender enquiries in respect of Erection and Commissioning services issued from this office. Interested bidders may clearly sent their consent for converting the present EMD into an "One Time EMD" in their offer.

Bidders who have already submitted such "One Time EMD" will be exempted from submission of any EMD for this tender. However bidder shall furnish details of the "One Time EMD" in his offer including the Check List furnished herein.

Part-II (price bid) cover-II:

All indications of price shall be given in this part-II "Price Bid". **EMD shall not be included in this cover.**

These two separate covers-I and II (part-I and part-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 on or before the due date as indicated.

The qualified bidder will be intimated separately about the status of their offer.

Bidders are requested to make specific note of the following conditions:

Contractor should have adequate resources including major T&P at his disposal for this job.

Contractor should have sound financial stability.

Bidder should meet quality requirement regarding workmanship, deployment of personnel, 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.

Clarification on tender specification, if any, shall be obtained by the bidder latest by seven days before Due Date for submission.

Offers must be submitted without any deviation. **BIDDER MUST SIGN &STAMP ALL PAGES OF THIS TENDER AND SUBMIT WITH THEIR OFFER.**

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

Project Information

The Sanjay Gandhi Power Station is being set up at a site about 10 Km from Birsinghpur Railway Station, District Umaria, Madhya Pradesh. The station shall have an ultimate installed capacity of 4 x 210 MW + 1 X 500 MW units.

Substantial amount of infrastructural and enabling works i.e. land development, boundary wall, construction roads & drainage, construction power & water supply arrangements are available. Contractor is advised to visit the site and apprise himself about the conditions of the site and infrastructure available in the area for fulfilling their commitment under the contract.

The site lies between broad gauge railway line of Bilaspur Katni section of South Eastern Railway and is connected by all weather motorable national and state highways. Nearest railway station is Birsinghpur from where a railway line will branch off to the site for material unloading and coal marshalling. The material consignments shall be as per the restrictions of rail and road transportation prevailing in the country.

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 0) One Time EMD or, 0) Only for this Tender	DD No. DD Date..... Name of Bank..... Amount: Rs.....	
5	Validity of Offer (BHEL's requirement: 180 days from the last date for offer submission)	Validity _____ days	
6	Mobilization Time (Please refer Section-11 of SCC)	Mobilization Time _____	
7	Whether any conditions stipulated?	<div>Yes (vide Document reference: No</div> <div>Bidder to note that tender with conditions unacceptable to BHEL shall be rejected.</div>	
8	Bidder has visited the project site and acquainted with the site conditions	Yes	No
9	Details of concurrent jobs are furnished (Appendix- V)	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
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

Check List (Vide Para 1.3 Of Section-I of General Conditions Of Contract)			
16	Latest copy of IT Return along with copy of PAN Card are Furnished	Yes	No
17	Month-wise Manpower Deployment Plan for this Work (Appendix-II) is furnished	Yes	No
19	Analysis of Unit Rates quoted (Appendix-III) is furnished	Yes	No
20	Month-wise deployment plan for major T&P (Appendix-VII & VIII) is furnished	Yes	No
21	Whether all the pages of the Tender Specification documents are read, understood and signed	Yes	No
22	Power of Attorney enclosed in favour of person making offer	Yes	No
23	Bidder has familiarized himself with all Relevant Local Laws & Local Conditions	Yes	No
24	Safety Requirement of this work in a Running plant Premises has been understood.	Yes	No
25	List of similar Jobs completed in last seven years is furnished (Appendix- VI)	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
	BIDDER MUST FURNISH HERE THE FOLLOWING DETAIL FOR RELEASING EMD AND OTHER PAYMENTS. 0 Name of the Company----- 0 Name of Bank----- 0 Name of Bank Branch----- 0 City/Place----- 0 Account Number----- 0 Account type----- 0 IFSC code of the Bank Branch----- 7. MICR Code of the Bank Branch-----	Yes	No

NOTE : STRIKE OFF YES OR NO, AS APPLICABLE.

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

DECLARATION STATEMENT

I, _____, HEREBY CERTIFY THAT ALL THE INFORMATION AND DATA FURNISHED BY ME WITH REGARD TO THIS TENDER SPECIFICATION NO.BHE/PW/PUR/BST-PLT/586 ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE. I HAVE RECIVED ALL THE DOCUMENTS VIZ. VOLUME-I (TECH. BID) & VOLUME-III (PRICE BID) COMPRISING THIS TENDER SPECIFICATION AND GONE THROUGH THE SPECIFICATION, CONDITIONS AND STIPULATIONS IN DETAIL AND AGREE TO COMPLY WITH THE REQUIREMENTS AND INTENT OF THE SPECIFICATION. I FURTHER CERTIFY THAT I AM DULY AUTHORISED REPRESENTATIVE OF THE UNDERMENTIONED TENDERER AND A VALID POWER OF ATTORNEY TO THIS EFFECT IS ALSO ENCLOSED.

TENDERER'S NAME AND ADDRESS

AUTHORISED REPRESENTATIVE'S SIGNATURE WITH
NAME AND ADDRESS

**CERTIFICATE CONFIRMING
KNOWLEDGE ABOUT SITE CONDITIONS**

REFERENCE: TENDER SPECIFICATION No. BHE/PW/PUR/BST-PLT/586

We, M/s

hereby declare and confirm that we have visited the project site (BIRSHINGHPUR TPS, M P) as referred in BHEL's Tender Specification under reference above and acquired full knowledge and information about the site conditions. We further confirm that the above information is true and correct and we shall not be eligible for any additional payment of any nature due to lack of knowledge or non-familiarization of site conditions.

BIDDER'S NAME AND ADDRESS:

SIGNATURE & OFFICIAL SEAL OF BIDDER'S
AUTHORISED SIGNATORY

PLACE:

DATE:

4.1.1 CERTIFICATE OF NO DEVIATION

REFERENCE: TENDER SPECIFICATION No. BHE/PW/PUR/BST-PLT/586

I/WE, M/s

HEREBY CERTIFY THAT NOTWITHSTANDING ANY CONTRARY INDICATIONS/ CONDITIONS ELSEWHERE IN OUR OFFER DOCUMENTS, I/WE HAVE NEITHER SET ANY TERMS AND CONDITIONS NOR THERE IS ANY DEVIATION TAKEN FROM THE CONDITIONS OF BHEL'S TENDER SPECIFICATIONS, EITHER TECHNICAL OR COMMERCIAL, AND I/WE AGREE TO ALL THE TERMS AND CONDITIONS MENTIONED IN BHEL'S TENDER SPECIFICATION WITH ASSOCIATED AMENDMENTS AND CLARIFICATIONS.

Date:

Signature of the Bidder

SECTION-3
OFFER OF THE BIDDER

To,
The 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/BST-PLT/586 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 bidders
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 as per requirement specified in the Tender Specification, 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:

Signature of bidder:

Date:

Address:

Witnesses with their address

Signature	name	address
1.		
2.		

SECTION-4

SPECIAL CONDITIONS OF CONTRACTS

4.0 SCOPE OF WORK INVOLVING SURFACE CLEANING AND APPLICATION OF PAINTS

THE WORK TO BE CARRIED OUT UNDER THE SCOPE OF THESE SPECIFICATIONS COVERS THE COMPLETE WORK OF LOADING, HANDLING, TRANSPORTING, UNLOADING, SURFACE CLEANING, APPLICATION OF PRIMER AND FINISH/FINAL PAINTS, GRINDING OF WELDING SPATTERS, KEROSENE CLEANING ETC OF BOILER & AUXILIARIES, TG & AUXILIARIES, LP PIPING, CW PIPING AND STRUCTURES AND HANGERS & SUPPORTS OF LP PIPINGS AND POWER CYCLE PIPING, TANKS AND VESSELS, AND OTHER EQUIPMENTS, PAINTING OF COLOUR BANDS, LETTERING, MARKING AND SIGNS FOR DIRECTION OF FLOW/ ROTATION, NAMEPLATES ETC OF 1 X 500 MW EXTN. STAGE-II UNIT # 5. THE WORK SHALL CONFORM TO INSTRUCTIONS/SPECIFICATIONS/STANDARD PRACTICES AND APPROVED COLOUR CODES THAT WILL BE PROVIDED BY BHEL FROM TIME TO TIME. IF ANY PORTION OF THE WORK IS FOUND TO BE DEFECTIVE IN WORKMANSHIP OR NOT CONFORMING TO SPECIFICATIONS, THE CONTRACTOR SHALL CLEAN THE SURFACE AND RE-DO THE WORK AT HIS COST FAILING WHICH THE WORK WILL BE GOT DONE BY ENGAGING OTHER AGENCIES OR DEPARTMENTALLY AND RECOVERIES WILL BE EFFECTED FROM CONTRACTORS BILL TOWARDS EXPENDITURE INCURRED INCLUDING 30% DEPARTMENTAL CHARGES. ALL TOOLS, TACKLES, FIXTURES, EQUIPMENTS, MATERIALS, MANPOWER, SUPERVISORS/ENGINEERS, CONSUMABLES ETC REQUIRED FOR THIS SCOPE OF WORK SHALL BE PROVIDED BY THE CONTRACTOR **(ONLY PAINT, PRIMER & THINNER FOR THIS WORK SHALL BE SUPPLIED BY BHEL FREE OF COST)**. ALL EXPENDITURE INCLUDING TAXES AND INCIDENTALS IN THIS CONNECTION WILL HAVE TO BE BORNE BY HIM UNLESS OTHERWISE SPECIFIED IN THE RELEVANT CLAUSE. THE CONTRACTOR'S QUOTED RATES SHOULD BE INCLUSIVE OF ALL SUCH CONTINGENCIES. SCOPE OF WORK IS FURTHER DETAILED HEREAFTER.

4.1 SCOPE OF WORK

(Also refer General and special requirement of Painting as per Annex- I)

4.1.1

MOSTLY THE ALL EQUIPMENT/COMPONENTS ETC HAVE BEEN SUPPLIED WITH DUE COAT OF PRIMER OR PRIMAR AND INITIAL COAT OF PAINT AT WORKS. HOWEVER, DUE TO TRANSPORTATION, STORAGE, HANDLING, & AGING ETC THE SAME MAY HAVE GOT DETERIORATED OR PEELED OFF. THE WORK WILL INVOLVE NOT ONLY REPAIRING THESE COATS BUT ALSO PROVIDE FINAL/ FINISH PAINT ON THE EQUIPMENTS/ COMPONENTS ETC.

4.1.2

THE SCOPE OF WORK INCLUDES CLEANING OF SURFACE, APPLICATION OF SPECIFIED COATS OF SPECIFIED PRIMER WHEREVER REQUIRED, FINISH PAINTS, PAINTING OF COLOUR BANDS, LETTERING, MARKING AND SIGNS FOR DIRECTION OF FLOW/ROTATION, NAMES ETC OF APPROVED COLOURS AS PER THE STANDARD COLOUR CODES AND SPECIFICATIONS SPECIFIED IN TENDER SPECIFICATION OR AS ADVISED BY BHEL/CUSTOMER ENGINEER AT SITE FOR THE EQUIPMENTS/COMPONENTS COVERED IN THESE SPECIFICATIONS. **THE REQUIRED PRIMER, PAINT WILL BE SUPPLIED BY BHEL/CUSTOMER FREE OF COST. CONTRACTOR SHALL ARRANGE ALL OTHER CONSUMABLES AND TOOLS AND TACKLES, WHICH ARE REQUIRED FOR SATISFACTORY COMPLETION OF WORK.** THE DRY FILM THICKNESS OF EACH COAT SHALL BE AS SPECIFIED BY BHEL/CUSTOMER ENGINEER AT SITE. CONTRACTOR SHALL ARRANGE THE CALIBRATED ELCOMETER FOR MEASURING THE DRY FILM THICKNESS.

4.1.3

THE CERTAIN CASES THE SHOP COAT OF PRIMER/ PAINT MIGHT HAVE PEELED OFF/ GOT DAMAGED DURING THE COURSE OF TRANSPORTATION, STORAGE, HANDLING AT SITE, ERECTION ETC. IN SUCH OF THESE CASES, TWO COAT OF SPECIFIED PRIMER HAS TO BE APPLIED AFTER DUE SURFACE CLEANING/PREPARATION, BEFORE APPLICATION OF SPECIFIED COAT OF INITIAL AND FINISH PAINT. RATE QUOTED FOR APPLICATION OF FINISH PAINT SHALL BE INCLUSIVE OF SUCH CON-INGENCIES. NO SEPARATE PAYMENT IS ENVISAGED FOR APPLICATION OF RED OXIDE PRIMER. ALSO, NO REVISION OF RATE SHALL BE ADMISSIBLE FOR ANY VARIATION IN QUANTITY INDICATED HEREIN. ONLY THE PRO-RATA PAYMENT BASED ON APPLICABLE ITEM RATE SHALL BE MADE.

4.1.4

ALL EXPOSED METAL PARTS OF THE EQUIPMENT INCLUDING PIPING, STRUCTURES, HAND RAILING, GRATING ETC SHALL BE THOROUGHLY CLEANED OFF DUST, RUST, SCALES AND OTHER FOREIGN MATERIALS BY MANUAL OR MECHANISED WIRE BRUSHING, SCRAPPING, SAND BLASTING ETC AND THE SAME BEING INSPECTED AND APPROVED BY BHEL/CUSTOMER ENGINEER BEFORE APPLICATION OF PRIMER. AFTERWARDS, THE ABOVE PARTS SHALL BE FINISH PAINTED WITH SPECIFIED NUMBER OF COATS AS PER SPECIFICATION.

4.1.5

IN CERTAIN ISOLATED INSTANCES WHERE IT IS NOT POSSIBLE TO CLEAN THE EQUIPMENTS AS EXPLAINED ABOVE, CLEANIN BY GRINDING MIGHT HAVE TO BE RESORTED TO. NO DAMAGE TO THE EQUIPMENT/COMPONENTS SHOULD BE CAUSED.

4.1.6

SURFACE TO BE PAINTED SHOULD BE FREE OF OIL AND GREASE. IT SHOULD BE REMOVED BY USING SUITABLE CLEANING AGENTS INCLUDING PERMITTED SOLVENTS. SURFACE CLEANED BY CHEMICAL AGENT, IF REQUIRED, SHALL BE TREATED FURTHER AS PRESCRIBED IN USE OF SUCH CLEANING AGENTS. THE

CONTRACTOR AT HIS OWN COST SHALL PROVIDE ALL THE CONSUMABLES AND APPLICATION IMPLEMENTS.

4.1.7

DURING THE PREPARATION OF SURFACE, IF THE SHOP COAT IS DAMAGE BY CHEMICAL CLEANING OR BY MECHANICAL MEANS, CONTRACTOR SHALL REPAIR THE SAME FREE OF COST TO BHEL. BHEL WILL MAKE AVAILABLE ONLY THE PRIMER AND PAINTS FREE OF ANY CHARGE TO CONTRACTOR.

4.1.8

SPECIFIED DRYING TIME SHALL BE PERMITTED FROM ONE TO ANOTHER COAT.

4.1.9

THIS WORK REQUIRES WORKING AT HIGHER ALTITUDES FROM GROUND LEVEL TO AS HIGH AS 65 M AND MORE. THE WORK SPREAD IS ALSO SUBSTANTIAL INVOLVING SUBSTANTIAL RUN OF STRUCTURES AND PIPING. CONTRACTOR SHALL TAKE SUFFICIENT PRECAUTIONS TO AVOID ANY ACCIDENT AND HAZARD IN ALL RESPECTS. THE ROPES, LADDERS, SCAFFOLDING MATERIALS, CLAMPS ETC AND CLIMBER USED SHOULD BE OF STANDARD QUALITY FOR SAFE AND SMOOTH EXECUTION OF WORK.

4.1.10

CONTRACTOR SHALL CARRY OUT THE WORK IN SUCH A WAY THAT OTHER ERECTED EQUIPMENT, STRUCTURE, CIVIL FOUNDATIONS AND OTHER PROPERTY ARE NOT DAMAGED. FOR DAMAGES IN ANY OF SUCH CASES DUE TO LAPSES BY CONTRACTOR, BHEL SHALL HAVE THE RIGHT TO RECOVER THE COST OF SUCH DAMAGES FROM THE CONTRACTOR.

4.1.11

CONTRACTOR SHALL TAKE DUE CARE TO COVER/PROTECT THE EQUIPMENT WHICH ARE ALREADY PAINTED WHILE CARRYING OUT THE PAINTING OF OTHER ADJACENT EQUIPMENT. IF SO HAPPENS, IT SHALL BE CLEANED AND REPAINTED BY THE CONTRACTOR WITHOUT ANY EXTRA CHARGES.

4.1.12

IN GENERAL, PAINTING OF STRUCTURAL PARTS AND COLOUR BANDS, LETTERING, MARKING OF DIRECTION OF FLOW/ROTATION ETC WILL BE CARRIED OUT BY BRUSH PAINTING. HOWEVER, AREAS/EQUIPMENT INACCESSIBLE FOR MANUAL PAINTING HAVE TO BE PAINTED BY SPRAY PAINTING. THE DECISION OF BHEL ENGINEER, IN THIS REGARD, SHALL BE FINAL AND BINDING ON THE CONTRACTOR. FOR THE PURPOSE OF SPRAY PAINTING, AIR AT ONE POINT WILL BE MADE AVAILABLE BY BHEL FREE. LAYING OF AIR HOSE PIPE AND ANY OTHER LINE REQUIRED SHALL BE DONE BY CONTRACTOR AT HIS COST. THE CONTRACTOR SHALL PROVIDE SPRAY EQUIPMENT SET.

4.1.13

APPROXIMATE QUANTITY OF WORK INVOLVED IS INDICATED VIDE RATE SCHEDULE (PRICE BID, VOL- II) ONLY FOR GENERAL INFORMATION. THESE MAY VARY TO ANY EXTENT.

4.1.14

THE RELEVANT PART OF TECHNICAL SPECIFICATION FOR ERECTION AND THE COLOR AND CODING SCHEME SPECIFIED BY THE CUSTOMER ARE ENCLOSED FOR INFORMATION. HOWEVER, THE WORK WILL HAVE TO BE EXECUTED ACCORDING TO THE APPLICABLE DOUCMENT GIVEN AT THE TIME OF EXECUTION.

4.2 COLLECTION OF MATERIALS AND STORAGE ETC.

4.2.1

THE CONTRACTOR SHALL TAKE DELIVERY OF PAINTS, PRIMER AND THINNER FROM THE STORAGE YARD/STORES/SHEDS OF BHEL/CUSTOMER, WHICH IS WITHIN A RADIUS OF 2 KM.

4.2.2

THE CONTRACTOR SHALL PROVIDE ACCOUNT OF ALL THE ITEMS ISSUED TO HIM AND RETURN ALL PRIMER, PAINTS ETC REMAINING EXTRA OVER THE NORMAL REQUIREMENT WITH PROPER IDENTIFICATION TAGS IN A PACKED CONDITION TO BHEL STORES. IN CASE OF ANY MISUSE OR EXCESS USE OVER THE NORMAL REQUIREMENT, BHEL RESERVES THE RIGHT TO RECOVER THE COST OF SUCH MISUSE/ EXCESS USE. DECISION OF BHEL ENGINEER IN THIS REGARD WILL BE FINAL AND BINDING ON THE CONTRACTOR.

4.2.3

THE CONTRACTOR SHALL MAKE ADEQUATE SECURITY ARRANGEMENTS INCLUDING EMPLOYMENT OF SECURITY PERSONNEL AND ENSURE PROTECTION FROM THEFT, FIRE, PILFERAGE, DAMAGE AND LOSS OF PAINTS ETC ISSUED TO HIM FOR THE WORK.

4.3 SITE CLEANLINESS

4.3.1

DURING THE COURSE OF WORK, SCRAP LUMBER WITH PROTRUDING NAILS, SHARP EDGES ETC AND ALL THE DEBRIS SHALL BE KEPT CLEARED FROM WORKING AREA, PASSAGE WAYS AND STAIRS IN AND AROUND SITE. PROPER HOUSEKEEPING IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL DEPOSIT ALL THE SCRAP, PACKING MATERIAL, RUBBISH, UNUSED AND OTHER MATERIALS AT SPECIFIED PLACE.

4.3.2

THE CONTRACTOR SHALL PROVIDE NECESSARY FIRST AID FACILITIES AND SAFETY APPLIANCES AND OUTFIT FOR ALL HIS EMPLOYEES, REPRESENTATIVES AND WORKMEN WORKING AT SITE.

4.4.0 GENERAL

4.4.1

THE WORK COVERED UNDER THIS SPECIFICATION REQUIRES THE BEST QUALITY OF WORKMANSHIP. THE CONTRACTOR SHOULD ENSURE TIMELY COMPLETION OF WORK. THE CONTRACTOR MUST HAVE ADEQUATE QUANTITY OF TOOLS, CONSTRUCTION IMPLEMENTS, EQUIPMENTS ETC, IN HIS POSSESSION. HE MUST ALSO HAVE ON HIS ROLLS ADEQUATE, TRAINED, QUALIFIED & EXPERIENCED SUPERVISORY STAFF AND SKILLED PERSONNEL.

4.4.2

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 CO-OPERATE WITH THE PERSONNEL OF OTHER OF OTHER AGENCIES, CO-ORDINATE HIS WORK WITH OTHERS AND PROCEED IN A MANNER THAT SHALL NOT DELAY OR HINDER THE PROGRESS OF WORK AS A WHOLE.

4.4.3

ALL THE WORK SHALL BE CARRIED OUT AS PER THE INSTRUCTIONS OF BHEL ENGINEER. BHEL ENGINEERS DECISION REGARDING THE CORRECTNESS OF THE WORK AND METHOD & SEQUENCE OF WORKING SHALL BE FINAL AND BINDING ON THE CONTRACTOR.

4.4.4

ALL THE NECESSARY CERTIFICATES AND LICENSES WHEREVER REQUIRED TO CARRYOUT THIS WORK ARE TO BE ARRANGED BY THE CONTRACTOR EXPEDITIOUSLY AT HIS COST.

4.4.5

THE TERMINAL POINTS AS DECIDED BY BHEL SHALL BE FINAL AND BINDING ON THE CONTRACTOR.

4.4.6

CONTRACTOR IS STRICTLY PROHIBITED FROM USING THE REGULAR COMPONENTS LIKE ANGLES, CHANNELS, BEAMS, PLATES, PIPE/TUBES, AND HANDRAILS ETC FOR ANY TEMPORARY SUPPORTING OR SCAFFOLDING WORKS. CONTRACTOR SHALL ARRANGE HIMSELF ALL SUCH MATERIALS. IN CASE OF SUCH MISUSE OF BHEL MATERIALS, A SUM AS DETERMINED BY BHEL ENGINEER WILL BE RECOVERED FROM CONTRACTOR'S BILLS. THE DECISION OF BHEL ENGINEER IS FINAL AND BINDING ON THE CONTRACTOR.

4.4.7

THE CONTRACTOR SHOULD VISIT THE SITE BEFORE QUOTING HIS RATES, EVALUATE THE VOLUME/ QUANTITY TO BE PAINTED, GET ACQUAINTED WITH SITE CONDITIONS AND SUBMIT HIS RATES. NO REVISION OF RATES SHALL BE ALLOWED UNDER ANY CIRCUMSTANCES.

4.5 EXCLUSIONS

FOLLOWING ARE EXCLUDED FROM THE CONTRACTOR'S SCOPE OF WORK UNDER THIS TENDER SPECIFICATION:

01 SUPPLY OF PRIMER, PAINT AND THINNER

SPECIAL CONDITIONS OF CONTRACT

SECTION-5

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

5.1 TOOLS AND TACKLES

5.1.1

CONTRACTOR IS REQUIRED TO PROVIDE ALL NECESSARY TOOLS AND PLANTS, MEASURING INSTRUMENTS AND HANDLING EQUIPMENTS FOR THIS SCOPE OF WORK. BHEL IS NOT PROVIDING ANY T & P FOR THIS WORK.

5.1.2

THE CONTRACTOR SHALL PROVIDE ALL THE NECESSARY SCAFFOLDING MATERIALS, TEMPORARY STRUCTURES AND NECESSARY SAFETY DEVICES ETC, DURING EXECUTION OF THE WORK.

5.1.3

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.

5.2.0 CONSUMABLES

5.2.1

THE CONTRACTOR SHALL PROVIDE ALL CONSUMABLES REQUIRED FOR CARRYING OUT THE WORK COVERED UNDER THIS SCOPE OF WORK EXCEPTING THOSE WHICH ARE SPECIFICALLY INDICATED AS BHEL SUPPLY.

5.2.2

ALL CONSUMABLES, TO BE PROCURED AND USED FOR THE WORK SHALL HAVE PRIOR APPROVAL OF BHEL/CUSTOMER ENGINEER IN REGARD TO BRAND AND QUALITY SPECIFICATION.

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

- a) DEVELOPMENT OF THE LAND AND COSTRUCTION OF LABOUR COLONY, WITH ARRANGEMENTS OF LIGHTING, DRINKING WATER, AND SANITATION ETC IS IN CONTRACTOR'S SCOPE.
- b) ELECTRICITY FOR LABUOR COLONY: CONTRACTOR SHALL MAKE ARRANGEMENT FOR DRAWING AND FURTHER DISTRIBUTION CONFORMING TO THE STATUTORY & SAFETY REQUIREMENTS. THE ELECTRICITY FOR

LABOUR CAMP WILL BE ON CHARGEABLE BASIS AT THE PREVAILING RATE OF STATE ELECTRICITY BOARD.

-) FOR DRINKING WATER CONTRACTOR HAS TO MAKE HIS OWN ARRANGEMENT INCLUDING DIGGING OF BORE-WELL IF REQUIRED.
-) 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.

5.4.0 FIELD OFFICE

5.4.1

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.

5.4.2

ON COMPLETION OF WORK, ALL THE TEMPORARY BUILDINGS, STRUCTURES 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, THE SAME WILL BE ARRANGED TO BE REMOVED AND EXPENDITURE THEREOF 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.

5.5.0 AREA LIGHTING

5.5.1

CONTRACTOR SHALL ARRANGE ADEQUATE FLOODLIGHTS, HAND LAMPS AND AREA LIGHTING. PROVISION OF DISTRIBUTION LINES FOR LIGHTING FROM THE SINGLE POINT TO THE REQUIRED PLACE WITH PROPER DISTRIBUTION BOARDS, OBSERVING THE SAFETY RULES LAID DOWN BY THE ELECTRICAL AUTHORITIES OF THE STATE SHALL BE DONE BY THE CONTRACTOR INCLUDING ALL THE MATERIALS LIKE CABLES, FUSES, SWITCH BOARDS ETC

5.6.0 CONSTRUCTION POWER & WATER

5.6.1

CONSTRUCTION POWER (414 V) WILL BE PROVIDED FREE OF COST AT A SINGLE POINT NEAR WORK SITE. HOWEVER THE TAXES & DUTIES (IF ANY) AS CHARGED BY CUSTOMER SHALL BE PAYABLE BUY CONTRACTOR. ADDITIONAL SOURCE AT THE DISCRETION OF BHEL MAY ALSO BE PROVIDED IF NEED ARISES. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY CABLES, FUSES, SWITCHES, SWITCHBOARDS,

ENERGY METERS ETC, AND ANY OTHER INSTALLATION AS SPECIFIED BY STATUTORY AUTHORITY IN THIS REGARD FOR FURTHER DRAWL OF POWER. OBTAINING APPROVALS / CLEARANCE OF SUCH INSTALLATIONS, PRIOR TO THEIR BEING PUT TO USE OR AS MAY BE SPECIFIED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

5.6.2

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.

5.6.3

WATER FOR CONSTRUCTION PURPOSE SHALL BE PROVIDED FREE OF COST AND SHALL BE DRAWN BY THE CONTRACTOR FROM RESERVOIR/CANAL BY HIS OWN ARRANGEMENT .DRINKING WATER FOR LABOUR COLONY /WORK SHALL BE PROVIDED AT ONE POINT .THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENT FOR DISTRIBUTION OF CONSTRUCTION/DRINKING WATER

5.6.4

CONTRACTOR SHALL BE WELL EQUIPPED WITH BACK-UP ARRANGEMENT 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.

5.6.5

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.

5.7

CONTRACTOR SHALL AUGMENT HIS RESOURCES SO AS TO MEET THE PROGRAMME OF COMPLETION CONVEYED FROM TIME TO TIME DURING EXECUTION OF WORK.

5.8.0 CONTRACT LABOUR

5.8.1 THE CONTRACTOR IN THE EVENT OF HIS ENGAGING 10 OR MORE WORKMEN WILL OBTAIN INDEPENDENT LICENSE UNDER THE CONTRACT LABOUR (REGULATIONS AND ABOLITION) ACT 1970 FROM THE CONCERNED AUTHORITIES BASED ON THE CERTIFICATE (FORM -V) ISSUED BY THE PRINCIPAL EMPLOYER/CUSTOMER.

5.8.2 PROVIDENT FUND

CONTRACTOR WILL DEDUCT THE NECESSARY AMOUNT FROM HIS EMPLOYEES TOWARDS PROVIDENT FUND AND CONTRIBUTE EQUAL AMOUNT AS PER GOVERNMENT OF INDIA LABOUR LAWS. CONTRACTOR REGULARLY TO THE PROVIDENT FUND COMMISSIONER AND GET THE ACCOUNT CODE WILL DEPOSIT THIS AMOUNT. CONTRACTOR SHALL SUBMIT THE ACCOUNT CODE DULY CERTIFIED BY PF COMMISSIONER TO BHEL PROJECT IN-CHARGE.

5.8.3

CONTRACTOR SHALL ALSO COMPLY WITH THE PROVISIONS OF ESIS ACT IN VOGUE AND SUBMIT EVIDENCE THEREOF TO BHEL SITE IN-CHARGE. ALSO, ALL OTHER EMPLOYEES' BENEFITS TO BE BORNE BY THE CONTRACTOR AS PER THE LABOUR LAWS. CONTRACTOR SHALL PRODUCE NECESSARY CERTIFICATES TOWARDS THEIR COMPLIANCE WITH SUCH STATUTES AND PAYMENT OF ALL STATUTORY DUES.

5.8.4

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

5.8.5

WHERE APPLICABLE, PROVISIONS OF WORKMAN COMPENSATION ACT SHALL BE ADHERED TO.

5.8.6

BHEL/CUSTOMER MAY INSIST UPON 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.

5.9.0 **TAXES, DUTIES, LEVIES**

5.9.1 REFER TO CLAUSE 2.8.4 OF GENERAL CONDITIONS OF CONTRACT WHEREIN IT HAS BEEN MENTIONED AS FOLLOWS:

5.9.1.1

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 and remittance record of such tax immediately after depositing the tax with concerned authorities. 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 inform formats for these reports.

It is the responsibility of the contractor to arrange gate pass for all his employees, T&P etc. 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 permit for working beyond normal working hours.

5.11.0

THE SCOPE OF WORK UNDER THIS CONTRACT IS DEEMED TO BE COMPLETE ONLY WHEN SO CERTIFIED BY THE ENGINEER INCHARGE OF BHEL.

SECTION-6
SPECIAL CONDITIONS OF CONTRACT

6.0 CONTRACTOR'S OBLIGATION WITH 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. 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 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 /CUSTOMER.

6.6 INDUSTRIAL RELATIONS AND LABOUR LAWS

AN INDUSTRIAL RELATIONS SUPERVISOR SHALL COORDINATE FOR THE IMPLEMENTATION OF LOCAL LABOUR LAWS, MAINTENANCE OF RECORDS AS REQUIRED BY CONTRACT LABOUR (REGULATION AND ABOLITION) ACT AND ALSO COORDINATE WITH THE LOCAL LABOUR AUTHORITIES AND ANY OTHER SUCH AUTHORITIES UNDER WHOM THIS WORK FALLS.

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 ORGANIZATION

THE CONTRACTOR SHALL DEPLOY ADEQUATE LABOURERS AND SUPERVISORY STAFF IN ALL THE RELEVANT AREA OF WORK AND ADMINISTRATION.

SECTION-7
SPECIAL CONDITIONS OF CONTRACT

- 7.0 OBLIGATIONS OF BHEL
- 7.1 FACILITIES PROVIDED BY BHEL
 - 7.1.1 SPACE FOR FIELD OFFICE
REFER SECTION-5 IN THIS REGARD.
 - 7.1.2 CONSTRUCTION WATER
REFER SECTION-5 IN THIS REGARD.
 - 7.1.3 CONSTRUCTION POWER
REFER SECTION-5 IN THIS REGARD.
 - 7.1.4 OTHER MATERIALS AND CONSUMABLES:
BHEL SHALL NOT PROVIDE ANY MATERIAL/CONSUMABLES EXCEPT
THOSE SPECIFICALLY MENTIONED IN THIS TENDER SPECIFICATION.
- 7.2 TOOLS & PLANTS
BHEL IS NOT PROVIDING ANY TOOLS AND PLANTS FOR THIS WORK.

SECTION-8

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.
- 8.3 A daily logbook of all measurements and testing/calibration should be maintained by contractor on the job for detailing inspection details of various equipments.
- 8.4 The performance of welders will be reviewed from time to time as per the BHEL standards. Welders' performance record shall be furnished periodically. 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 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 conform to job requirement in respect of measurement range, accuracy level & any other specification. The indicative list of MMDs required for this work and to be made available by the contractor is given in appendix-IV. The list will be reviewed by BHEL and the contractor shall meet any augmentation needed.
- 8.7 The MMDs deployed by the contractor shall, at all stages of work, have valid and current calibration. BHEL shall be done the calibration of these MMDs from the agencies accredited/ approved. Copy of calibration certificates in respect of these MMDs has to be submitted to BHEL. Periodical status report regarding validity of calibration has to be submitted to BHEL. Re-calibration/ re-validation shall be done periodically as per BHEL specifications. Contractor shall conform to the specifications of BHEL regarding storage of the MMDs.
- 8.8 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.

- 8.9 In the course of work BHEL may counter/ finally check the measurements with their own MMDs. Contractor shall render all assistance in conduct of such counter/final measurements.
- 8.11 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 for the services of quality assurance engineer.
- 8.12 Stage Inspection By FES/QA Engineers
- Apart from day-to-day inspection by BHEL engineers stationed at site and also by customer's engineers, stage inspection of equipments under erection and commissioning at various stages of erection and commissioning by teams of engineers from field engineering services of BHEL's manufacturing units and quality assurance teams from field quality assurance factory quality assurance and commissioning engineers from technical services of BHEL will also be conducted. Contractor shall arrange all labour, tools and tackles etc, for such stage inspections as part of work.

7.12 Statutory Inspection of Work:

8.13.1

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

8.13.1

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

- 1) Inspectorate of steam boilers and smoke nuisance
- 2) Any other authority connected to this 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, submitting documents, radiographs etc. and following up the matter with them. Contractor shall also make all arrangements for offering the products/systems for inspection, as applicable, to the concerned authority.

8.13.3

The contractors shall pay all fees connected with testing of his welders/workers and testing, inspection & calibration of his MMD and T&P.

8.13.4

It shall be contractor's responsibility to obtain approval of statutory authorities, whenever applicable, for the conducting of any work which comes under the purview of these authorities. Any cost arising from this shall be contractor's account.

8.13.5

BHEL will pay fees for visits, inspection fees etc. of these statutory authorities. All other expenses shall be borne by the contractor. In case these inspections have to be repeated due to default/fault of the contractor and fees have to be paid again, the contractor has to bear the charges.

8.13.6

Contractor should be qualified to execute pressure parts & piping work coming under the purview of IBR, for which he should register himself with CIB Uttar Pradesh. Similarly it is the responsibility of contractor to obtain license from chief electrical inspector, Uttar Pradesh for carrying out high voltage work. Contractor also should be aware of the latest IBR regulations and electricity act, including the amendments thereof.

8.13.7

The contractors shall pay all fees connected with testing of his welders/workers and testing, inspection & calibration of his MMD and T&P.

8.14.0

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.

8.14.0 Field Quality Plan for HP Piping

Contractor shall carry out all activities conforming to the approved Field Quality Plan (FQP) as revised from time to time. A specimen FQP is being enclosed for contractor's reference.

SECTION-9
SPECIAL CONDITIONS OF CONTRACT
Safety, Occupational Health and Environmental Management

Introduction:-

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.

9.0 The Contractor Shall

8.0.0 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

8.0.0 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 sign board giving the following information and display it near the work site:

- . Name of Contractor
- . Name of Contractor Site-in-charge & Telephone number

- . Job Description in short
- . Date of start of job
- . Date of expected completion
- . 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.

9.3 **SPECIAL CONDITIONS**

9.2.1 **Safety**

9.2.1.0 **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.

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

9.2.1.0 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

9.2.1.0 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

9.2.1.0 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.

9.2.1.0 The contractor shall not use any hand lamp energised 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.

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

9.2.1.0 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.

9.2.1.0 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.

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

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

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

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

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

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

9.2.1.0 Gas cylinders shall be handled and stored as per Gas Cylinder Rules and relevant safe working practices

9.2.1.18 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.

9.2.1.19 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.

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

9.2.1.21 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

9.2.1.22 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.

9.2.1.23 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.

9.2.1.24 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.

9.2.1.25 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.

9.2.1.26 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.

9.2.1.0 **Emergency Response**

9.2.1.15.0 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.

9.2.1.15.0 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 aid personnel 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.

9.2.27 OCCUPATIONAL HEALTH

9.2.2.4 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.

9.2.2.4 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

9.2.2.4 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 PPEs 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

9.2.2.4 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

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

9.2.2.4 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

9.2.2.4 Adequate arrangements shall be made to provide safe drinking water

9.2.2.4 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

9.2.3.8 HYGIENE and HOUSEKEEPING

9.2.3.8 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.

9.2.3.8 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.

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

9.2.7 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 advise

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

9.1 SUPERVISION

9.3.0 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.

9.3.1 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

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9.3.2 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 that 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

9.5.6 **REPORTING**

9.5.7 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.

9.5.8 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.

9.5.9 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.

9.5.10 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

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.

9.5.5 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.

9.12 **AUDIT REVIEW AND INSPECTION**

9.6.5 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.

9.6.5 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 PPEs
- 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

SI No.	Equipment	Scope of inspection	Inspection by	Schedule
1	Hand tools	To identify unsafe/defective	User	Daily

		tool		
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

9.12 **NON COMPLIANCE:-**

9.7.2 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.	Safety	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 Slings 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&Ps	500/-

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 utilized 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

BHEL, PSWR 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:

9.10.2 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 13414	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

IS No.	YEAR	Amd. upto	DESCRIPTION
			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 MASONRY 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

IS No.	YEAR	Amd. upto	DESCRIPTION
			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 3314	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 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 4145	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 No.	YEAR	Amd. upto	DESCRIPTION
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 HOT 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 7145	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 8089	1976		CODE OF SAFE PRACTICE FOR LAYOUT OF OUTSIDE FACILITIES IN AN INDUSTRIAL PLANT
IS 8091	1976		CODE OF PRACTICE FOR INDUSTRIAL

IS No.	YEAR	Amd. upto	DESCRIPTION
			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 9814	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

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SECTION-10

SPECIAL CONDITIONS OF CONTRACT

10.0 DRAWINGS AND DOCUMENTS

- 10.1 The detailed drawings, specifications available with BHEL engineers will also form part of this tender specification. Revision of drawings/documents may take place due to various considerations as is normal in such large project. Work will have to be carried out as per revised drawings/ documents. These documents will be made available to the contractor during execution of work at site.
- 10.2 One set of necessary drawings/documents to carry out the erection work will be furnished to the contractor by BHEL on loan that 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 tenderers, general conditions of contract contained in sections 1 & 2 respectively and special conditions of contract contained in sections 4 to 14 and appendices, provisions contained in special conditions of contract in sections 4 to 14 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.**
- 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 case.

SPECIAL CONDITIONS

SECTION-11

TIME SCHEDULE,-MOBILISATION, PROGRESS AND MONITORING, COMPLETION ETC

11.1 TIME SCHEDULE

CONTRACTOR HAS TO MOBILISE HIS RESOURCES AND WORK FORCE IN SUCH A MANNER THAT THE ENTIRE WORK AS DETAILED IN THIS SPECIFICATION IS COMPLETED SATISFACTORILY IN ALL RESPECTS IN **4 (FOUR) MONTHS** FROM START OF WORK AT SITE. HOWEVER, WITH THIS OVERALL SCHEDULE, THE UNIT HAS TO BE COMPLETED WITHIN 4 MONTHS FROM START OF WORK

11.1.1 GRACE PERIOD

A GRACE PERIOD OF 1 MONTHS BEYOND THE TIME SCHEDULE SPECIFIED ABOVE IS PROVIDED.

11.1.2 MOBILISATION

11.1.2.1

THE CONTRACTOR SHOULD REACH SITE AND ESTABLISH HIS SITE OFFICE AND MOBILISE TO COMMENCE THE WORK AS PER DIRECTIONS OF BHEL ENGINEER. THE DATE OF START OF PAINTING WORK ON ANY EQUIPMENT AS DIRECTED BY BHEL ENGINEER AND SO CERTIFIED BY BHEL ENGINEER WILL BE CONSIDERED AS THE DATE OF START OF CONTRACT. THE TIME TAKEN FOR PREPARATORY WORK SHALL NOT BE CONSIDERED FOR RECONING THE COMMENCEMENT CONTRACT.

11.1.2.2

CONTRACTOR SHALL MOBILISE AND ARRANGE HIS RESOURCES FOR COMPLETION OF WORK TO SUIT THE PEAK REQUIREMENTS AS ALSO TO ACHIEVE MONTHLY PROGRAMMES AND TARGETS SET BY BHEL ENGINEER. IN A PROJECT OF THIS MAGNITUDE, PREPONEMENT OF SCHEDULES ARE TO BE EXPECTED AND ALSO NORMAL DELAYS IN MATERIAL SUPPLIES AND FRONT AVAILABILITY ARE LIKELY. CONTRACTOR'S OFFER SHALL ACCOUNT FOR ALL SUCH CONTINGENCIES.

11.2 PLANNING, PROGRESS AND MONITORING OF WORK

11.2.1

Contractor shall furnish a Completion Plan (bar chart) to meet the above schedule. Contractor shall submit a tentative Bar Chart of major activities along with the offer (Technical Bid). Also contractor shall draw Monthly Plan with the approval of BHEL.

11.2.2

It is the responsibility of the contractor to provide all the relevant information on a regular basis regarding erection progress.

11.2.3

The contractor shall submit daily, weekly and monthly progress reports, manpower reports, material reports, equipment reports etc. The progress reports shall indicate the progress achieved against planned with reasons indicating the delays, if any. The report shall also give the remedial actions, which the contractor intends to make good the slippage or lost time so that further works again proceed as per the original program and the slippage do not accumulate and affect the overall program.

11.2.4

Any other information required for decision-making, planning and action taking, the contractor should furnish the same. The tentative format on daily report for labour, tools and plants is given in appendix. The other reports on daily, weekly and monthly erection progress shall be furnished as per the formats required by BHEL.

11.2.5

The work under the scope of contractor is deemed to be completed in all respects, only when all the activities specified under scope of work are completed satisfactorily and so certified by BHEL engineer. The decision of BHEL in this regard shall be final and binding on the contractor.

11.3 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. 11.4. ABOVE WILL BE MADE CONSIDERING THE AVAILABILITY OF COMPONENTS FOR CIVIL WORK COMPLETION 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) CIVIL WORK COMPLETION SCHEDULE NOT ACHIEVED OWING TO NON-AVAILABILITY OF FRONTS.
- A) CIVIL WORK COMPLETION SCHEDULE NOT ACHIEVED OWING TO NON-AVAILABILITY OF MATERIALS BY CONTRACTOR.
- C) CIVIL WORK COMPLETION SCHEDULE 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) CIVIL WORK COMPLETION SCHEDULE NOT ACHIEVED DUE TO ANY OTHER REASONS NOT ATTRIBUTABLE TO THE CONTRACTOR.

11.4 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.

11.5 OVERRUN COMPENSATION

IF THE CONTRACT IS EXTENDED 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.30,000/- PER MONTH (RUPEES THIRTY THOUSAND ONLY). OVERRUN COMPENSATION WILL BE PAID FOR THE EXTENSION ATTRIBUTABLE TO BHEL. NO OVERRUN COMPENSATION WILL BE PAYABLE FOR THE EXTENSION ON ACCOUNT OF REASONS ATTRIBUTABLE TO CONTRACTOR AND/OR FORCE MAJEURE CONDITIONS.

11.6 FORECLOSING OF CONTRACT

11.6.1

BHEL shall have the discretion to foreclose the contract at any time in case Contractor fails to perform his duties and obligations under this contract.

11.6.2

The date of completion of work for the purpose of guarantee vide clause 2.13 of General Conditions of Contract shall be the date on which the contract is foreclosed.

10.6 Interest Bearing Recoverable Advance

Interest bearing (rate of interest will be 1% per annum more than bank interest rate, 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 within the contract period (including extensions granted or foreclosure if any).

11.8 CONTRACT VARIATIONS

11.8.1 Price Variation

No price variation shall be applicable for this contract. The contractual rates shall remain firm over the contract period, grace period and extended period, if any. Accordingly, clause no. 2.16 of General Conditions of Contract is not applicable for this Contract.

11.8.2 Quantity Variation

The quantities of various items of work in this tender specification are approximate and may vary up to any extent or may be deleted altogether. The contractual item rates shall remain firm for any quantity variation. Pro-rata payment shall be made for actual quantities executed

11.9 Definition of Work Completion

The contractor's scope of work under these specifications will be deemed to have been completed in all respects, 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.

11.10 SPLITTING OF WORK

BHEL reserves the right to split up the work and award to more than one agency in case contractor fails to provide adequate resources, manpower etc. to achieve the desired progress of work

11.11

Liquidated damages (L D)

L D shall be applicable as per General Terms & Conditions (GCC) of contract.

SECTION-12 SPECIAL CONDITIONS

12.0 TERMS OF PAYMENT

12.0.1

The contractor shall submit his monthly running account bills with all the details required by BHEL on specified date every month covering progress of work in all respects and areas from the 25th of previous calendar month to 24th of the current month.

12.0.2

On receipt of the bill, joint measurement and checking of the work done will be carried out by the concerned BHEL engineer as per clause 2.6 of General Conditions of the Contract and break-up given in this section of the contract.

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 twelve **(12) months** from the date of completion of entire work as certified by BHEL.

However, this amount may be released earlier (including before completion of work) subject to receipt and acceptance of bank guarantee of equal amount in BHEL's prescribed format and 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:

4. Name of the Company
5. Name of Bank
6. Name of Bank Branch
7. City/Place
8. Account Number
9. Account type
10. IFSC code of the Bank Branch
11. MICR Code of the Bank Branch

BHEL may also choose to release payment by other alternative modes as suitable 12.4

12.1 STAGE-WISE BREAK UP FOR PRO-RATA PROGRESSIVE PAYMENT

12.1.1

98% OF THE ITEM RATE ON PRORATA BASIS ON COMPLETION OF SURFACE CLEANING, COATINGS OF PRIMER AS APPLICABLE AND APPLICATION OF SPECIFIED COATS OF FINISH PAINTS AS PER THE REQUIREMENT.

12.1.2

2% OF THE ITEM RATE ON PRORATA BASIS ON COMPLETION OF COLOUR BAND MARKING, LEGENDS, DIRECTION OF FLOW/ROTATION ETC.

12.2.0 **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 Indian standards in this regard may be applied.
- B) Where the payment is made on the basis of item rate, actual executed quantity measured jointly shall only be paid for.
- C) 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.

SECTION-13

SPECIAL CONDITIONS OF CONTRACT

13.0 DETAILS TO BE FURNISHED BY THE BIDDERS

Apart from other details called for in the tender document under the various other provisions, the following details shall be submitted by the bidders along with their offers (Technical Bid). Please also refer the checklist furnished in the beginning of the Tender Specification.

13.1

Contractor shall submit his HQ and Site organization charts.

13.2

Contractor shall submit tentative month-wise plan to match the Completion Schedule as in Section-11 of Special Conditions of Contract.

13.3

Contractor shall furnish the list of major tools and plants owned by them as well as T&P deployment plan for this work.

13.4

Contractor shall furnish the names of engineers, supervisors, and other specialized staff working with him for more than two years.

13.5

Contractor shall furnish month-wise deployment plan of manpower.

SECTION-14

SPECIAL CONDITIONS OF CONTRACT

14.0 Insurance

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

14.1.1

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 Reporting Damages and Carrying out Repairs

14.2.1

Checking all components/equipments at siding/site and reporting to transporter and /or insurance authorities of any damages/losses will be done by BHEL.

14.2.2

Contractor shall render all help to BHEL in inspection including handling, re-stacking etc, assessing and preparing estimates for repairs of components damaged during transit, storage and erection, commissioning and preparing estimates for fabrication of materials lost/damaged during transit, storage and erection. Contractor shall help BHEL to furnish all the data required by railways, insurance company or their surveyors.

14.2.3

Contractor shall report to BHEL in writing any damages to equipments/ components on receipt, storing, and during drawl of the materials from stores, in transit to site and unloading at place of work and during erection and commissioning. The above report shall be as prescribed by BHEL site management. Any consequential loss arising out of non-compliance of this stipulation will be borne by contractor.

14.2.4

Contractor shall carry out fabrication of any material lost/damaged as per instructions from BHEL engineer.

14.2.5

BHEL, however, retains the right to award or not to award to the contractor any of the rectification/rework/repairs of damages and also fabrication of components.

14.2.6

All the repairs/rectification/rework of damages and fabrication of materials lost, if any, shall be carried out by a separately identifiable gang for certification of man-hours. Daily log sheets should be maintained for each work separately and should be signed by contractor's representative and BHEL engineer. Signing of log sheets does not necessarily mean the acceptance of these as extra works.

14.2.7

All rectification, repairs, rework and fabrication of components lost, which are minor and incidental to erection work (consuming not more than 100 man-hours on each occasion) shall be treated as part of work without any extra cost.

14.2.8

Insurance cover under this policy will generally be as per clauses 2.10.1 to 2.10.4 of General Conditions of Contract unless and otherwise specified differently in the Special Conditions.

14.2.9

In case the loss/damage is not attributable to the contractor, Payments of all extra works on account of repair / rectification / reworks of damages and fabrication of materials lost will be as per provisions of Section-13 of SCC.

15.1.9

In case the repairs/rectification/rework and fabrication of materials lost, the work has been done by more than one agency including the contractor, the payment towards extra charges will be on pro-rata basis and the decision of BHEL in this regard is final and binding on the contractor.

15.1.9

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 as per applicable Insurance (TAC) tariff guidelines for every incidence of loss/damage.

14.2.12

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.

14.3 Insurance by the Contractor and Indemnification of BHEL

14.3.1

BHEL has taken third party liability insurance, indicating in the proposal for such insurance that sub-contractors will be taking part in the erection work detailed in this tender specification. However, the bidder has to bear any expenses/consequences over and above the amount that may be reimbursed to BHEL by such coverage of third party liability insurance taken by BHEL.

Such additional liability will be to cover and indemnify BHEL and its customer of all liabilities which may come up and cause harm/damage to other contractors/customer/BHEL properties/personnel or all or anybody rendering service to BHEL/ customer or is connected with BHEL/ customer's work in any manner whatsoever. The bidders' specific attention is also invited to clause 2.10 of General Conditions of Contract.

14.3.2

Contractor shall obtain suitable statutory as well as non-statutory insurance policies for all the properties belonging to him and also for his personnel deployed at project for execution of the contract work.

SECTION-15

SPECIAL CONDITION OF CONTRACT

15.0 EARNEST MONEY DEPOSIT & SECURITY DEPOSIT

EARNEST MONEY DEPOSIT:

EMD for this tender is Rs. 1,00,000/- (Rupees One Lakh only). Bidders who have already deposited One Time EMD of Rs. 2.00 lakh will be exempted from submission of any EMD now for this tender.

EMD is to be paid in **cash** (as permissible under Income Tax Act), Pay order or **Demand Draft** only in favour of Bharat Heavy Electricals Limited and payable at Nagpur. **No other form of EMD is acceptable.**

EMD by the Tendered will be forfeited as per Tender Documents if

- i) After opening the tender, the tendered revokes his tender within the validity period or increases his earlier quoted rates.
- ii) The tendered 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.

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.

SECURITY DEPOSIT

The successful bidder shall furnish security Deposit. The rate of Security Deposit shall 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 based on award value shall be furnished before start of the work by the Contractor. Amount of Security Deposit shall be aligned with the actual executed value at appropriate stages of the contract period if there is variation from the award value.

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).

Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act subject to a **maximum of 50%** of the total security deposit value. The balance 50% has to be remitted either by cash or in the other form of security. The Bank Guarantee format should have the approval of BHEL.

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.

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 furnished in the form of BG/DD/Securities from Post Office/FDR by the Contractor before start of the work and the balance 50% may be recovered from the running bills.

viii) EMD of the successful tendered shall be converted as Security Deposit, excepting those bidders who have 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.

APPENDIX -1
GENERAL AND SPECIAL REQUIREMENT OF PAINTING

I. PAINTING

All exposed metal parts of the equipment including pipings, structure railings, etc wherever applicable, after installation unless otherwise surface protected, shall be first painted with at least two coats of suitable primer which matches the shop primer paint used, after thoroughly cleaning all such parts of all dirt, rust, scales, greases, oils and other foreign materials by wire brushing, scraping or sand blasting and the same being inspected and approved by the Employer for painting. Afterwards, the above parts shall be finished painted three two coats of allowed resin machinery enamel paint. The minimum thickness of paint film shall not be less than 100 microns. The quality of the finish paint shall be as per the standards of IS or equivalent and to be of the colour as approved by the Employer.

II. COLOUR AND CODING SCHEME

1.0 Purpose

The purpose of this work instruction is to provide the uniform colour and coding scheme for the painting of the equipment and piping installed in our power plant by various vendors. This will help enhance the aesthetic ambience of an otherwise industrial environment. At the same time for identification purpose, colour code/tags have been enumerated for labeling of articles, equipment, pipes, structures etc.

2.0 Scope

4.1.1 The Colour and Coding Scheme covers applications of Ground Colour and Colour Tags/Bands on power plant equipment, piping & ducting as final coat over and above the protective coatings for the purpose of identification.

4.1.2 The Surface Preparation process and sequence of painting, Statutory requirements and other public Safety Regulations is beyond the scope of this standard.(WHY THIS CLAUSE)

1.0 Definitions and Abbreviations

1.1 HOD – Head of the Department

1.2 MR- Management Representative

1.3 IS – Indian Standard

2.0 Description

2.1 ISO 9001-2000, Clause 7.5.3

2.2 Quality manual Section 7.5.3

2.3 QS-01-DIV-W-01, Guideline for drafting procedure/work instruction/ guidelines.

3.0 Procedure

3.1 Colour Scheme for Equipment

Major Equipment in a Building or elsewhere shall be finished with main shade of a colour scheme, while the minor equipment, pipes, etc. shall be finished with secondary shade, as enumerated in accompanying annexures.

3.2 Colour Scheme for Pipelines

The Ground Colour shall be as per the over all Colour Scheme. Generally it shall follow the secondary shade of Colour Scheme.

3.3 Identification

In the case of pipelines, IS:9404 – 1979 “Colour code for identification of pipelines used in Thermal Power Plants” is followed for LABELLING or TAGGING so that Identification of numerous pipelines in a Thermal Power Plant can be done by adopting a system of colour coding consisting of a Colour Band Tag with distinct legend for each system. Direction of flow with an arrow shall be marked near valves junction fittings wetc. To indicate flow & return flow pipes, words F&R will be written in the legend respectively.

3.4 Colour Band

Colour band is superimposed on the ground colour Fig 2A & 2B Appendix C to distinguish one kind or condition of the fluid it carries: for example, condensate from boiler feed, clarified water from drinking water etc.

2.0 Application

2.0.0 Ground colour may be applied in one of the following ways:-

(a) The ground colours shall be applied throughout the entire length of pipe line :-

(a) The Colour Code Band/Tag as an identification mark shall be applied as follows:

-) At Start and finish of the pipes
-) At Inlet and at outlet of valves
-) Near junction and fittings.
-) Before & after Walls and floors where pipe is crossing them
-) It shall also be applied at immediate points. But in no case, the distance between two consecutive colour bands shall exceed 5 meters.

© Colour bands shall have a minimum width of 75 mm. Where

hazardous materials are carried in the pipes the colour bands shall be slant as shown in Fig.3.

(d) The recommended colour bands for the pipe lines with their ISC/RAL nos. are given in Appendix – B.

2.0 **Addition Identifications**

2.0.0 Lettering

- ii. For identification purpose, Colour Code/Tags have been enumerated for labeling of articles; equipment, pipes, structures.
- ii. The recommended size of lettering for pipes of different diameters is given below:

<u>Outside Dia of pipe of Covering</u>	<u>Size of Legend</u>
--	-----------------------

20 to 100 mm	10 mm
100 to 250 mm	40 mm
250 mm & above	60 mm

The lettering shall be given on a bordered rectangular patch background, which has been designated as Colour Code Tags/Bands.

2.0.0 Direction of Flow

Where it is required to be indicated the direction of flow arrow may be painted near the valves fittings, junctions, walls etc and at suitable intervals along the pipeline in a manner best suited to local conditions. These shall be black in colour. If a label or badge with a codified indication is attached to the pipe the direction of flow may be indicated by the painted end of the label or badge or a painted arrow.

2.0.0 Visibility of Markings

Consideration should be given to the visibility of the letters from the Working platforms. For example where the pipelines are located above the normal line of vision of the operator, the lettering should be placed below the horizontal line of the pipeline.

**APPENDIX-II
ANALYSIS OF UNIT RATE QUOTED**

SL. NO.	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%	

DATE
SIGNATURE OF THE BIDDER

APPENDIX-III

FORMAT FOR MONTH-WISE MANPOWER DEPLOYMENT PLAN (CATEGORY-WISE NUMBERS TO BE INDICATED FOR EACH MONTH)

Use additional sheet for remaining period

SN	CATEGORY	MONTHS										
		1	2	3	4	5	6	7	8	9	10	So on
01	RESIDENT ENGINEER											
02	APPLICATION ENGINEERS											
03	QUALITY ASSURANCE ENGINEER											
04	SAFETY ENGINEER											
05	MATERIALS MANAGEMENT SUPERVISORS											
06	SKILLED LABOURS(SUCH AS PAINTERS)											
07	STORE KEEPERS											
08	ELECTRICIANS											
09	SEMISKILLED/ UNSKILLED WORKERS											
	MONTH WISE TOTAL											

SIGNATURE OF BIDDER

DATE:

APPENDIX-IV

CONCURRENT COMMITMENTS

SN	FULL POSTAL ADDRESS 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

SIGNATURE OF THE BIDDER
DATE:

APPENDIX-V

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	TIME SCHEDULE (MONTHS)	DATE OF ACTUAL COMPLETION OF WORK	REMARKS

SIGNATURE OF TENDERER WITH SEAL

- **PLEASE USE ADDITIONAL SHEET IF NEEDED IN THE SAME FORMAT.**
- **PLEASE ENCLOSE COPIES OF WORK ORDERS INCLUDING DETAILED BILL OF QUANTITIES, COMPLETION CERTIFICATES IN SUPPORT OF THIS STATEMENT.**