

**TENDER SPECIFICATION**  
**NO.BHE/PW/PUR/FINSE-CVL/683**

**FOR**

**CIVIL, STRUCTURAL & ARCHITECTURAL WORK FOR MAIN POWER BLOCK  
COMPRISES OF STG FOUNDATION, STG BUILDING INCLUDING ITS AUXILIRIES,  
BALANCE OF PLANTS AND ENABLING WORK SUCH AS CONSTRUCTION OF  
STORE SHEDS ,SECURITY CABINS, DEVELOPMENT OF OPEN STORAGE YARD  
AND ASSOCIATED ELECTRIFICATION WORKS, PROVIDING ONSITE SERVICES TO  
BHEL STAFF AT 2x12MW EXPANSION POWER PLANT**

**AT**

**FINCHAA SUGAR FACTORY (FSF)**

**STATE- ORAMIA. (ETHIOPIA)**

**PART-I: TECHNICAL -BID**

**VOLUME- I**

**SPECIAL & GENERAL CONDITIONS OF CONTRACT,  
QR, NIT**



BOOK NO.

**BHARAT HEAVY ELECTRICALS LIMITED**

(A GOVERNMENT OF INDIA UNDERTAKING)

POWER SECTOR - WESTERN REGION

SHREEMOHINI COMPLEX

345, KINGS WAY - NAGPUR 440 001

BHEL : PS WR

TS: BHE/PW/PUR/FINSE-CVL/ 683

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SIGN OF BIDDER WITH SEAL

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**LEGEND:**

\$. PLACED BEFORE 'GENERAL CONDITIONS OF CONTRACT' IN BOTH HARD AND SOFT COPY DOCUMENTS.

#. ATTACHED AT THE END OF HARD COPY OF TENDER SPECS. PART-I (TECHNICAL BID) AND AS A SEPARATE FILE TITLED 'WEB\_NIT\_GCC' AS SOFT COPY HOSTED IN WEB PAGE.

@. ISSUED AS SEPARATE BOOKLET IN HARD COPY AS 'PRICE-BID'. SOFT COPY HOSTED IN WEB PAGE.

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

**BHARAT HEAVY ELECTRICALS LIMITED**

(A GOVERNMENT OF INDIA UNDERTAKING)

POWER SECTOR - WESTERN REGION

SHREEMOHINI COMPLEX

345, KINGS WAY - NAGPUR 440 001 ( INDIA )

PH NO : 0091- 0712- 3048600, FAX-0091- 0712- 3048605

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**TENDER SPECIFICATION NO.BHE/PW/PUR/FINSE - CVL/683**

**NAME OF THE WORK:** CIVIL, STRUCTURAL & ARCHITECTURAL WORK FOR MAIN POWER BLOCK COMRISES OF STG FOUNDATION, STG BUILDING INCLUDING ITS AUXILIARIES, BOPs AND ENABLING WORK SUCH AS CONSTRUCTION OF STORE SHEDS, SECURITY CABINS, DEVELOPMENT OF OPEN STORAGE YARD AND ASSOCIATED ELECTRIFICATION WORKS, PROVIDING ONSITE SERVICES TO BHEL STAFF AT 2x12MW EXPANSION POWER PLANT AT FINCHAA, FINCHAA SUGAR FACTORY (FSC), STATE-ORAMIA (ETHIOPIA)

**EARNEST MONEY DEPOSIT:** Earnest Money Deposit (EMD) : EMD of Indian Rupees 2,00,000/- . FOR MORE DETAIL PL REFER SECTION-15.

DUE DATE & TIME FOR RECEIPT OF OFFERS: ON OR BEFORE----- **1800 HOURS**

THIS TENDER CONTAINS THE FOLLOWING DOCUMENTS.

**PART - I**

VOLUME - I (TECHNICAL BID /GENERAL & SPECIAL CONDITIONS OF CONTRACT)

VOLUME -II (TECHNICAL BID /TECHNICAL SPECIFICATION)

**PART - II**

VOLUME – III (PRICE BID)

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

M/S.

(THESE TENDER DOCUMENTS ARE NOT TRANSFERABLE)

**SR. MANAGER ( PUR)**

BHEL : PS WR

**BHARAT HEAVY ELECTRICALS LIMITED**

*(A GOVERNMENT OF INDIA UNDERTAKING)*

POWER SECTOR - WESTERN REGION

SHREEMOHINI COMPLEX

345, KINGS WAY - NAGPUR 440 001

**PROCEDURE FOR SUBMISSION OF SEALED TENDERS**

-----

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

**A) PART-I: TECHNICAL BID**

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

- a) VOLUME-I : SPECIAL AND GENERAL CONDITIONS OF CONTRACT
- VOLUME-II : STANDARD TECHNICAL SPECIFICATIONS

**B) PART – II, PRICE BID**

VOLUME-III : PRICE BID (ISSUED IN DUPLICATE)

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

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

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

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

CONTRACTOR SHOULD HAVE SOUND FINANCIAL STABILITY.

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

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

THE TENDERER IF ANY, SHALL OBTAIN CLARIFICATION ON TENDER BEFORE SUBMITTING THEIR OFFER AT LEAST ONE WEEK BEFORE DATE OF SUBMISSION. .

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**Offers must be submitted without any deviation.**

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

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

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

**Tender received after due date shall NOT be considered under any circumstances.**

PURCHASER OF THIS TENDER DOCUMENT IS ADVISED TO CHECK AND ENSURE COMPLETION OF ALL PAGES OF TENDER DOCUMENT AND REPORT ANY DISCREPANCY TIMELY FOR CORRECTIVE ACTION, IF ANY, TO THE ISSUING AUTHORITY BEFORE THE BIDS ARE SUBMITTED. ORIGINAL COPY/ DOWNLOADED COPY OF TENDER DOCUMENT COMPLETE IN ALL RESPECTS MUST BE SUBMITTED BACK (DULY SIGNED AND STAMPED) AS PART OF THE BID WITHOUT WHICH THE SAME IS LIABLE TO BE REJECTED BY BHEL.

**SOME SPECIAL CONDITIONS OF THIS TENDER ARE AS BELOW :**

- 1) **Only Indian bidder shall be eligible to participate in this tender.**
- 2) **The Indian bidder who is submitting the offer should necessarily fulfill the QR (Qualifying Requirement) and other tender conditions. The Indian Bidder will be permitted to have a tie up for execution of limited portions of work with the agencies locally available in Ethiopia, on prior approval of BHEL. However back to back tie up is NOT permitted.**
- 3) **The Indian bidders shall only be allowed to submit their offers & quoted rates shall be Indian rupees only.**

## PROJECT INFORMATION

### INTRODUCTION

2X12MW FINCHAA IS BEING SET UP BY FINCHAA SUGAR FACTORY (FSF) NEAR FINCHAA VALLY IN THE STATE OF ORAMIA (ETHIOPIA).

### GENERAL SITE DATA

- a) ROAD APPROACH : PROJECT SITE IS LOACTED IN THE WOLEGA ZONE OF AROMA REGION, ABOUT 350KM WEST OF ADDIS ABABA.
- b) SEA PORT : PORT OF ENTRY FOR IMPORTED GOODS BY MARINE TRANSPORT IS PORT OF DJIBOUTI, WHICH IS AROUND 1300 KM FROM SITE
- c) AIR PORT : PORT OF ENTRY FOR AIR TRANSPORTATION IS ADDIS ABABA.
- d) HEIGHT ABOVE MSL : 1500 M
- e) RAINY SEASON : JUNE TO OCTOBER
- f) AVERAGE RAINFALL : 1300MM
- g) CRUSHING SEASON : 27 WEEKS (188 DAYS) ,EXTENDING FROM SECOND WEEK OF NOVEMBER THROUGH TO MID MAY.
- h) SEISMIC ZONE : NONE DEFINED
- i) MAXIMUM AMBIANT TEMRATURE (SHADE) : +34 ° C
- j) MINIMUM AMBIANT TEMRATURE (SHADE) : +11 ° C
- k) DESIGN TEMPRATURE RANGE : +5 ° C TO +40 ° C
- l) RELATIVE HUMIDITY RANGE : 62% TO 96 %( AVERAGE 84%).
- m) COLLING WATER TEMPERATURE RANGE : +20 ° C TO +24 ° C
- n) DUST CONDITION : VERY DUSTY, CONTAINS SUGAR AND SPLASHES OF MOLASSES

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- o) AREA CLASSIFICATION ELECTRICAL : HAZARDOUS CLASS 1; DIVISION  
1A REFINARY SUGAR HANDLING.

**PROVISION OF WATER SUPPLY**

- a) WATER IS PUMPED FROM FINCHAA RIVER BY FOUR RIVER PUMPS.

**PREVAILING WIND**

- a) PREDOMINANT WIND DIRECTION : CALM  
b) OCCASIONAL WIND DIRECTION : SOUTH\_EAST TO NORTH WEST AND  
EAST TO WEST  
c) AVERAGE WIND SPEED : 3.4 KM/H  
d) MAXIMUM WIND SPEED : 6.5 KM/H.

**CANE QUALITY AND THROUGHPUT**

- a) CANE HARVESTING : BURNT CANE, WHOLE STICK MANUALLY  
HARVESTED AND MECHANICALLY LOADED IS  
RECEIVED AT FACTORY.  
b) POL% CANE : 14.06  
c) FIBRE% CANE (AVERAGE) : 14.60  
d) ASH% CANE (AVERAGE) : 0.75  
e) SAND% CANE (APPROXIMATE) : 4.0



Check List			
(Vide Para 1.3 Of Section-I of General Conditions Of Contract)			
1	Name of the Bidder with Postal Address for Correspondence		
2	Name of Contact Person with Telephone & Fax No.	Mr./Ms Tel No. Fax No.	
3	Nature of the firm	PROPRIETARY / PARTNERSHIP / LIMITED CO.	
4	Details of EMD  Please Indicate whether  1) One Time EMD or,  2) Only for this Tender	DD No. .... DD Date..... Name of Bank..... Amount: Rs.....	
5	Validity of Offer (BHEL's Requirement: 180 days from Due Date)	Validity _____ days	
6	Mobilization Time (Please refer Section-11 of SCC)	Mobilization Time _____	
7	Whether any conditions stipulated?	Yes (vide Document reference:	No
		<b>Bidder to note that tender with conditions unacceptable to BHEL shall be rejected.</b>	
8	Bidder has visited the project site and acquainted with the site conditions	Yes	No
9	Details of concurrent jobs are furnished ( <b>Appendix-V</b> )	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	<b>Analysis of Unit Rates</b> quoted ( <b>Appendix-III</b> ) is furnished	Yes	No

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<b>Check List</b>			
(Vide Para 1.3 Of Section-I of General Conditions Of Contract)			
14	<b>Month-wise manpower Deployment plan (Appendix-II)</b> is furnished	Yes	No
15	<b>Month-wise deployment plan for major T&amp;P (Appendix-VII &amp; VIII)</b> is furnished	Yes	No
16	Whether all the pages of the Tender Specification documents are read, understood and signed	Yes	No
17	<b>Power of Attorney</b> enclosed in favour of person making offer	Yes	No
18	Bidder has familiarized himself with all Relevant Local Laws & Local Conditions	Yes	No
19	Safety Requirement of this work in a Running plant Premises has been understood.	Yes	No
20	Erection and Commissioning programme furnished	Yes	No
21	Whether contractor has left any job unfinished? If so, give reasons.	Yes	No
22	Whether any client has terminated the contractor's work before completion? If so, furnish reasons for the same	Yes	No
23	<b>BIDDER MUST FURNISH HERE THE FOLLOWING DETAIL FOR RELEASING EMD AND OTHER PAYMENTS DULY ENDORSED BY BANK ( IE SIGN &amp; STAMP BY BANK ).</b>  1 Name of the Company----- 2 Address of Company----- 3 Name of Bank----- 4 Name of Bank Branch----- 5 City/Place----- 6 Account Number----- 7 Account type----- 8 IFSC code of the Bank Branch----- 9 MICR code of the Bank Branch-----	Yes	No

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

Date:

Signature of Bidder

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

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SIGN OF BIDDER WITH SEAL

## DECLARATION STATEMENT

I, \_\_\_\_\_, HEREBY CERTIFY THAT ALL THE INFORMATION AND DATA FURNISHED BY ME WITH REGARD TO THIS TENDER SPECIFICATION NO.**BHE/PW/PUR/FINSE -CVL/683** ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE. I HAVE RECIVED ALL THE DOCUMENTS VIZ. VOLUME-I & II (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

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SIGN OF BIDDER WITH SEAL

**CERTIFICATE OF DECLARATION FOR CONFIRMING  
KNOWLEDGE ON SITE CONDITIONS**

WE, M/S -----

HEREBY DECLARE AND CONFIRM THAT WE HAVE VISITED THE PROJECT SITE AT **FINCHAA, STATE –ORAMIA(ETHIOPIA)** AS REFERRED IN BHEL'S TENDER SPECIFICATION NO. **BHE/PW/PUR/FINSE-CVL/683** AND ACQUIRE FULL KNOWLEDGE AND INFORMATION ABOUT THE SITE CONDITIONS & NATURE OF JOB. 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.

BIDDERS'NAME AND ADDRESS

SIGNATURE & OFFICIAL SEAL OF  
AUTHORISED SIGNATORY

PLACE:

DATE:

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**TENDER SPECIFICATION: BHE/PW/PUR/FINSE-CVL/683**

**CERTIFICATE OF NO DEVIATION**

WE, M/S -----

HEREBY CERTIFY AND CONFIRM THAT THERE ARE NO DEVIATIONS, EITHER TECHNICAL OR COMMERCIAL, SOUGHT BY US IN RESPECT OF THE TERMS AND CONDITIONS AS IN BHEL' TENDER SPECIFICATION NO. **BHE/PW/PUR/FINSE-CVL/683** AND I AM AGREEING TO ALL THE TERMS AND CONDITIONS MENTIONED IN TENDER SPECIFICATION.

SIGNATUTRE OF THE TENDERER AND OFFICIAL SEAL

**SIGNATURE OF TENDERER**

**DATE:**

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### SECTION-3

#### OFFER OF CONTRACTOR

##### SENIOR MANAGER (PURCHASE)

BHARAT HEAVY ELECTRICALS LIMITED

POWER SECTOR - WESTERN REGION

SHREEMOHINI COMPLEX

345, KINGS WAY, NAGPUR 440 001

COUNTRY: INDIA : STATE (MAHARASTRA)

DEAR SIR,

I/WE HEREBY OFFER TO CARRY OUT THE WORK DETAILED IN TENDER SPECIFICATION NO.BHE/PW/PUR/FINSE - CVL/683 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 DOCUMENTS CONNECTED WITH THE ABOVE WORK AND AGREE TO ABIDE BY THE SAME.

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

I/WE HAVE DEPOSITED/FORWARDED HERewith A SUM OF **EMD of Indian Rupees 2,00,000/-** . TOWARDS EARNEST MONEY DEPOSIT (DETAILS IN CHECKLIST) WHICH SHALL BE REFUNDED SHOULD OUR OFFER NOT BE ACCEPTED. SHOULD OUR OFFER BE ACCEPTED, I/WE FURTHER AGREE TO DEPOSIT SUCH ADDITIONAL SUM WHICH ALONGWITH THE SUM OF EMD SHALL MAKE UP 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 TENDERER:

DATE:

ADDRESS:

WITNESSES WITH THEIR ADDRESS

SIGNATURE

NAME

ADDRESS

1.

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## SECTION-4

### SPECIAL CONDITIONS OF CONTRACT

**4.0 (A)** DETAIL SCOPE OF WORK ARE AS UNDER

#### **PART - A**

##### **SCOPE OF MAIL CIVIL WORK:**

###### **1) CONSTRUCTION OF THE FOLLOWING PLANT BUILDINGS;-**

- a) CONTROL ROOM BUILDING AND SWITCHGEAR BUILDING - 1 NO.
- b) STG HALL - 1 NO.
- c) CW PUMP HOUSE - 1 NO.
- d) BEARING CW PUMP HOUSE - 1 NO.
- e) IA/PA COMPRESSER HALL - 1 NO.

###### **2) CONSTRUCTION OF THE FOLLOWING EQUIPMENT FOUNDATION;-**

- a) STEAM TURBINE - 2 NOS.
- b) FOUNDATION OF AUXILIARIES AS REQUIRED

###### **3) CONSTRUCTION OF THE FOLLOWING SERVICES;-**

- a) STORM WATER DRAINS
- b) OILY WATER DRAIN
- c) CABLE TRENCHES INCLUDING PRE-CAST TRENCH COVER
- d) CONCRETE PAVING IN OPERATING AREAS ONLY .

###### **4) CONSTRUCTION OF SUPPORTING STRUCTURE AND FOUNDATION**

- a) FOR PIPES/CABLE RACKS.

#### **PART - B**

##### **SCOPE OF ENABLING WORK:**

- a) CONSTRUCTION OF CLOSED SHED (SIZE 60M X 15M) WITH STORE OFFICE IN PART OF THE AREA - **1 NO.** HEIGHT OF THE SHED SHALL BE APPROX. 5.00M FROM PLINTH LEVEL.
- b) CONSTRUCTION OF CLOSED SHED WITHOUT STORE OFFICE OF SIZE 60M X 15M - **1 NO.** HEIGHT OF THE SHED SHALL BE APPROX. 5.00M FROM PLINTH LEVEL.
- c) CONSTRUCTION OF SECURITY CABIN OF SIZE (4M X 3M) - 2 NO.

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- d) INTERNAL ELECTRIFICATION OF CLOSED STORAGE SHEDS AND SECURITY CABIN AS ABOVE
- e) OPEN STORAGE YARD DEVELOPMENT, LEVELING/DRESSING AND CONSOLIDATION - **(APPROX. 18,000 SQ. M).**
- f) CONSTRUCTION OF ROADS, DRAINS, FENCING, GATES FOR OPEN STORAGE YARD.
- g) PROVIDING AND LAYING RCC HUME PIPE AS PER SITE REQUIREMENT.
- h) REMOVAL OF DENSE GRASS, VEGETATIONS, WILD GROWTH, ETC. FROM OPEN STORAGE YARD
- i) ILLUMINATION OF OPEN STORAGE YARD.

## **PART - C**

**FACILITY TO BE PROVIDED TO BHEL SITE STAFF : (APPROX. STRENGTH – 16 HEADS) SHALL BE AS PER RATE SCHEDULE ,PART -C MENTIONED IN THE PRICE BID**

**THE ABOVE FACILITIES SHALL BE PROVIDED IN PHASES AS PER THE POSTING OF BHEL STAFF AT SITE & SHALL REMAIN TILL ENTIRE CONTRACT PERIOD & EXTENSION PERIOD IF ANY.**

### **4.0 (B ) SPECIAL CONDITION OF CONTRACT**

- 1) DETAILS OF THE ITEMS IN “ SCHEDULE OF QUANTITIES (SOQ) “ SHALL BE READ IN CONJUNCTION WITH THE CORRESPONDING SPECIFICATIONS, DRAWINGS AND OTHER VARIOUS REQUIREMENTS STIPULATED IN VARIOUS SECTIONS OF BID DOCUMENTS. THE RATES QUOTED SHALL BE INCLUSIVE OF ALL THE REQUIREMENTS.
- 2) THE WORK SHALL BE CARRIED OUT AS PER CONSTRUCTION DRAWINGS, SPECIFICATIONS, SOQ AND INSTRUCTION OF THE SITE ENGINEERS. DRAWINGS ENCLOSED WITH THESE DOCUMENTS ARE ONLY INDICATIVE GIVING SOME IDEA OF THE TYPE OF WORK INVOLVED. THE LAYOUT, SIZES AND DETAILS OF THE BUILDING, STRUCTURES AND FOUNDATIONS SHOWN IN TENDER DRAWINGS MAY VARY TO A LARGE EXTENT DURING ACTUAL CONSTRUCTION. FINAL DRAWINGS WILL BE ISSUED PROGRESSIVELY DURING THE EXECUTION OF THE WORK.
- 3) ITEMS OF WORK PROVIDED IN THIS SOQ BUT NOT COVERED IN THE SPECIFICATIONS SHALL BE EXECUTED STRICTLY AS PER INSTRUCTIONS OF THE ENGINEER.
- 4) UNLESS SPECIFICALLY MENTIONED OTHERWISE IN THE CONTRACT, THE BIDDER SHALL QUOTE HIS RATES FOR THE FINISHED ITEMS AND SHALL PROVIDE FOR THE COMPLETE COST TOWARDS FUEL, TOOLS, TACKLE, EQUIPMENT, CONSTRUCTIONAL PLANT , TEMPORARY WORKS, LABOUR MATERIALS, LEVIES , TAXES , TRANSPORT, LAYOUT, REPAIRS, RECTIFICATION, MAINTENANCE TILL HANDING OVER, SUPERVISION, SHOPS, ESTABLISHMENTS, SERVICES , TEMPORARY ROADS, REVENUE EXPENSES, CONTINGENCIES, OVERHEADS, PROFITS AND ALL INCIDENTAL ITEMS NOT SPECIFICALLY

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MENTIONED BUT REASONABLY IMPLIED AND NECESSARY TO COMPLETE THE WORKS ACCORDING TO THE CONTRACT.

- 5) THE RATE SHALL ALSO BE INCLUSIVE OF CARRYING OUT TOPOGRAPHY SURVEY OF SITE TO ESTABLISH LEVELS AND COORDINATES AT SUITABLE INTERVALS, FORM EXISTING GRID LEVELS AND COORDINATES FURNISHED BY

THE OWNER, ESTABLISH BENCH MARKS, SETTING OUT THE LOCATION AND LEVELS OF THE PROPOSED STRUCTURES, CONSTRUCTIONS AND MAKING REFERENCES , PILLARS AND OTHER IDENTIFICATION MARKS ETC. NO SEPARATE PAYMENT WILL BE MADE TOWARDS THE SAME.

- 6) RATES SHALL BE QUOTED BOTH IN FIGURES IN CLEAR LEGIBLE WRITING. NO OVER WRITING IS ALLOWED. ALL SCORING AND CANCELLATION SHOULD BE COUNTER SIGNED BY THE BIDDER. IN CASE OF ILLEGIBILITY, THE INTERPRETATION OF THE ENGINEER SHALL BE FINAL. **ALL ENTRIES SHALL BE IN ENGLISH LANGUAGE. ALSO OFFER TO BE SUBMITTED IN ENGLISH LANGUAGE ONLY.**

### **7) RATES SHALL BE QUOTED BY BIDDER IN INDIAN RUPEES ONLY**

- 8) ENGINEERS DECISION SHALL BE FINAL AND BINDING ON THE CONTRACTORS REGARDING CLARIFICATION OF ITEMS IN THIS SCHEDULE WITH RESPECT TO THE OTHER SECTION OF THE CONTRACT.
- 9) IN CASE OF ANY DISCREPANCY BETWEEN BOQ, RELEVANT DRAWING AND/OR SPECIFICATIONS CLARIFICATION SHALL BE SOUGHT AT TENDER STAGE IT SELF. OTHERWISE IT SHALL BE ASSUMED THAT THE BIDDER HAS QUOTED FOR THE MORE STRINGENT REQUIREMENT.
- 10) **CONTRACTOR SHALL MOBILIZE SUFFICIENT NUMBER OF EXCAVATION MACHINE/POCLAIN/ JCB, DUMPERS, CONCRETE BATCHING PLANT, VIBRATORS, CONCRETE PUMPS, SHUTTERING & SCAFFOLDING MATERIALS FOR RCC FRAMEWORK OF BUILDINGS, WINCHES, CRANES, TRACTOR, DUMPER AND QUALITY CONTROL LAB. EQUIPMENTS AT SITE FOR SUCCESSFUL COMPLETION OF JOB IN TIME.**

#### **4.0.1**

**THE WORKS TO BE PERFORMED UNDER THIS CONTRACT CONSIST OF PROVIDING ALL LABOUR, SUPERVISION, ALL TYPES OF MATERIALS (INCLUDING STEEL & CEMENT), SCAFFOLDING, CONSTRUCTION EQUIPMENTS, TOOLS AND PLANTS, TEMPORARY WORKS, SUPPLIES, TRANSPORTATION AND ALL INCIDENTAL ITEMS NOT SHOWN OR SPECIFIED BUT REASONABLY IMPLIED OR NECESSARY FOR THE PROPER COMPLETION OF WORK IN ALL RESPECTS. TESTING OF ALL MATERIALS, CONCRETE, EARTHWORK OTHER ALLIED WORKS, PREPARATION OF BAR BENDING SCHEDULES ON THE BASIS OF CONSTRUCTION DRAWINGS.**

#### **4.0.2**

THE AREA OF WORK SHALL BE CLEARED OF ALL VEGETATION, RUBBISH AND OTHER OBJECTIONABLE MATTER AND MATERIALS REMOVE SHALL BE BURNT OR OTHERWISE DISPOSED OF AS DIRECTED BY THE ENGINEER-IN-CHARGE.

BHEL : PS WR

NO SEPARATE PAYMENT FOR THIS OPERATION SHALL BE MADE. THE COST OF ALL THESE OPERATIONS SHALL BE DEEMED TO HAVE BEEN INCLUDED IN THE UNIT RATES RENDERED FOR THE DIFFERENT ITEMS UNDER BILL OF QUANTITIES.

- 4.0.3 ALL THE WORKS AREAS SHALL BE ADEQUATELY FLOOD LIGHTED TO THE SATISFACTION OF THE ENGINEER-IN-CHARGE WHEN THE WORK IS IN PROGRESS DURING THE NIGHT SHIFTS.
- 4.0.4 THE UNIT RATES SHALL INCLUDE ALL MATERIAL EQUIPMENT, FIXTURES, LABOUR CONSTRUCTION PLANT, TEMPORARY WORKS AND EVERYTHING WHETHER OF PERMANENT OR TEMPORARY NATURE NECESSARY FOR THE COMPLETION OF JOB IN ALL RESPECTS.
- 4.0.6 THE UNIT RATES QUOTED FOR VARIOUS ITEMS OF B.O.Q SHALL INCLUDE ALL THE STIPULATIONS MENTIONED IN TECHNICAL SPECIFICATIONS AND NOTHING EXTRA OVER B.O.Q RATES SHALL BE PAYABLE.
- 4.0.7 DESIGN DRAWINGS SHOWING ENOUGH DETAILS FOR THE CONSTRUCTION AS PER THE SPECIFICATION SHALL BE FURNISHED TO THE CONTRACTOR IN A PHASED MANNER AS FAR AS POSSIBLE.
- 4.0.8 CUSTOMER/BHEL SHALL PROVIDE LAND OUTSIDE PLANT PREMISES FOR REGULAR DISPOSAL AND ASSOCIATED ACTIVITIES IN RESPECT OF EXCAVATED SURPLUS EARTH, DISMANTLED MATERIALS GENERATED FROM THIS WORK. REFER SECTION-5 FOR FURTHER DETAILS IN THIS REGARD. RATES QUOTED SHALL BE INCLUSIVE OF ABOVE CONDITION.
- 4.0.9 ALL ARCHITECTURAL ITEMS SHALL BE PURCHASED FROM ONLY THE VENDORS APPROVED BY BHEL/FSF/CONSULTANT.
- 4.0.10 CONTRACTOR SHALL TAKE DELIVERY OF CERTAIN STEEL MATERIALS **LIKE FOUNDATION BOLTS/ EMBADMENTS** (IF ANY) SUPPLIED BY OUR MANUFACTURING UNITS OF BHEL/ SUPPLIERS OF EQUIPMENT FROM BHEL SITE STORES/STORAGE YARD IN THE PRESCRIBED PROFORMA. FIXING OF FOUNDATION BOLTS IN IMPORTANT EQUIPMENT FOUNDATIONS DONE BY USING STEEL TAMPLATES EXCLUSIVELY MADE FOR THIS PURPOSE WITHIN THE QUOTED RATE. WOODEN TAMPLATES SHALL NOT BE PERMITTED. BOLT AND INSERTS AFTER FIXING IN POSITION SHALL BE PROPERLY WELDED WITH ADJACENT **STEEL/REINFORCEMENT** MEMBER TO RETAIN IN CORRECT POSITION AND TO ENSURE ALIGNMENT/VERTICALITY DURING CONCRETING.

#### **4.2.0 STRUCTURAL WORKS**

**THE WORK INVOLVES:** SUPPLY OF STEEL MATERIALS FROM APPROVED MANUFACTURERS , FABRICATION, ERECTION, WELDING, TESTING, ALIGNMENT FOR THE ABOVE STRUCTURES AND HANDING OVER OF STRCUTURAL WORK TO BHEL /THEIR AGENCY FOR FURTHER WORKS.

#### **4.3.0 WELDING**

WELDING SHALL BE DONE BY THE QUALIFIED WELDERS. WELDER'S TEST TO BE CONDUCTED AT SITE IN PRESENCE OF BHEL/BHEL'S CUSTOMER. PROCESS QUALIFICATION IF REQUIRED SHALL BE ARRANGED BY CONTRACTOR.

BHEL : PS WR

ALL SAMPLES FOR THE WELDER'S QUALIFICATION TEST SHALL ARRANGED BY CONTRACTOR. QUOTED RATE SHALL BE INCLUSIVE OF ALL THE EXPENDITURE TOWARDS TESTING OF WELDERS FOR DESTRUCTIVE AND NON-DESTRUCTIVE TEST, TESTING AND APPROVAL OF WELDERS ETC., COMPLETE. ALL WELDED JOINTS SHALL BE SUBJECT TO THE ACCEPTANCE OF BHEL ENGINEER. ALL THE WELDED JOINTS SHALL BE CLEANED OF SLAG ETC. AND PAINTED WITH PRIMER TO PREVENT CORROSION AT NO EXTRA COST TOWARDS THIS. **PRIMER AND PAINT OF APPROVED COLOUR & SHADES SHALL BE SUPPLIED BY CONTRACTOR AS PER THE TECHNICAL SPECIFICATION/APPROVED DRAWING & PRIOR APPROVALS OF BHEL/FSF.**

#### 4.3.1

CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENT INSIDE/OUTSIDE THE PLANT PREMISES FOR STORAGE OF THE CEMENT AND OTHER MATERIALS INCLUDING THE BUILDING MATERIALS. SPACE FOR DEVELOPMENT OF SUCH INFRASTRUCTURE FACILITIES SHALL BE PROVIDED BY **BHEL/FSF (Fincha sugar factory)** FREE OF COST AS PER THE AVAILABILITY.

ALSO FOR FABRICATION OF STEEL STRUCTURALS AND REINFORCEMENTS THE NECESSARY AREA INSIDE/OUTSIDE THE PLANT PREMISES SHALL BE PROVIDED BY BHEL & ALL NECESSARY INFRASTRUCTURES HAS TO BE ARRANGED BY THE CONTRACTOR AT THEIR COST. ALL COSTS, DUTIES, LAVIES, TAXES AND

INCIDENTAL, CHARGES ETC., HAVE TO BE BORN BY THE CONTRACTOR. REQUISITE FENCING AND OTHER SUITABLE SECURITY ARRANGEMENTS ETC. SHALL BE THE CONTRACTOR'S RESPONSIBILITY. TRANSPORT OF THE WORKED AND FABRICATED ITEMS, ARRANGING GATEPASSES AND OTHER PERMITS ETC., IS ALSO PART OF CONTRACTOR'S RESPONSIBILITY. THE RATES QUOTED SHALL BE INCLUSIVE OF ALL THE ABOVE AND RELATED FACTORS. NO CLAIM WHATSOEVER WILL BE ENTERTAINED BY BHEL IN THIS REGARD. REFER SECTION-5 IN THIS REGARD.

#### 4.4 GENERAL

4.4.1 THE DETAILED SCOPE OF WORK COVERED IN THESE SPECIFICATIONS IS NOT A COMPREHENSIVE LIST OF THE ITEMS OF WORK INVOLVED. THE DETAILED SCOPE OF WORK MAY VARY CONSIDERABLY DEPENDING ON THE ACTUAL CONSTRUCTION REQUIREMENTS AND AS PER DRAWINGS RELEASED.

#### 4.4.2

THE DRAWINGS ENCLOSED WITH THIS TENDER (IF ANY) ARE INTENDED TO GIVE THE TENDERER A GENERAL IDEA OF THE TYPE AND EXTENT OF WORK INVOLVED.

THE DRAWINGS ARE AS SUCH ONLY INDICATIVE AND NOT TO BE CONSTRUED AS THE EXACT CONSTRUCTION DRAWINGS. THE WORK SHALL BE EXECUTED AS PER

THE "AFC" DRAWING (APPROVED FOR CONSTRUCTION) SUPPLIED BY BHEL FROM TIME TO TIME (2 SETS) IN PHASED MANNER.

BHEL : PS WR

#### 4.4.3

MATERIALS SHALL BE STACKED NEATLY, PRESERVED AND STORED IN THE CONTRACTOR'S SHED AND WORK AREAS IN AN ORDERLY MANNER.

#### 4.4.4

SHOULD THE CONTRACTOR OR HIS WORKMEN OR SERVANTS BREAK, DEFACE, INJURE OR DESTROY ANY PART OF A BUILDING, ROAD, KERBS, FENCE, ENCLOSURES, WATER PIPES, CABLES, DRAINS, ELECTRIC OR TELEPHONE POSTS OR WIRES, TREES OR ANY OTHER PROPERTY, OR TO ANY PART OF ERECTED EQUIPMENTS AND STORED COMPONENTS ETC., THE CONTRACTOR SHALL MAKE THE SAME GOOD AT HIS OWN EXPENSE OR IN DEFAULT, THE BHEL SITE ENGINEER MAY CAUSE THE SAME TO BE MADE GOOD BY OTHER AGENCY OR BY OTHER MEANS AND DEDUCT THE EXPENSE WITH BHEL OVERHEAD (OF WHICH THE SITE ENGINEER'S DECISION IS FINAL) FROM ANY SUMS THAT MAY BE THEN OR AT ANY TIME THEREAFTER BECOME DUE TO THE CONTRACTOR OR FROM HIS SECURITY DEPOSIT OR ANY OTHER MONEY DUE.

#### 4.4.5

THE WORK HAS TO BE EXECUTED WITH THE CONSTRAINTS LIKE RAIN, INSUFFICIENT SPACE, IMPROPER APPROACH ROADS ETC., AND IN CONJUNCTION WITH NUMEROUS OTHER OPERATIONS AT SITE AS IT ALWAYS HAPPENS IN THIS

NATURE OF PROJECT.THE CONTRACTOR AND HIS PERSONNEL SHALL COOPERATE WITH OTHER PERSONNEL/CONTRACTOR, COORDINATING HIS WORK WITH OTHERS AND PROCEED IN A MANNER THAT SHALL NOT DELAY OR HINDER THE PROGRESS OF WORK AS A WHOLE.

#### 4.4.6

**THE CONTRACTOR SHOULD SATISFY BHEL THAT AN ACCIDENT RISK INSURANCE POLICY IN RESPECT OF HIS EMPLOYEES AS PER WORKMEN COMPENSATION ACT, IS TAKEN BEFORE** STARTING OF THE WORK AND ALSO SATISFY BHEL THAT THE POLICY IS KEPT IN FORCE TILL THE CONTRACT IS COMPLETED.

#### 4.4.7

RECOVERIES WILL BE MADE FROM CONTRACTOR'S BILLS FOR ANY LIABILITY ACCRUED TO BHEL FOR THE ACCIDENTS AND REFUND OF THE SAME SHALL BE CONSIDERED LATER, AFTER THE CLAIM IS FULLY SETTLED BY INSURANCE AUTHORITIES.

#### 4.4.8

THE CONTRACTOR SHALL SUBMIT SURVEY REPORT/ PERFORMANCE REPORT OF THE TOOLS AND PLANTS DEPLOYED BY HIM AND BEING UTILISED ON THE WORK UNDER THE SCOPE. THESE SURVEY REPORTS/ PERFORMANCE REPORTS ARE TO BE OBTAINED BY CONTRACTOR FROM THE CUSTOMER OF BHEL/INSURANCE AUTHORITIES AND SUBMITTED TO BHEL AT NO EXTRA COST.

#### 4.4.9

BHEL : PS WR

IN CASE, ANY ADDITIONAL EXPENDITURE IS TO BE INCURRED IN WORK DURING EXECUTION ARISING OUT OF THE FAULTY EXECUTION OF SUCH WORK BY THE CONTRACTOR, THE SAME SHALL BE BORNE BY THE CONTRACTOR.

#### **4.5 ALSO INCLUDED IN THE SCOPE**

UNLESS OTHERWISE SPECIFIED, THE WORK TO BE PROVIDED FOR BY THE CONTRACTOR FOR THE ITEMS AS MENTIONED IN THE "SCHEDULE OF ITEMS"/ RATE SCHEDULE SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

##### **4.5.1**

FURNISHING ALL LABOUR, MATERIALS, SUPERVISORS, CONSTRUCTION PLANTS, EQUIPMENT, SUPPLIES, TRANSPORT TO AND FROM THE SITE, FUEL, ELECTRICITY, COMPRESSED AIR, WATER, TRANSIT AND STORAGE INSURANCE AND ALL OTHER INCIDENTAL ITEMS AND TEMPORARY WORKS NOT SHOWN OR SPECIFIED BUT REASONABLY IMPLIED OR NECESSARY FOR THE PROPER COMPLETION, MAINTENANCE AND HANDING OVER OF THE WORK, EXCEPT IN ACCORDANCE WITH THE STIPULATIONS LAID DOWN IN THE CONTRACT DOCUMENTS AND ADDITIONAL STIPULATIONS AS MAY BE PROVIDED BY THE ENGINEER DURING THE COURSE OF WORKS.

##### **4.5.2**

FURNISHING MANUFACTURER'S TEST CERTIFICATES AND LABORATORY REPORT IN RESPECT OF THE PRODUCTS USED OR INTENDED TO BE USED, IF CALLED FOR IN THE SPECIFICATIONS OR IF SO DESIRED BY THE ENGINEER. APPROVAL OF THESE MANUFACTURER'S TEST CERTIFICATES SHALL BE OBTAINED MANDATORILY FROM BHEL PRIOR TO USE OF RESPECTIVE MATERIALS WHICH OTHERWISE MAY RENDER THESE MATERIALS LIABLE FOR REJECTION.

##### **4.5.3**

FURNISHING SAMPLES OF ALL MATERIALS REQUIRED BY THE ENGINEER FOR TESTING/INSPECTION AND APPROVAL FOR USE IN THE WORKS. THE SAMPLES MAY BE RETAINED BY THE ENGINEER FOR FINAL INCORPORATION IN THE WORKS.

##### **4.5.4**

GIVING ALL NOTICES, PAYING ALL FEES, TAXES ETC. IN ACCORDANCE WITH THE GENERAL & SPECIAL CONDITIONS OF CONTRACT, THOSE ARE REQUIRED FOR ALL WORK.

##### **4.5.5**

ARRANGING MANUFACTURER'S SUPERVISION FOR ITEMS OF WORK DONE AS PER MANUFACTURERS' SPECIFICATION. CARRYING OUT TOPOGRAPHIC SURVEY OF THE ENTIRE PLOT AND ESTABLISH LEVELS AND CO-ORDINATES AT SUITABLE INTERVALS FROM EXISTING GRID LEVELS AND CO-ORDINATES FURNISHED BY THE OWNER ESTABLISH BENCH MARKS, SETTING OUT THE LOCATION AND LEVELS OF PROPOSED STRUCTURES, CONSTRUCTION AND MARKING OF

BHEL : PS WR

REFERENCE PILLARS AND OTHER IDENTIFICATION WORKS ETC. THE CONTRACTOR SHALL PROVIDE THE OWNER/BHEL SUCH ASSISTANCE, INSTRUMENTS, MACHINES, LABOUR AND MATERIALS AS ARE NORMALLY REQUIRED FOR EXAMINING, MEASURING AND TESTING ANY WORK AND THE QUALITY, WEIGHT OR QUANTITY OF ANY MATERIAL USED.

4.5.6

PROVIDING ALL INCIDENTAL ITEMS NOT SHOWN OR SPECIFIED BUT REASONABLY IMPLIED OR NECESSARY FOR THE SUCCESSFUL COMPLETION OF THE WORK IN ACCORDANCE WITH CONTRACT.

4.5.7

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

4.5.8

CONTRACTOR SHALL DISPLAY 'DANGER BOARDS' AS PER INSTRUCTION OF BHEL/CUSTOMER AS PER REQUIREMENT.

4.5.9

CONTRACTOR SHALL NOT BE ALLOWED TO BRING ANY INFLAMMABLE MATERIAL INSIDE THE PLANT. HOWEVER, FOR ABSOLUTE REQUIREMENT OF THESE MATERIALS, CONTRACTOR SHALL HAVE TO TAKE ADVANCE PERMISSION/APPROVAL FROM BHEL/CUSTOMER AND SHALL STORE IN PROPER PLACE FOLLOWING ADEQUATE SAFETY MEASURES AND SHALL PUT BANNER/BOARD DANGER/ INFLAMMABLE /HIGHLY INFLAMMABLE/ NO SMOKING AS PER THE REQUIREMENT OF BHEL/CUSTOMER.

4.5.10

CONTRACTOR SHALL PROVIDE SUFFICIENT QUANTITIES OF FIRE HYDRANT (WATER, SAND) AND FIRE EXTINGUISHERS AT SAFE/ACCESSIBLE DISTANCE WHILE CARRYING OUT HOT WORK. CONTRACTOR SHALL DEPLOY HIS TRAINED PERSONS FOR OPERATION OF SUCH SAFETY EQUIPMENT.

4.6.0 **FIELD QUALITY LAB.**

THE CONTRACTOR HAS TO ESTABLISH A SEPARATE FIELD QUALITY LAB AT SITE WITH ALL REQUISITE INSTRUMENTS AND DEDICATED QUALIFIED ENGINEERS/SUPERVISOR FOR DAY-TO-DAY QUALITY CHECKS OF CONCRETE AND OTHER BUILDING MATERIALS DURING THE PROGRESS OF WORK. ALL Q5UALITY RECORDS AND LOGSHEETS SHALL BE MAINTAINED AS PER THE REQUIREMENT OF BHEL/BHEL'S CUSTOMER AND AS PER FIELD QUALITY PLAN APPROVED BY BHEL/FSF.

#### 4.7.0 **FINAL PAINTING**

SURFACE PREPARATION INCLUDING FINAL PAINTING ON THE STRUCTURAL STEEL AND OTHER PART OF THE WORK SHALL BE DONE STRICTLY AS PER **BHEL/FSF** SPECIFICATION.

4.8.0 **GROUND WATER TABLE:** GROUND WATER TABLE ENCOUNTERED DURING WORKS HAS TO DEWATER DURING EXECUTION OF WORK.

## SECTION-5

### SPECIAL CONDITIONS

#### 5.0 OBLIGATIONS OF THE CONTRACTOR (TOOLS, TACKLES, MATERIALS, CONSUMABLES , FACILITY TO BE PROVIDED TO BHEL AT SITE)

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

- a) **ARRANGING LAND** AND COSTRUCTION OF LABOUR COLONY, WITH ARRANGEMENTS OF ELECTRIFICATION/LIGHTING, DRINKING WATER AND SANITATION ETC ARE IN CONTRACTOR'S SCOPE. (CONTRACTOR HAS TO MAKE THEIR OWN ARRANGEMENT FOR CONSTRUCTION OF LABOUR COLONY AT THEIR COST )
- b) 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.
- c) **ADEQUATE SHUTTERING MATERIALS, SCAFFOLDING PIPES, COUPELERS, JACKS, ACHRO SPANS, CRIBS FOR SGT DECK, PLY, WOODEN BATTONS, PROPS & OTHER HARDWARES ALONGWITH SUFFICIENT NUMBERS OF CARPENTERS, BARBENDORS, FITTERS, HELPERS TO ENSURE THE SIMULTANIOUS WORKING IN ALL THE FRONTS.**

#### 5.2 TOOLS AND TACKLES

##### 5.2.1

ALL TOOLS AND TACKLES LIKE CONCRETE BATCHING PLANT, CONCRETE PUMP, VIBRATORS, DEWATERING PUMPS, POCLAINS, TIPPERS, ROAD ROLLERS, PLATE VIBRATORS, CRANES OF ADEQUATE CAPACITY FOR UNLOADING, LOADING OF RAW & FABRICATED MATERIALS, PRE-ASSEMBLY ETC TO BE DONE AT CONTRACTOR'S STORAGE CUM FABRICATION YARD OUTSIDE/INSIDE PLANT PREMISES INCLUDING OPERATOR/DRIVER, FUEL, LUBRICANTS, ALL OTHER CONSUMABLES AND REQUIREMENTS HAVE TO BE ARRANGED BY THE CONTRACTOR..

##### 5.2.2

ALL TOOLS AND TACKLES TO BE USED BY THE CONTRACTOR FOR THE WORK SHALL HAVE THE PRIOR APPROVAL OF BHEL ENGINEER IN REGARD TO BRAND, QUALITY AND SPECIFICATION.

##### 5.2.3

CONTRACTOR SHALL PROVIDE ALL THE NECESSARY SCAFFOLDING MATERIALS LIKE PIPES, COUPLERS, JACKS, ACHRO SPANS, STRUCTURAL PYLONS/ CRIPS/WOODEN BATTONS, SHUTTERING PLATS ETC. FOR FORM WORK. AND NECESSARY SAFETY DEVICES ETC.

BHEL : PS WR



#### 5.2.4

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

#### 5.2.5

IN THE EVENT OF CONTRACTOR FAILING TO ARRANGE THE REQUIRED TOOLS, PLANTS, MACHINERY, EQUIPMENT, MATERIAL AND NONAVAILABILITY OF THE SAME OWING TO BREAKDOWN, BHEL WILL RESORT TO HIRING OUT THE SAME FROM OUTSIDE AGENCIES OR MAY PROVIDE THEIR EQUIPMENT IF AVAILABLE OR MAY RESORT TO BUYING OF EQUIPMENT/MATERIAL AT THE COST OF CONTRACTOR. FULL COST OF EQUIPMENT/HIRE CHARGES/RENTAL CHARGES ALONGWITH DEPARTMENTAL OVERHEADS @ 30% WILL BE CHARGED TO THE CONTRACTOR.

#### 5.2.6

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

#### 5.2.7

FOR FULL WELDING OF STRUCTURES, ONLY WELDING GENERATORS/ WELDING RECTIFORMERS MAY BE ALLOWED FOR USE. THE USE OF WELDING TRANSFORMERS WILL BE SUBJECT TO THE APPROVAL OF BHEL ENGINEER.

#### 5.2.8

CONTRACTOR HAS TO ARRANGE NECESSARY DEWATERING PUMPS, TRANSIT MIXERS, BATCHING PLANTS, CONCRETE PUMPS AND VIBRATORS, CRANES, FABRICATION AND ERECTION TOOLS & PLANTS, ETC.

#### 5.2.9

CONTRACTOR SHALL FURNISH THE PROOF OF OWNING THE MAJOR TOOLS AND PLANTS.

### **5.3 CONSUMABLES**

#### 5.3.1

THE CONTRACTOR SHALL PROVIDE ALL CONSUMABLES REQUIRED FOR CARRYING OUT THE WORK COVERED UNDER THIS SCOPE OF WORK.

### 5.3.2

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

## **5.4 WELDING ELECTRODES AND GASES**

### 5.4.1

ALL THE REQUIRED WELDING ELECTRODES AS APPROVED BY BHEL SHALL BE ARRANGED BY CONTRACTOR AT HIS COST. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN APPROVAL OF BHEL, BEFORE PROCUREMENT REGARDING SUPPLIER, TYPE OF ELECTRODES ETC. ON RECEIPT OF THE ELECTRODES AT SITE, IT SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY BHEL REGARDING TYPE OF ELECTRODES, BATCH NUMBER AND DATE OF EXPIRY ETC.

BHEL RESERVES THE RIGHT TO REJECT THE USE OF ANY ELECTRODES AT ANY STAGE, IF FOUND DEFECTIVE BECAUSE OF BAD QUALITY, IMPROPER STORAGE, EXPIRY DATE, UNAPPROVED TYPE OF ELECTRODES ETC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE THE SAME AT HIS COST WITHOUT LOSS OF TIME.

### 5.4.2

WELDING ELECTRODE STORAGE FACILITY (ROOM) HAVING EXTERNAL HEATING ARRANGEMENT TO CONTROL TEMPERATURE AND HUMIDITY AS PER THE SPECIFICATIONS OF BHEL SHALL BE PROVIDED. CALIBRATED THERMAMETERS HAVE TO BE INSTALLED IN THE ROOM FOR CONTROLLING THE ABOVE FACTORS.

### 5.4.3

ALL THE REQUIRED GASES LIKE OXYGEN, ACETYLENE, ETC. SHALL BE PROVIDED BY THE CONTRACTOR AT HIS COST.

### 5.4.4

IF AT ANY TIME DURING THE EXECUTION OF WORK, IT IS NOTICED THAT THE WORK IS SUFFERING ON ACCOUNT OF NONAVAILABILITY OF INPUTS FROM THE CONTRACTOR'S SIDE LIKE ELECTRODES, GASES AND OTHER MATERIALS, TOOLS & PLANTS, THEN, BHEL WILL MAKE ALTERNATE ARRANGEMENTS AND THE NECESSARY COSTS WITH OVERHEADS @ 30% SHALL BE RECOVERED.

### 5.4.5

MONTHLY CONSUMPTION DETAILS IN RESPECT OF ALL MAJOR CONSUMABLES SHALL BE SUBMITTED TO BHEL.

## **5.5 SPACES FOR FIELD OFFICE, STORES, FABRICATION YARD, BATCHING PLANT FOR STRUCTURALS, DISPOSAL AREA FOR EXCAVATED SURPLUS EARTH ETC.**

BHEL : PS WR

**5.5.1 FIELD OFFICE, STORES, FABRICATION YARD, BATCHING PLANT: BHEL/FSF SHALL PROVIDE OPEN SPACE FOR CONSTRUCTION OF SITE OFFICE, STORE SHEDS AND STORES FOR STORAGE OF PROJECT MATERIALS, INSTALLATION OF BATCHING PLANT AS PER THE AVAILABILITY. THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR CONSTRUCTION OF FIELD OFFICE, STORE SHED FOR STORING CEMENT & OTHER PROJECT MATERIALS AND SITE STORES FOR STORING SMALL T&PS, HANDTOOLS, ETC. BIDDERS SHOULD NOTE THAT, AS THIS BEING EXTENSION PROJECT AVAILABILITY OF WORKING SPACE IS A MAJOR CONSTRAINTS & THEY HAVE TO MANAGE IN LIMITED SPACE AS PER AVAILABILITY OR ELSE THEY HAVE TO MAKE THEIR OWN ARRANGEMENT OUTSIDE OF THE PLANT AT THEIR OWN COST. BIDDERS SHALL BE PERMITTED TO GO FOR RMC (READY MIX CONCRETE) OF DESIRED GRADE ON APPROVAL OF BHEL/FSF FROM OUTSIDE WITHOUT ANY EXTRA COST TO BHEL. RMC CONCRETE THUS SUPPLIED SHALL BE PAID UNDER REGULAR ITEMS OF CONCRETE AS PER GRADE PROVIDED IN RATE SCHEDULE.**

5.5.2 ALL ASSOCIATED INFRASTRUCTURES LIKE SECURITY AND FENCING/BOUNDARIES ETC., SHALL BE ARRANGED BY THE CONTRACTOR FOR THEIR OFFICE COMPLEX, STORAGE SHED, CEMENT GODOWN ETC. ALL ATTENDANT TAXES, DUTIES, LEVIES, AND ALL OTHER INCIDENTALS SHALL BE TO THE CONTRACTOR'S ACCOUNT. ALSO, OBTAINING, AND KEEPING THEM VALID TILL COMPLETION OF WORK, ALL NECESSARY CLEARANCES, PERMITS, LICENSES ETC. AS PER THE LAWS, RULES AND REGULATIONS IN FORCE FROM TIME TO TIME AND ADHERENCE TO THESE SHALL BE THE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR'S QUOTED RATES SHALL TAKE IN TO ACCOUNT ALL THESE FACTORS. BHEL WILL NOT ENTERTAIN ANY CLAIM WHATSOEVER FOR COMPENSATION/ RE-IMBURSEMENT OF SUCH EXPENSES EXCEPT FOR THOSE SPECIFICALLY STATED.

CLOSE STORAGE SHED TO BE USED FOR STORAGE OF CEMENT SHOULD HAVE ADEQUATE CAPACITY AND PROTECTED ENOUGH AGAINST LEAKAGE DURING MONSOON AND DAMPNESS. STORING OF CEMENT AND STEEL SHALL BE DONE FOR THE STANDARD PRACTICE OF CIVIL ENGINEERING AND AS PER THE INSTRUCTION OF BHEL.

CONTRACTOR SHALL PROVIDE TARPAULINS, SLEEPERS (WOODEN/RCC) AND ANY OTHER MATERIALS / AID REQUIRED FOR STORAGE OF ALL THEIR MATERIALS IN THEIR STORAGE CUM FABRICATION YARD AS WELL AS AT SITE.

**5.5.3 AREA FOR DISPOSAL OF EXCAVATED SURPLUS EARTH**

AREA FOR DISPOSAL OF EXCAVATED SURPLUS EARTH SHALL BE PROVIDED BY THE CUSTOMER AT FREE OF COST OUTSIDE THE BATTERY LIMIT/PROJECT PREMISES .DEPENDING OF SPACE AVAILABILITY. CONTRACTOR SHALL ARRANGE PROGRESSIVE DISPOSAL OF EXCAVATED SURPLUS EARTH AS ACCUMULATION OF EXCAVATED EARTH SHALL NOT BE PERMITTED.HENCE CONTRACTOR SHALL DISPOSE OFF THE EXCAVATED EARTH GENERATED DURING EXECUTION OF WORK AFTER KEEPING THE SUFFICIENT QUANTITY OF GOOD EXCAVATED EARTH FOR BACKFILLING. ALSO, LEVELLING, CONSOLIDATION ETC., REQUIRED TO BE

BHEL : PS WR

DONE ON THE DISPOSED EARTH IN THE SAID AREA SHALL BE PERFORMED BY THE CONTRACTOR. RATES QUOTED SHALL BE INCLUSIVE OF ALL COST FACTORS. BHEL WILL NOT ENTERTAIN ANY CLAIM

WHATSOEVER FOR COMPENSATION/ RE-IMBURSEMENT OF SUCH EXPENSES EXCEPT FOR THOSE SPECIFICALLY STATED.

THE CONTRACTOR HAS TO PLAN CONCRETE WORK IN SUCH MANNER THAT GOOD EARTH AVAILABLE DURING EXCAVATION CAN BE EFFECTIVELY USED IN BACK FILLING DIRECTLY TO SAVE TIME AND TRANSPORT OUTSIDE.

#### 5.5.4

ON COMPLETION OF WORK, ALL THE TEMPORARY BUILDINGS, STRUCTURES, PIPELINES, CABLES, ETC. SHALL BE DISMANTLED AND LEVELLED AND DEBRIS SHALL BE REMOVED AS PER INSTRUCTIONS OF BHEL BY THE CONTRACTOR AT HIS COST. IN THE EVENT OF HIS FAILURE TO DO SO, THE SAME WILL BE ARRANGED BY BHEL AND EXPENDITURE THEREOF WITH OVERHEADS WILL BE RECOVERED FROM THE CONTRACTOR. THE DECISION OF BHEL ENGINEER IN THIS REGARD IS FINAL.

### 5.6 AREA LIGHTING

#### 5.6.1

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, AND SWITCH BOARDS ETC.

### 5.7.0 CONSTRUCTION POWER & WATER

#### 5.7.1 CONSTRUCTION POWER:-

**THREE PHASE, 380V, 300 - 400 AMPS, 4-WIRE** WILL BE PROVIDED AT ONE POINT NEAR THE SITE APPROXIMATELY 300 METERS FROM ERECTION SITE FREE OF CHARGE. HOWEVER THE CONTRACTOR SHALL PROVIDE ENERGY METER (CALIBRATED) FOR MEASURING THE CONSUMPTION OF POWER IN THEIR WORKS. ALL CABLES, FUSES, DISTRIBUTION BOARDS, SWITCHES, SWITCHBOARDS, BUS BARS, EARTHING ARRANGEMENTS, PROTECTION DEVICES E.G. ELCB IF ANY AND OTHER INSTALLATION AS SPECIFIED BY STATUTORY AUTHORITY/CLIENT IN THIS REGARD FOR DRAWL OF CONSTRUCTION POWER SHALL BE ARRANGED BY THE CONTRACTOR. OBTAINING APPROVALS, PAYMENT OF NECESSARY FEES, DUTIES

ETC TOWARDS THE CLEARANCE OF SUCH INSTALLATIONS, PRIOR TO THESE BEING PUT TO USE OR AS MAY BE SPECIFIED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. BHEL SHALL NOT BE 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.

#### 5.7.2

BHEL : PS WR

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.

**5.7.3 CONSTRUCTION WATER & DRINKING WATER: -**

**CONSTRUCTION WATER AS WELL AS DRINKING SHALL BE PROVIDED BY FSF AT ONE POINT NEAR BY SITE WITHIN A DISTANCE OF 300M FREE OF CHARGE.. FURTHER DISTRIBUTION SHALL BE DONE BY CONTRACTOR AT THEIR OWN COST.**

**5.7.4**

IN CASE OF NON-AVAILABILITY OF CUSTOMER SUPPLIED POWER, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALTERNATE ARRANGEMENTS. CONTRACTOR SHALL BE ADEQUATELY EQUIPPED TO ARRANGE STANDBY DIESEL WELDING GENERATORS IN THE EVENT OF CONSTRUCTION POWER FAILURE. ESSENTIAL WELDING JOBS SHALL NOT BE STOPPED ON ACCOUNT OF MAIN CONSTRUCTION POWER FAILURE. ALSO, HE SHOULD DEPLOY ADEQUATE WATER TANKERS FOR TRANSPORT OF WATER ON THE OCCASSIONS WHEN CUSTOMER SUPPLIED WATER IS NOT AVAILABLE/ INADEQUATE.

**5.7.5**

CONTRACTOR HAS TO FORM TEMPORARY APPROACH ROAD FROM MAIN ROAD NEAR WORK SITE FOR TRANSPORTATION OF MATERIALS; CONCRETE ETC. NO SEPARATE PAYMENT SHALL BE MADE FOR THE SAME.

**5.7.6 FIELD TESTING EQUIPMENTS**

APART FROM MAINTAINING QUALITY REQUIREMENT AS ALREADY SPECIFIED IN TENDER, CONTRACTOR SHALL ARRANGE HIS OWN TESTING LABORATORY ALONGWITH CALIBRATED TEST EQUIPMENTS FOR DAY TODAY WORK AT SITE.

**CONCRETE MIX DESIGN:** CONCRETE MIX DESIGN FOR VARIOUS GRADE OF CONCRETE SHALL BE GOT DONE THROUGH APPROVED LABORATORY/ GOVT. INSTITUTE SUBJECT TO THE APPROVAL OF BHEL. THIS IS TO BE DONE BEFORE START OF RCC WORK AT SITE. HOWEVER, PREVAILING MIX DESIGN BEING USED AT SITE (BY CUSTOMER) MAY BE PERMITTED INITIALLY TO START WITH THE JOB TILL RECEIPT OF FRESH MIX DESIGN ON THE DESCRIPTION OF BHEL. CEMENT USING FOR CONCRETE WILL BE **ORDINARY PORTLAND CEMENT (OPC)** WITH THE GRADE AS SPECIFIED IN TECHNICAL SPECIFICATION. MINIMUM CEMENT CONTENT FOR VARIOUS GRADE OF CONCRETE SHALL BE AS PER BRITISH/ETHIOPIA STANDARD.

**5.7.7 OTHER RESPONSIBILITIES IN GENERAL**

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CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER USAGE OF THEIR MATERIALS LIKE CEMENT, AND AGGREGATES ETC. AS PER STANDARD REQUIREMENT OF IS CODES AND CONTROL THE WASTAGE WITHIN LIMIT. NO COMPENSATION SHALL BE MADE FOR ANY EXCESS CONSUMPTION UNDER ANY CIRCUMSTANCES.

5.7.8

CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DELAY IN PROGRESS OF WORK DUE TO DELAY/SHORT SUPPLY OF MATERIAL TO BE PROCURED BY THEM FOR THIS JOB.

5.7.9

**JOINT INSPECTION/CHECKING FOR ROUTINE JOBS SHALL BE DONE JOINTLY BY BHEL, FSF/THEIR CONSULTANT. CONTRACTOR HAS TO ARRANGE FOR NECESSARY PROTOCOLS/CHECK REQUEST AND OTHER QUALITY RECORDS AS PER THE PROCEDURE OF BHEL IN TRIPLICATE. CONTRACTOR SHALL ARRANGE FOR INSPECTION CALL TO BHEL/FSF IN ADVANCE FOR ROUTINE CHECKING & CLEARANCE OF WORK .**

5.7.10

AS-BUILT DRAWING: CONTRACTOR SHALL ARRANGE TO INCORPORATE ALL CHANGES, IN AFC DRAWINGS, MADE AS PER THE SITE REQUIREMENT ON COMPLETION OF WORK AND SUBMIT THE SAME TO BHEL FOR PREPARING FINAL AS-BUILT DRAWING. THIS SHALL FORM PART OF WORK AND RATES QUOTED SHALL BE INCLUSIVE OF THIS.

5.7.11

#### **STATUTORY REQUIREMENT**

***CONTRACTOR SHALL COMPLY WITH ALL STATUTORY REQUIREMENTS, LOCAL LAWS, LABOUR LAW PREVAILING IN THAT COUNTRY (ETHIOPIA) FOR EXECUTION OF PROJECT WORKS WITHIN THEIR QUOTED RATE. NO EXTRA PAYMENT SHALL BE MADE TO THE CONTRACTOR ON THIS ACCOUNT.***

### **5.8 EMPLOYMENT OF WORKERS , WORKING TIME ETC.**

**5.8.1 It shall be the responsibility of the Contractor to pay salaries and other benefits to its employees/personnnel engaged by it as per the agreement with them, and in keeping in line with the local laws in Fincha. The Contractor shall submit to Construction Manager, BHEL Site, Fincha regularly, the details/statement of wages paid to its workers in India/back home, besides wages paid in Fincha.**

**5.8.2 All traveling and transportation expenses including air fares etc shall be borne by the Contractor for all his employees. The Contractor shall also bear air fare and other expenses for those employees sent back to their place on account of misconduct, disobedience, improper behaviors, sickness, unsatisfactory work or any other reason whatsoever.**

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- 5.8.3 Contractor shall arrange passports for all his staff and labour. BHEL will assist Contractor for issue of visas including multi-entry visas and other permits as per requirement for the job. However, the Contractor shall arrange for attestation of certificates and other documents required for travel arrangements, medical tests as applicable and comply with other formalities. All expenses for all these activities will be borne by the Contractor.**
- 5.8.4 The delay in obtaining the passports and other travel documents or compliance with the various formalities for the deputation of the contractor's personnel shall not absolve the contractor from his obligations under the Contract including completion of the work strictly in accordance with the time schedule.**
- 5.8.5 The Contractor shall in all dealings with persons in his employment have due regard to all recognised festivals, days of rest/weekly off, and religious or other customs in Finchha and shall make special arrangements whenever the exigencies of the construction program demand that work shall proceed during such festivals and days of rest.**
- 5.8.6 The Contractor shall plan and schedule the activities on Site such that they happen strictly during the specified working hours.**
- 5.8.7 The Contractor shall not otherwise than in accordance with Finchha State Laws import, sell, give, barter, or otherwise dispose of any alcoholic liquor or drugs or any arms or ammunition to any person or persons whatsoever, nor permit or suffer any such importation, sale, gift, barter, or other disposal by his employees.**
- 5.8.8 The Contractor shall submit a request to BHEL for issue of an identity card to each and every person employed at the Site by him along with passport size photographs and other documents as may be required for the purpose.**
- 5.8.9 No person will be allowed to enter the project premises without an identity card. All identity cards will be surrendered by the Contractor to BHEL in respect of each person on completion of assignment of such person.**
- 5.8.10 The Contractor shall at all times take all requisite precautions and use his best endeavors to prevent any riotous or unlawful behavior by or amongst the labourers and others employed by him for the purpose of or in connection with the Contract and for the preservation of the peace and the protection of the inhabitants and the security of property on or in the neighbourhood of the Site.**
- 5.8.11 The Contractor shall in collaboration with, and to the requirements of, any duly constituted medical or sanitary authority, ensure that suitable arrangements are made on the Site for the maintenance of health, the prevention and overcoming of epidemics, and for adequate first-aid, welfare, and hygiene services.**
- 5.8.12 The Contractor, his partners, foreign workers and employees and their families shall not be involved by any manner in any political activity during their residence in the Employer's country**

## 5.9 TAXES, DUTIES, LEVIES

### 5.9.0 TAXES, DUTIES, LEVIES

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

#### 5.9.1

**The rate quoted by bidders should be inclusive of all Taxes & Duties and BHEL will not reimburse any amount on account of Taxes & Duties. Wherever tax exemptions/concessions are allowed to the bidder, the same may be availed by the bidder without attracting any financial implication on BHEL. However, if as per the Ethiopian/ Indian laws, BHEL can avail set off against any tax or duty paid by the bidder, the bidder shall provide necessary documents to BHEL to avail such set off.**

**All payments to the bidders shall be subject to recovery of all applicable Withholding Tax and / or Tax Deduction at source as per the Ethiopian Laws and /or Indian Law**

### 5.8.7 SUBMISSION OF PERIODICAL REPORTS

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

1. MANPOWER REPORTS - DAILY
2. PROGRESS REPORTS – DAILY
3. WORKING PLAN - MONTHLY PLAN WITH FURTHER WEEKLY SPLIT-UP FOR PROGRESS MONITORING
4. CALIBRATION REPORTS OF INSTRUMENTS
5. RECONCILIATION OF BHEL SUPPLIED MATERIALS (IF ANY) – MONTHLY
6. ACCIDENT REPORT (IF ANY) WITHIN 24 HRS.

***SUITABLE FORMATS FOR THESE REPORTS SHALL BE PREPARED JOINTLY AT SITE.***

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.

5.9THE SCOPE OF WORK UNDER THIS CONTRACT IS DEEMED TO BE COMPLETE ONLY WHEN SO CERTIFIED BY THE ENGINEER INCHARGE OF BHEL.

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## **5.10 INSURANCE:**

### **(A) – SCOPE OF BHEL**

BHEL SHALL ARRANGE INSURANCE COVERAGE FOR THE EQUIPMENT AND MATERIALS SUPPLIED BY BHEL FROM VARIOUS MANUFACTURING UNIT IN INDIA INCLUDING BOUGHT OUT ITEMS. THIS WILL COVER THE RISKS DURING TRANSIT, STORAGE, ERECTION AND COMMISSIONING.

### **(B) – SCOPE OF CONTRACTOR (INSURANCE FOR CIVIL – ALL- RISK INCLUDING TRANSIT INSURANCE AND WORKMEN COMPENSATION)**

THE CONTRACTOR HAS TO ARRANGE ON HIS OWN, INSURANCE FOR ALL RISK DURING EXECUTION OF CIVIL WORKS, FOR ALL MATERIALS LIKE CEMENT, STEEL AND OTHER BOUGHT OUT ITEMS, AND FOR THEIR ALL T & P AND OTHER FIXED ASSETS WHICH THEY MAY HAVE TO ACQUIRE AND DEPLOY AT SITE.

IT IS THE ENTIRE RESPONSIBILITY OF THE CONTRACTOR TO INSURE HIS WORKMEN AGAINST ACCIDENT AND INJURY WHILE AT WORK AS REQUIRED BY THE RELEVANT RULES AND TO PAY COMPENSATION, IF ANY, TO THEIR WORKMEN AS PER WORKMEN'S COMPENSATION LAW PREVAILING IN ETHIOPIA. THE CONTRACTOR HAS ALSO TO INSURE HIS STAFF AGAINST ACCIDENT/INJURY. THESE INSURANCE COVERS HAVE TO BE TAKEN PRIOR TO START OF HIS WORK.

CONTRACTOR SHALL MAKE AVAILABLE THE POLICY TO BHEL SITE IN-CHARGE FOR NECESSARY VERIFICATION BEFORE COMMENCEMENT OF WORK. HOWEVER, IRRESPECTIVE OF SUCH VERIFICATION/ACCEPTANCE, THE SOLE RESPONSIBILITY TO MAINTAIN ADEQUATE INSURANCE COVER AS ABOVE AT ALL TIMES DURING THE PERIOD OF CONTRACT SHALL LIE WITH THE CONTRACTOR. REGARDING THE AFORESAID INSURANCE COVER, THE CONTRACTOR SHALL DIRECTLY DEAL WITH THE INSURANCE COMPANY FOR ALL MATTERS REGARDING THE INSURANCE IN HIS SCOPE.

5.11 BHEL WILL PROGRESSIVELY ISSUE APPROVED DRAWINGS RELEASED FOR CONSTRUCTION IN SOFT COPY. **CONTRACTOR SHALL TAKE OUT ADEQUATE NUMBER OF PRINTS FOR THEIR USE & HAND OVER MIN. 2 COPIED OF EACH DRAWINGS (A-0 SIZE) TO BHEL FOR USE OF BHEL'S ENGINEER. CONTRACOR SHALL RETURN ALL THE DRAWING (SOFT AS WELL AS HARD COPIES) AFTER COMPLETION OF WORK.**

## **SECTION-6**

### **SPECIAL CONDITIONS OF CONTRACT**

#### **6.0 CONTRACTOR'S OBLIGATION WITH REGARD TO EMPLOYMENT OF SUPERVISORY STAFF AND WORKMEN**

##### **6.1 SUPERVISORY STAFF AND LABOUR**

###### **6.1.1**

THE CONTRACTOR SHALL SUPPLY ALL THE SKILLED/UNSKILLED LABOR, GAS CUTTERS, RIGGERS, SARONGS, ERECTORS, CARPENTERS, FITTERS AND ELECTRICIANS, MASONS, PLUMBERS ETC. BHEL RESERVES THE RIGHT TO DECIDE ON THE SUITABILITY OF THE WORKERS AND OTHER PERSONNEL WHO WILL BE EMPLOYED BY THE CONTRACTOR. 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.

###### **6.1.2**

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENGAGE HIS WORKMEN IN SHIFTS AND OR ON OVERTIME BASIS FOR ACHIEVING THE TARGET 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 TARGETS WILL BE FINAL AND BINDING ON THE CONTRACTOR.

###### **6.1.3**

CONTRACTOR SHALL EMPLOY ONLY QUALIFIED AND EXPERIENCED ENGINEERS/SUPERVISORS FOR THIS JOB. THEY SHALL HAVE PROFESSIONAL APPROACH IN EXECUTING THE WORK HAVING ADEQUATE KNOWLEDGE AND EXPERIENCE IN THE FIELDS. CONTRACTOR SHALL GIVE AN ORGANIZATION CHART INDICATING THE STAFFING PATTERN.

###### **6.1.4**

THE CONTRACTOR SHALL ENGAGE ALL THE UNSKILLED, SKILLED AND SPECIALLY SKILLED LABOURER INCLUDING BRICK MASONS, CARPENTERS, PLUMBERS, ELECTRICIANS, FABRICATORS AND FITTERS ETC. AND SUPERVISORY STAFF. ONLY TRAINED AND COMPETENT PERSONNEL WITH PREVIOUS EXPERIENCE IN THE JOB .SHALL BE EMPLOYED. HOWEVER, BHEL RESERVES THE RIGHT TO DECIDE ON THE SUITABILITY OF THE WORKERS AND OTHER PERSONNEL WHO WILL BE EMPLOYED BY THE CONTRACTOR. BHEL RESERVES THE RIGHT TO INSIST ON REMOVAL OF ANY EMPLOYEE OF THE CONTRACTOR AT ANY TIME, IF THEY FOUND HIM UNSUITABLE. THE CONTRACTOR SHALL BE BOUND TO FOLLOW THE INSTRUCTION OF BHEL.

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## **6.2 INDUSTRIAL RELATIONS AND LABOUR LAWS**

### **6.2.1**

AN INDUSTRIAL RELATIONS SUPERVISOR SHALL COORDINATE FOR THE IMPLEMENTATION OF LOCAL LABOUR LAWS, MAINTENANCE OF RECORDS AS REQUIRED AS PER THE PREVAILING RULES IN ETHIOPIA. HE SHOULD ALSO COORDINATE WITH THE LOCAL LABOUR AUTHORITIES. CONTRACTOR HAS TO ENSURE MINIMUM WAGES PAYMENT TO THEIR LABOURS AS PER THE RULE OF THE STATE AND THEY HAVE TO PRODUCE DOCUMENTARY EVIDENCE TO THAT EFFECT TO BHEL IF SO REQUIRED.

### **6.2.2**

CONTRACTOR SHALL PROVIDE THE NAMES AND DETAILS OF ENGINEER/SUPERVISORS AT THE TIME OF MOBILIZATION TO BHEL AS PER THE PROPOSED ORGANIZATION CHART.

### **6.2.3**

IN CASE AT ANY TIME THE CONTRACTOR IS NOT IN A POSITION TO DEPLOY THE REQUIRED ENGINEERS/SUPERVISORS DUE TO ANY REASON, BHEL SHALL HAVE THE OPTION TO DEPLOY THEIR ENGINEERS/SUPERVISORS. THE EXPENDITURE INCURRED WITH OVERHEADS ON THIS ACCOUNT WILL BE RECOVERED FROM THE CONTRACTOR'S BILLS.

### **6.2.4**

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

### **6.2.5**

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 AND IN GENERAL, SEE THAT THE WORKS ARE CARRIED OUT IN A SAFE AND PROPER MANNER AND IN COORDINATION WITH

OTHER LABOUR AND STAFF EMPLOYED DIRECTLY BY BHEL OR OTHER CONTRACTORS OF BHEL OR BHEL'S CLIENT.

### **6.2.6**

THE CONTRACTOR SHALL PAY FOR ALL TAXES, FEES, LICENSE CHARGES, LOCAL BODY CLEARANCE, DUTIES, TOOLS, ROYALTY, COMMISSIONS AND OTHER CHARGES, GATE PASSES WHICH MAY BE LEVIABLE ON ACCOUNT OF HIS OPERATION IN EXECUTING THE CONTRACT. IN CASE BHEL IS FORCED TO MAKE ANY SUCH PAYMENTS, BHEL SHALL HAVE THE RIGHT TO RECOVER THE SAME FROM CONTRACTOR'S BILLS.

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#### **6.2.7 SITE ORGANIZATION**

**THE CONTRACTOR SHALL PROVIDE ADEQUATE STAFFING IN THE FOLLOWING AREA IN ADDITION TO THE STAFF REQUIREMENT FOR EXECUTION:**

- 1. OVERALL PLANNING, MONITORING & CONTROL & BILLING**
- 2. QUALITY CONTROL & QUALITY ASSURANCE**
- 3. MATERIALS MANAGEMENT**
- 4. SAFETY, FIRE & SECURITY**
- 5. INDUSTRIAL RELATION & FULFILLMENT OF LABOUR LAWS & OTHER STATUTORY OBLIGATIONS.**

## SECTION – 7

### SPECIAL CONDITIONS OF CONTRACT

#### 7.0 OBLIGATIONS OF BHEL

##### 7.1 FACILITIES TO BE PROVIDED BY BHEL

###### 7.1.1 SPACE FOR SITE OFFICE / STORES

REFER SECTION-5 IN THIS REGARD.

###### 7.1.2 CONSTRUCTION POWER & WATER

REFER SECTION- 4 & 5 IN THIS REGARD.

###### 7.1.3 OTHER MATERIALS AND CONSUMABLES:

BHEL SHALL NOT PROVIDE ANY MATERIAL / CONSUMABLES EXCEPT THOSE SPECIFICALLY MENTIONED AS BHEL SCOPE IN THESE SPECIFICATIONS/BOQ.

###### 7.1.4 **CRANES:** NO CRANES OF ANY SIZE & CAPACITY SHALL BE PROVIDED BY BHEL WITH RESPECT TO THIS CONTRACT.

###### 7.1.5 BHEL WILL PROGRESSIVELY ISSUE APPROVED DRAWINGS RELEASED FOR CONSTRUCTION IN SOFT COPY. CONTRACTOR SHALL TAKE OUT ADEQUATE NUMBER OF PRINTS FOR THEIR USE & HAND OVER MIN. 2 COPIES OF EACH DRAWINGS (A-0 SIZE) TO BHEL FOR USE OF BHEL'S ENGINEER. CONTRACTOR SHALL RETURN ALL THE DRAWING (SOFT AS WELL AS HARD COPIES) AFTER COMPLETION OF WORK.

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**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 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 'S ENGINEERS, WELDING LOGS AND OTHER QUALITY CONTROL AND QUALITY ASSURANCE DOCUMENTATION AS PER BHEL ENGINEER'S INSTRUCTIONS, IS WITHIN THE SCOPE OF WORK/SPECIFICATION.

THE PROTOCOLS BETWEEN CONTRACTOR AND BHEL SHALL BE MADE PRIOR TO INSTALLATION FOR CORRECTNESS OF FOUNDATIONS, MATERIALS, PROCEDURES, AT EACH STAGE OF INSTALLATION, GENERALLY AS PER THE REQUIREMENT OF BHEL. THIS IS NECESSARY TO ENSURE ELIMINATION OF ERRORS OR KEEPING THEM WITHIN TOLERABLE LIMITS AND TO AVOID ACCUMULATION AND MULTIPLICATION OF ERRORS.

**8.3** A DAILY LOGBOOK SHOULD BE MAINTAINED BY EVERY SUPERVISOR/ENGINEER OF CONTRACTOR ON THE JOB IN DUPLICATE (ONE FOR BHEL AND ONE FOR CONTRACTOR) FOR DETAILING AND INCORPORATING ALIGNMENT/CLEARANCE/ CENTERING/LEVELING READINGS AND INSPECTION DETAILS OF VARIOUS EQUIPMENTS, STRUCTURES, PIPING, AND OTHERS.

ALL THE IMPORTANT MEASUREMENTS LIKE PRE-ASSEMBLY RECORDS, FOUNDATION LEVELS, EQUIPMENT ALIGNMENT, ETC SHALL BE RECORDED IN THE DAILY LOGBOOK WITH SKETCHES BASED ON BHEL DRAWINGS INDICATING READINGS/ MEASUREMENTS TAKEN AND SIGNED BY BHEL CONTRACTOR'S REPRESENTATIVES.

WELDING DETAILS LIKE SERIAL NUMBER OF WELD JOINTS, WELDERS NAME, DATE OF WELDING, DETAILS OF REPAIR, HEAT TREATMENT ETC SHALL BE DOCUMENTED IN WELDING LOG AS PER BHEL ENGINEER'S INSTRUCTIONS.

**8.4** ALL THE ELECTRICAL/MECHANICAL MEASURING AND MONITORING DEVICES/ GAUGES, FEELER GAUGES, HEIGHT GAUGES, DIAL GAUGES, MICROMETERS, PRECISION LEVELS, SPIRIT LEVELS, WATER LEVEL MICROMETERS SURFACE PLATES, STRAIGHT EDGES, VERNIER CALIPERS AND ALL OTHER MEASURING INSTRUMENTS SHALL BE PROVIDED BY THE CONTRACTOR FOR CHECKING, LEVELING, ALIGNMENT, CENTERING ETC OF THE ERECTED EQUIPMENTS AT VARIOUS STAGES. THE INSTRUMENTS/GAUGES/TOOLS ETC PROVIDED SHOULD BE OF BRAND, QUALITY AND ACCURACY, SPECIFIED BY BHEL ENGINEER AND SHOULD HAVE NECESSARY CALIBRATION AND OTHER CERTIFICATES AS PER THE REQUIREMENTS OF BHEL ENGINEER.

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- 8.5** IN THE COURSE OF ERECTION, IT MAY BE NECESSARY TO RE-CHECK OR COUNTER CHECK OR FINALLY CHECK THE WORK WITH INSTRUMENTS RECENTLY CALIBRATED, RECALIBRATED OR OF INSPECTION GRADE GAUGE/TOOLS OR SPECIAL MEASURING INSTRUMENTS. SUCH INSTRUMENTS WHENEVER NECESSARY WILL BE PROVIDED BY BHEL ON SPECIFIC AUTHORIZATION BY BHEL ENGINEER.
- 8.6** THE INSTRUMENTS MENTIONED IN CLAUSE 8.5 SHALL BE DRAWN BY THE CONTRACTOR FROM BHEL STORES ON THE SPECIFIC AUTHORIZATION AND USE THE SAME ON THE SPECIFIC JOB FOR THE PURPOSE OF INSPECTION/ RECHECKING/COUNTER CHECKING/ FINALLY CHECKING OF THE WORK AND SHALL BE RETURNED TO BHEL STORES IMMEDIATELY ON COMPLETION OF THE INSPECTION.
- 8.7** 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.
- 8.8** THE WELDER'S PERFORMANCE WILL BE REVIEWED FROM TIME TO TIME AS PER THE BHEL STANDARDS AND ANY WELDER NOT PERFORMING TO THE STANDARDS SET BY BHEL WILL BE REMOVED FROM WORKING. CONTRACTOR SHALL ARRANGE FOR THE ALTERNATE WELDERS IMMEDIATELY.
- 8.9** ALL THE WELDERS SHALL CARRY IDENTITY CARDS AS PER THE PRO FORMA PRESCRIBED BY BHEL ONLY WELDERS DULY AUTHORIZED BY BHEL SHALL BE ENGAGED ON THE WORK.
- 8.10** CONTRACTOR SHALL ENSURE SPEEDY ALIGNMENT AND WELDING OF ALL EQUIPMENTS ERECTED BY HIM SOON AFTER PLACEMENT. ALSO ALL ALIGNMENTS, WELDING, NDT TESTS REQUIRED FOR STAGE INSPECTION SHALL BE COMPLETED AS PER THE QUALITY ASSURANCE PROCEDURES.
- 8.11** **STAGE INSPECTION BY FES/ QA ENGINEERS**
- APART FROM DAY-TO-DAY INSPECTION BY BHEL ENGINEERS AND FSF ENGINEERS, STAGE INSPECTION OF EQUIPMENTS AT VARIOUS STAGES OF ERECTION AND COMMISSIONING BY TEAMS OF ENGINEERS FROM FIELD ENGINEERING SERVICES /FIELD QUALITY ASSURANCE GROUPS OF BHEL'S MANUFACTURING UNITS AND COMMISSIONING ENGINEERS FROM TECHNICAL SERVICES OF BHEL MAY ALSO BE CONDUCTED. CONTRACTOR SHALL ARRANGE ALL LABOUR, TOOLS AND TACKLES ETC, FOR SUCH STAGE INSPECTIONS WITHIN THEIR QUOTED RATE.
- 8.11.1** ANY MODIFICATIONS SUGGESTED BY FES / FQA ENGINEERS TEAM SHALL BE CARRIED OUT. CLAIMS OF CONTRACTOR, IF ANY, SHALL BE DEALT AS PER CLAUSE 13.1 TO 13.8.

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**8.11.2** ANY MINOR RECTIFICATION OR MINOR REPAIRS OF DEFECTIVE WORK FOUND AT DURING STAGE INSPECTION SHALL BE RECTIFIED FREE OF COST, BY THE CONTRACTOR.

**8.11.3** ANY MAJOR RECTIFICATION OR MAJOR REPAIR/MAJOR REWORK OF DEFECTIVE WORK, FOUND OUT DURING STAGE INSPECTION AS PER CLAUSE 8.11, BUT NOT ATTRIBUTABLE TO CONTRACTOR SHALL ALSO BE CARRIED OUT. CLAIMS OF CONTRACTOR, IF ANY, SHALL BE GOVERNED AS PER CLAUSE 13.1 TO 13.8.

**8.12 STATUTORY INSPECTION**

**8.12.1** DURING THE STATUTORY INSPECTION, CONTRACTOR SHALL PROVIDE ALL THE MANPOWER ASSISTANCE AS PER THE REQUIREMENT WITHIN THEIR QUOTED RATE. HOWEVER, ALL OTHER ARRANGEMENTS FOR VISITING OF STATUTORY AUTHORITIES AT SITE INCLUDING FEE ETC SHALL BE BORNE BY BHEL ALSO REFER SECTION 5 IN THIS REGARD.

**8.13.0** BHEL, POWER SECTOR- WESTERN REGION (PSWR) HAS ALREADY BEEN ACCREDITED WITH ISO 9002 CERTIFICATION AND AS SUCH THIS WORK IS SUBJECT TO VARIOUS AUDITS TO MEET ISO 9002 REQUIREMENTS. ONE PARTICULAR ASPECT, WHICH NEEDS SPECIAL MENTION, IS ABOUT ARRANGEMENT OF CALIBRATION OF INSTRUMENTS BY THE CONTRACTOR. CONTRACTOR SHALL ENSURE DEPLOYMENT OF RELIABLE AND CALIBRATED MMD (MEASURING AND MONITORING DEVICES). THE MMD SHALL HAVE TEST/CALIBRATION CERTIFICATES FROM AUTHORIZED/GOVERNMENT APPROVED/ ACCREDITED AGENCIES TRACEABLE TO NATIONAL/INTERNATIONAL STANDARDS. RETESTING/RECALIBRATION SHALL ALSO BE ARRANGED AT REGULAR INTERVALS DURING THE PERIOD OF USE AS ADVISED BY BHEL ENGINEER WITHIN THE CONTRACT PRICE.

THE CONTRACTOR WILL ALSO HAVE ALTERNATE ARRANGEMENTS FOR SUCH MMD SO THAT WORK DOES NOT SUFFER WHEN THE PARTICULAR EQUIPMENT/ INSTRUMENT IS SENT FOR RE-CALIBRATION. ALSO IF ANY MMD IS NOT FOUND FIT FOR USE, BHEL SHALL HAVE THE RIGHT TO STOP THE USE OF SUCH ITEM AND INSTRUCT THE CONTRACTOR TO DEPLOY PROPER ITEM AND RECALL I.E. REPEAT THE READINGS TAKEN BY THAT INSTRUMENT, FAILING WHICH BHEL MAY DEPLOY MMD S AND RETAKE THE READINGS AT CONTRACTOR'S COST.



## SECTION-9

### SPECIAL CONDITIONS OF CONTRACT

#### **Safety, Occupational Health and Environmental Management**

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

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

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

##### **9.1 The Contractor shall:**

###### **9.1.1**

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

###### **9.1.2**

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

###### **9.1.3**

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

###### **9.1.4**

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

###### **9.1.5**

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

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- i) Name of Contractor
- ii) Name of Contractor Site-in-charge & Telephone number
- iii) Job Description in short
- iv) Date of start of job
- v) Date of expected completion
- vi) Name of BHEL Site-in-charge.

#### 9.1.6

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

#### 9.1.7

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

### 9.2 **SPECIAL CONDITIONS**

#### 9.2.1 **Safety**

##### 9.2.1.1 **Safety Plan**

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

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

##### 9.2.1.2

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

##### 9.2.1.3

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

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

##### 9.2.1.4

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

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#### 9.2.1.5

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

#### 9.2.1.6

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

#### 9.2.1.7

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

#### 9.2.1.8

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

#### 9.2.1.9

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

#### 9.2.1.10

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

#### 9.2.1.11

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

#### 9.2.1.12

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

#### 9.2.1.13

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

#### 9.2.1.14

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

#### 9.2.1.15

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

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

9.2.1.16

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.

9.2.1.17

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.

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

9.2.1.18

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

9.2.1.19

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.

9.2.1.20

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.

9.2.1.21

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.

9.2.1.22

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.

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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.

#### 9.2.1.23 **Emergency Response**

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

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

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

#### 9.2.1.27

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

### **9.2.2 OCCUPATIONAL HEALTH**

#### 9.2.2.1

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

#### 9.2.2.2

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

#### 9.2.2.3

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

#### 9.2.2.4

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

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

#### 9.2.2.5

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

#### 9.2.2.6

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

#### 9.2.2.7

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

#### 9.2.2.8

Adequate arrangements shall be made to provide safe drinking water

#### 9.2.2.9

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

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

### **9.2.3.0 HYGIENE and HOUSEKEEPING**

#### 9.2.3.1

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

#### 9.2.3.2

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

#### 9.2.3.3

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

### **9.2.4 ENVIRONMENT MANAGEMENT**

#### 9.2.4.1

BHEL has a sound environmental management system, which is to be maintained and implemented by all the contractors. The system allows for project specific objectives to be set and developed sensitive to client requirements, applicable environmental legislation and BHEL's own objectives and policy. BHEL engineers will assess and monitor the environmental impact of their

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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.

## **WASTE MANAGEMENT**

### **9.2.4.3.1**

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

### **9.2.4.3.2**

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

### **9.2.4.3.3**

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

### **9.2.4.3.4**

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

### **9.2.4.3.5**

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

### **9.2.4.3.6**

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

## **9.3 SUPERVISION**

### **9.3.1**

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

### **9.3.2**

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

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

### **9.3.3**

Before starting work under any contract, the contractor must ensure that a job specific safety procedures/field practices as required over and above the safety permit conditions are prepared

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and followed .He should also ensure that all supervisors and workers involved understand and follow this procedures /field practices.

#### 9.3.4

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

#### 9.4.0 **TRAINING & AWARENESS**

##### 9.4.1

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

##### 9.4.2

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

##### 9.4.3

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

##### 9.4.4

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

##### 9.4.5

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

#### 9.5.0 **REPORTING**

##### 9.5.1

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

##### 9.5.2

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

##### 9.5.3

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

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#### 9.5.4

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

#### 9.5.5

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

#### 9.5.6

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

### 9.6 AUDIT REVIEW AND INSPECTION

#### 9.6.1

BHEL shall conduct audit on the contractor performance and compliance with the project specific requirements of the Environment and Occupational Health & Safety Management systems. The programme of audit shall cover all activities under the contract but will focus particularly on high-risk activities. The Construction Manager shall decide the schedule of audit. The audit findings shall be communicated to the contractors and necessary remedial action as advised by BHEL Engineers shall be under taken within the stipulated time.

#### 9.6.2

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

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

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

The contractor shall take remedial measures as per the findings of each inspection

Besides the above, the contractor shall be required to carry out the following inspections

Sl no	Equipment	Scope of inspection	Inspection by	Schedule
1	Hand tools	To identify unsafe/defective tool	User	Daily

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2	Power tools	To identify unsafe/defective tool	User	Daily
3	Fire Extinguishers	To check pressure and any defect	User / Safety Coordinator	Daily  Every month
4	Lifting equipment/tackles	To check for defects and efficacy of brakes	User  Third party	Daily  Every Year
5	PPE	To check for defects	User	Daily

### 9.7 **NON COMPLIANCE:-**

#### 9.7.1

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

Sl. No	Instance of Violation	Fine (in Rs)
01	Not Wearing Safety Helmet	50/-
02.	Not wearing Safety Belt	100/-
03.	Grinding Without Goggles	50/-
04.	Not using 24 V Supply For Internal Work	500/-
05.	Electrical Plugs Not used for hand Machine	100/-
06.	Not 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/-

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Sl. No	Instance of Violation	Fine (in Rs)
12.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
13.	Improper Earthing Of Electrical T&P	500/-
	Major Accident or Accidents causing partial loss of earning to the victim	50,000/- per victim
14	Fatal Accident or Accidents causing permanent loss of earning to the victim	1,00,000/- per victim

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

#### 9.8

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

#### 9.9

#### Memorandum of Understanding

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

#### Memorandum of Understanding

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:

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**9.10**

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

IS No	YEAR	Amd upto	DESCRIPTION
IS 10204	1982		PORTABLE FIRE EXTINGUISHERS MECHANICAL FOAM TYPE
IS 10245	1994		SPECIFICATION FOR BREATHING APPARATUS
IS 10291	1982		SAFETY CODE FOR DRESS DRIVERS IN CIVIL ENGINEERING WORKS
IS 10658	1983		HIGHER CAPACITY DRY POWDER FIRE EXTINGUISHERS (TROLLEY MOUNTED)
IS 10662	1992		COLOUR TELEVISION
IS 10667	1983		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR PROTECTION OF FOOT AND LEG
IS 11037	1984		ELECTRONIC FAN REGULATORS
IS 11057	1984		INDUSTRIAL SAFETY NETS
IS 11451	1998		RECOMMENDATION FOR SAFETY AND HEALTH REQUIREMENT RELATING TO OCCUPATION EXPOSURE TO ASBESTOS
IS 1169	1967		PEDESTAL FANS
IS 1179	1967		SPECIFICATION FOR EQUIPMENT FOR EYE AND FACE PROTECTION DURING WELDING
IS 11833	1986		DRY POWDER FIRE EXTINGUISHERS FOR METAL FIRES
IS 11972	1987		CODE OF PRACTICE FOR SAFETY PRECAUTION TO BE TAKEN WHEN ENTERING A SEWAGE SYSTEM
IS 1287	1986		ELECTRIC TOASTER
IS 13063	1991		STRUCTURAL SAFETY OF BUILDINGS ON SHALLOW FOUNDATIONS ON ROCKS
IS 13385	1992		SPECIFICATIONS FOR FIRE EXTINGUISHERS 50 LITRE WHEEL MOUNTED WATER TYPE (GAS CARTRIDGES)
IS 13386	1992		SPECIFICATIONS FOR FIRE EXTINGUISHERS 50 LITRE MECHANICAL FOAM TYPE
IS 13415	1992		CODE OF SAFETY FOR PROTECTIVE BARRIERS IN AND AROUND BUILDINGS
IS 13416	1992		RECOMMENDATIONS FOR PREVENTIVE MEASURES AGAINST HAZARDS AT WORKING PLACE PART 1 TO PART 5

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IS No	YEAR	Amd upto	DESCRIPTION
IS 13430	1992		CODE OF PRACTICE FOR SAFETY DURING ADDITIONAL CONSTRUCTION AND ALTERATION TO EXISTING BUILDINGS
IS 13849	1993		PORTABLE FIRE EXTINGUISHERS DRY POWDER TYPE ( CONSTANT PRESSURE)
IS 1446	1985		CLASSIFICATION OF DANGEROUS GOODS (FIRST REVISION)
IS 1476	1979		REFRIGERATORS
IS 1641	1988		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): GENERAL PRINCIPLES OF FIRE GRADING AND CLASSIFICATION
IS 1642	1989		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS- DETAILS OF CONSTRUCTION
IS 1643	1988		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): EXPOSURE HAZARD
IS 1646	1997		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): ELECTRICAL INSTALLATIONS
IS 1904	1986		CODE OF PRACTICE FOR DESIGN AND CONSTRUCTION OF FOUNDATIONS IN SOIL
IS 1905	1987		STRUCTURAL SAFETY OF BUILDINGS MASONARY WALLS
IS 2082	1985		ELECTRICAL GEYSERS
IS 2171	1985		PORTABLE FIRE EXTINGUISHERS DRY POWDER TYPE (CARTRIDGE)
IS 2309	1989		PRACTICE FOR THE PROTECTION OF BUILDINGS AND ALLIED BUILDINGS AGAINST LIGHTENING
IS 2312	1967		EXHAUST FANS
IS 2361	1994		SPECIFICATION FOR BUILDING GRIPS - FIRST REVISION
IS 2418	1977		TUBULAR FLUORSCENT LAMPS IS 2418 (FT-1)
IS 2750	1964		STEEL SCAFFOLDINGS
IS 2762	1964		SAFE WORKING LOADS IN KGS FOR WIRE ROPE SLINGS
IS 2878	1986		FIRE EXTINGUISHERS CARBON DIOXIDE TYPE (PORTABLE AND TROLLEY MOUNTED)
IS 2925	1984		SPECIFICATION FOR INDUSTRIAL SAFETY HELMETS
IS 3016	1982		CODE OF PRACTICE FOR FIRE PRECAUTIONS IN WELDING AND CUTTING OPERATIONS- FIRST REVISION

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IS No	YEAR	Amd upto	DESCRIPTION
IS 3315	1974		DESERT COOLERS
IS 3521	1989		INDUSTRIAL SAFETY BELTS AND HARNESS
IS 368	1983		IMMERSION WATER HEATERS
IS 3696	1991		SAFETY CODE OF SCAFFOLDS AND LADDERS PART 1 TO 2
IS 3737	1996		LEATHER SAFETY BOOTS FOR WORKERS IN HEAVY METAL INDUSTRIES
IS 374	1979		CEILING FANS INCLUDING REGULATORS
IS 3764	1992		EXCAVATION WORK - CODE OF SAFETY
IS 3786	1983		METHOD FOR COMPUTATION OF FREQUENCY AND SEVERITY RATES FOR INDUSTRIAL INJURIES AND CLASSIFICATION OF INDUSTRIAL ACCIDENTS
IS 3935	1966		CODE OF PRACTICE FOR COMPOSITE CONSTRUCTION
IS 4014	1967		CODE OF PRACTICE FOR STEEL TUBULAR SCAFFOLDING
IS 4081	1986		SAFETY CODE FOR BLASTING AND RELATED DRILLING OPERATIONS
IS 4082	1977	1996	STACKING AND STORAGE OF CONSTRUCTION MATERIALS AND COMPONENTS AT SITE
IS 4130	1991		DEMOLITION OF BUILDINGS - CODE OF SAFETY PART 1 TO 2
IS 4138	1977		SAFETY CODE FOR WORKING IN COMPRESSED AIR (FIRST REVISION)
IS 4155	1966		GLOSSARY OF TERMS RELATING TO CHEMICAL AND RADIATION HAZARDS AND HAZARDOUS CHEMICALS
IS 4209	1967		CODE OF SAFETY FOR CHEMICAL LABORATORY
IS 4250	1980		FOOD MIXERS
IS 4262	1967		CODE OF SAFETY FOR SULFURIC ACID
IS 4756	1978		SAFETY CODE FOR TUNNELING WORK
IS 4912	1978		SAFETY REQUIREMENTS FOR FLOOR AND WALL OPENINGS, RAILINGS AND TOE BOARDS
IS 5121	1969		SAFETY CODE FOR PILING AND OTHER DEEP FOUNDATIONS
IS 5182	1969	1982	METHODS FOR MEASUREMENT OF AIR POLLUTION
IS 5184	1969		CODE OF SAFETY FOR HYDROFLUORIC ACID

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IS No	YEAR	Amd upto	DESCRIPTION
IS 5216	1982	2000	RECOMMENDATIONS ON SAFETY PROCEDURES AND PRACTICE IN ELECTRICAL WORK PART I AND II
IS 555	1979		TABLE FANS
IS 5557	1995		INDUSTRIAL AND SAFETY LINED RUBBER BOOTS ( SECOND REVISION)
IS 5916	1970		SAFETY CODE FOR CONSTRUCTION INVOLVING USE OF HOR BITUMINOUS MATERIALS
IS 5983	1980		SPECIFICATION FOR EYE PROTECTORS - FIRST REVISION
IS 6234	1986		PORTABLE FIRE EXTINGUISHERS WATER TYPE ( STORED PRESSURE)
IS 692	1994		CRITERIA FOR SAFETY AND DESIGN OF STRUCTURES SUBJECTED TO UNDERGROUND BLASTS
IS 6994	1973		SPECIFICATION FOR SAFETY GLOVES
IS 7155	1986		CODE OF RECOMMENDED PRACTICE FOR CONVEYOR SAFETY (PART 1 TO 8)
IS 7205	1974		SAFETY CODE FOR ERECTION OF STRUCTURAL STEEL WORK
IS 7293	1974		SAFETY CODE FOR WORKING WITH CONSTRUCTION MACHINERY
IS 7323	1994		GUIDELINES FOR OPERATIONS OF RESERVOIRS
IS 7812	1975		CODE OF SAFETY FOR MERCURY
IS 7969	1975		SAFETY CODE FOR HANDLING AND STORAGE OF BUILDING MATERIALS
IS 8089	1976		CODE OF SAFE PRACTICE FOR LAYOUT OF OUTSIDE FACILITIES IN AN INDUSTRIAL PLANT
IS 8091	1976		CODE OF PRACTICE FOR INDUSTRIAL PLANT LAYOUT
IS 8095	1976		ACCIDENTS PREVENTION TAGS
IS 818	1968	1997	CODE OF PRACTICE FOR SAFETY AND HEALTH REQUIREMENTS IN ELECTRIC AND GAS WELDING, AND CUTTING OPERATIONS
IS 8448	1989		AUTOMATIC LINE VOLTAGE CORRECTOR (STABILISER)
IS 8519	1977		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR BODY PROTECTION

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

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## SECTION-10

### SPECIAL CONDITIONS OF CONTRACTS

#### DRAWINGS AND DOCUMENTS

##### 10.1

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

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

##### 10.3

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

##### 10.4

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

##### 10.5

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

##### 10.6

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

##### 10.7

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

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

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## SECTION-11

### SPECIAL CONDITIONS

#### 11.0.0

**TIME SCHEDULE - MOBILISATION - PROGRESS AND MONITORING, COMPLETION, ADVANCE, PRICE VARIATION, SALES TAX, WCT ETC.**

#### INITIAL MOBILIZATION AND CONTRACT PERIOD

##### 11.1.1 INITIAL MOBILIZATION

CONTRACTOR HAS TO MOBILISE THEIR MATERIALS, RESOURCES AND WORK FORCE SO AS TO START THE WORK **WITHIN 15 DAYS OF FAX/TELEGRAPHIC INTIMATION OF AWARD OF WORK**. FURTHER MOBILIZATION OF FRESH RESOURCES AND AUGMENTATION OF EXISTING RESOURCES SHALL BE DONE IN CONSULTATION WITH BHEL IN ALL THE AREAS AS COVERED IN SCOPE OF WORK ELSEWHERE IN SUCH A MANNER THAT THE ENTIRE WORK IS COMPLETED **WITHIN THE CONTRACT PERIOD**. **COTRACT PERIOD SHALL BE 14 (FOURTEEN) MONTHS**.

**CONTRACTOR HAS TO NOTE THAT TIME IS ESSENCE OF THIS CONTRACT & ENTIRE WORK HAS TO BE COMPLETED AS PER SCHEDULE. THEY HAVE TO ENGAGE MANPOWER, T&PS AND OTHER RESOURCES IN SUCH A WAY THAT ALL THE FRONTS CAN BE STARTED SIMULTANUOUSLY.**

##### 11.1.2 CONTRACT PERIOD AND SCHEDULE FOR COMPLETION

THE ENTIRE WORK UNDER THE SCOPE OF THIS CONTRACT SHALL BE CARRIED OUT IN SUCH A MANNER THAT THE FOLLOWING LISTED MAJOR MILESTONES ARE ACHIECED AS PER COMPLETION SCHEDULE GIVEN AGAINST EACH ECTIVITY & RELEASE FOR ERECTION BY OTHER AGENCY.

AREA	ACTIVITY	TENTATIVE DATE OF HANDING OVER FOR MECHANICAL ERECTION (Unit #1)
<b><u>PART – A OF RATE SCHEDULE</u></b> <b><u>MAIN CIVIL WORK/ POWER BLOCK WORK</u></b>		<b>ASSUMING LOI ON 15/10/2009</b>
<b><u>CONSTRUCTION OF THE FOLLOWING PLANT BUILDINGS:</u></b>		
1	STG HALL	6 MONTHS FROM THE DATE OF LOI

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2	CONTROL ROOM BUILDING AND SWITCH GEAR BUILDING	8 MONTHS FROM THE DATE OF LOI
3	CW PUMP HOUSE,BEARING CW PUMP HOUSE WITH CW LINE CIVIL WORKS	10 MONTHS FROM THE DATE OF LOI
4	IA/PA COMPRESSER HALL	7 MONTHS FROM THE DATE OF LOI
<b><u>CONSTRUCTION OF THE FOLLOWING EQUIPMENT FOUNDATIONS</u></b>		
1	STEAM TURBINE FOUNDATION & AUXILIARIES FOR UNIT#1	6 MONTHS FROM THE DATE OF LOI
2	SUPPORTING STRUCTURE AND FOUNDATION FOR PIPES/CABLE RACKS, CABLE TRENCHES	9 MONTHS FROM THE DATE OF LOI
<b><u>CONSTRUCTION OF THE FOLLOWING MISCELLANEOUS SERVICES</u></b>		
1	STORM WATER DRAIN	14 MONTHS FROM THE DATE OF LOI
2	OILY WATER DRAIN	
3	CONCRETE PAVING IN OPERATING AREAS ONLY	

**UNIT #2 SHALL HAVE PHASE GAP OF 1 (ONE) MONTH**

AREA	ACTIVITY	TENTATIVE DATE OF HANDING OVER FOR MECHANICAL ERECTION
<b><u>PART – B OF RATE SCHEDULE</u></b>		<b>ASSUMING LOA ON 15/10/2009</b>
<b><u>ENABLING WORK</u></b>		
1	CLOSED STORAGE SHED WITH OFFICE IN ALL RESPECT (WITH PLUMBING & ELECTRIFICATION)	2 MONTHS FROM DATE OF LOI
2	CLOSED STORAGE SHEDS, SECURITY CABINS IN ALL RESPECT (WITH PLUMBING & ELECTRIFICATION).	3 MONTHS FROM DATE OF LOI
3	READYNESS OF 50% AREA( ie 9000 SQM)FOR OPEN STORAGE YARD (ROAD,DRAINAGE,LIGHTING ETC)	3 MONTHS FROM DATE OF LOI

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4	READYNESS OF REMAINING 50% AREA( ie 9000 SQM)FOR OPEN STORAGE YARD (ROAD,DRAINAGE,LIGHTING ETC)	4 MONTHS FROM DATE OF LOI
<b><u>PART – C OF RATE SCHEDULE</u></b>  <b><u>SITE FACILITY</u></b>		AS PER REQUIREMENT OF BHEL

CONTRACTOR SHALL ENGAGE SEPARATE RESOURCES FOR ENABLING WORK SO AS TO COMPLETE THE INFRASTRUCTURE FACILITY AT SITE AS EARLY AS POSSIBLE.

**THE OVERALL CONTRACT PERIOD SHALL BE 14 (FOURTEEN) MONTHS. CONTRACTOR SHALL NOTE THAT INDIVIDUAL MILESTONES AS ABOVE SHALL BE ACIEVED AS PER SCHEDULE FURNISHED ABOVE IN PHASED MANNER & HANDOVER FOR MECHANICAL ERECTION. *THE DATE OF ACCEPTANCE OF LOI (LETTER OF INTENT) SAID AREA SHALL BE RECKNOED AS THE START OF CONTRACT PERIOD FOR THIS PERPOSE.***

## **11.2.0 PROGRESS AND MONITORING OF WORK, CONTRACT EXTENSION**

### 11.2.1

**CONSTRUCTION SCHEDULE:** - THE CONTRACTOR SHALL FURNISH THE L2/L3 CONSTRUCTION SCHEDULE AREA WISE BASED ON THE ABOVE MILESTONES WITHIN 30 DAYS OF ISSUE OF LOI. CONTRACTOR SHALL DRAW MONTHLY COMPLETION PROGRAMME ALONGWITH THE BHEL ENGINEER FOR VARIOUS ACTIVITIES. CONTRACTOR TO ARRANGE ALL THE INPUTS LIKE CEMENT AND ALL OTHER MATERIALS IN THEIR SCOPE FOR COMPLETION OF THE PROJECT UNDER THIS CONTRCAT IN TOTALITY.

### 11.2.2

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL THE RELEVANT INFORMATION ON A REGULAR BASIS REGARDING PROGRESS ACHIEVED.

### 11.2. 3

CONTRACTOR SHALL DRAW MONTHLY COMPLETION PROGRAMME IN CONSULTATION WITH BHEL FOR VARIOUS ACTIVITIES. THE CONTRACTOR SHALL SUBMIT DAILY, WEEKLY AND MONTHLY PROGRESS REPORTS, MANPOWER REPORTS, MATERIAL CONSUMPTION AND STOCK REPORTS, STELL MATERIALS REQUIREMENT (UNDER BHEL SCOPE OF SUPPLY) EQUIPMENT STATUS 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 WORK PROCEED AGAIN AS PER THE ORIGINAL PROGRAMME AND THE SLIPPAGE DO NOT ACCUMULATE AND AFFECT THE OVERALL PROGRAMME.

### 11.2.4

ANY OTHER INFORMATION THAT IS REQUIRED FOR DECISION MAKING, PLANNING AND ACTION TAKING, THE CONTRACTOR SHOULD FURNISH THE SAME. THE TENTATIVE FORMAT FOR VARIOUS REPORTS WILL BE PRESCRIBED AT SITE BY BHEL.

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#### 11.2.5

THE WORK UNDER THE SCOPE OF CONTRACTOR WILL BE DEEMED TO BE COMPLETE IN ALL RESPECTS ONLY WHEN 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**

IN ORDER TO ESTABLISH THE REASONS LEADING TO EXTENSION OF THE CONTRACT PERIOD A REGULAR REVIEW OF THE PERFORMANCE AS STATED VIDE CL. 11.2 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 IN THE PRESCRIBED **FORMAT PUR - F06**:

- A) CIVIL WORK COMPLETION SCHEDULE NOT ACHIEVED OWING TO NON-AVAILABILITY OF FRONTS.
- B) 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**

##### 11.4.1

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

##### 11.4.2

A JOINT PROGRAMME SHALL BE DRAWN FOR THE WORK TO BE COMPLETED DURING THE EXTENDED CONTRACT PERIOD. REVIEW OF THE PROGRAM AND RECORD OF SHORTFALL AS DESCRIBE VIDE CLAUSE 11.3 SHALL BE DONE DURING THE EXTENDED PERIOD. THE OVERRUN CHARGES WILL BE PAID IN PROPORTION TO THE ACHIEVEMENT OF THE RESPECTIVE MONTH VIS-À-VIS THE PLAN FOR THE MONTH (FOR ASSESSING THE PERFORMANCE, THE AGREED PLAN SHALL BE REDUCED BY SHORTFALL ATTRIBUTABLE TO THE BHEL). BHEL MAY DISALLOW CONTRACTOR'S CLAIM FOR OVER RUN CHARGES, IF THE MONTHLY PROGRAMME AS MENTIONED HERE NOT MADE BY HIM.

##### 11.4.3

THE PART OF EXTENSION ATTRIBUTABLE TO THE CONTRACTOR, IF ANY, IN TOTAL CONTRACT EXTENSION SHALL BE EXHAUSTED FIRST I.E. IMMEDIATELY AFTER END OF GRACE PERIOD. THIS

SHALL BE FOLLOWED BY THE EXTENSION ON ACCOUNT OF FORCE MAJEURE CONDITIONS, IF ANY, AND LASTLY ON ACCOUNT OF BHEL.

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## **11.5 COMPENSATION FOR DELAY: -**

### **11.5.1**

IF THE CONTRACTOR FAILS TO COMPLETE THE WORK UNDER THE SCOPE OF WORK IN THIS CONTRACT/AS PER TENDER SCHEDULES, WITHIN THE TIME SPECIFIED IN THE SPECIFICATION OR WITHIN ANY EXTENSION (FOR REASONS NOT ATTRIBUTABLE TO BHEL), HE SHALL, WITHOUT PREJUDICE TO ANY OTHER RIGHT OR REMEDY OF BHEL ON ACCOUNT OF SUCH BREACH, **PAY COMPENSATION (PENALTY) TO BHEL**. THE ABOVE AGREED COMPENSATION SHALL BE A PENALTY EQUIVALENT TO 1/2 % (Half PERCENT) OF THE TOTAL CONTRACT PRICE, EXCLUDING ELEMENTS OF TAXES, DUTIES ETC. IF ANY, PER WEEK OR PART THEREOF OF THE DELAY SUBJECT TO A MAXIMUM OF 10% (TEN PERCENTAGE) OF THE TOTAL EXECUTED PRICE EXCLUDING ELEMENTS OF TAXES, DUTIES ETC.( Also pl refer cl no 2.7.5 of G C C )

11.5.2 BHEL SHALL DEDUCT THE AMOUNT OF SUCH COMPENSATION FROM ANY MONEY DUE OR WHICH MAY BECOME DUE TO THE CONTRACTOR AND/OR RECOVER SUCH COMPENSATION FROM THE BANK GUARANTEES / SECURITY DEPOSIT OF THE CONTRACTOR. TO BE ENTITLED TO IMPOSE SUCH COMPENSATION, BHEL WILL NOT BE REQUIRED TO PROVE THAT BHEL HAS INCURRED SUCH AMOUNT AS ACTUAL DAMAGE.

11.5.3 BHEL RESERVES THE RIGHT TO PURCHASE FROM ELSEWHERE ON ACCOUNT OF AND AT THE RISK & COST OF THE CONTRACTOR WITHOUT NOTICE TO THE CONTRACTOR OF THE EQUIPMENT/MATERIALS NOT SO DELIVERED, WITHOUT CANCELLING THE ORDER/CONTRACT IN RESPECT OF THE EQUIPMENT/MATERIALS NOT YET DUE FOR DELIVERY.

11.5.4 BHEL RESERVES THE RIGHT TO CANCEL THE ORDER/CONTRACT OR A PORTION THEREOF FOR THE STORES NOT SO DELIVERED AT THE RISK & COST OF THE CONTRACTOR AND THE CONTRACTOR SHALL BE LIABLE TO BHEL FOR ANY EXCESS COSTS THEREOF.

11.5.5 THE CONTRACTOR SHALL CONTINUE THE PERFORMANCE OF THE ORDER/CONTRACT UNDER ALL CIRCUMSTANCES, TO THE EXTENT NOT CANCELLED.

11.5.6 WHERE ACTION IS TAKEN AS PER ABOVE, THE CONTRACTOR SHALL BE LIABLE FOR ANY LOSS, WHICH BHEL MAY SUSTAIN ON THAT ACCOUNT. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY GAIN ON SUCH PURCHASE AND THE MANNER AND THE METHOD OF SUCH PURCHASE SHALL BE AT THE DISCRETION OF BHEL. IT SHALL NOT BE OBLIGATORY ON ANY PART OF BHEL TO SERVE A NOTICE OF SUCH PURCHASE ON CONTRACTOR

## **11.6 REVISION OF ACCEPTED RATES**

NO. REVISION OF RATES SHALL BE APPLICABLE IN THE EVENT, THE COMPLETION PERIOD IS EXTENDED FOR ANY REASON WHATSOEVER.

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### **11.7 Price Variation**

Agreed price/rate shall remain firm through out the contract period including extended period thereof. No price variation/adjustment shall be applicable for this contract and clause No.2.15 of General Conditions of Contract shall not be applicable.

### **11.8 VARIATION IN QUANTITIES**

THE QUANTITIES OF VARIOUS ITEMS MENTIONED IN THIS TENDER ARE APROXIMATE AND MAY VARY UPWARD/DOWNWARD OR MAY BE DELETED ALTOGETHER AS PER THE DRAWING SUPPLIED

AT SITE DURING EXECUTION. THE QUOTED RATE OF EACH ITEM SHALL REMAIN FIRM AS LONG AS THE VARIATION IN THE TOTAL VALUE OF WORK EXECUTED UNDER THIS CONTRACT, INCLUDING EXTRA ITEMS IF ANY, REMAIN WITHIN **PLUS OR MINUS 30 (THIRTY PERCENT)** OF THE CONTRACT VALUE AS PER DESIGN CONSIDERATIONS. THE TENDERER HAS TO KEEP THEIR QUOTED RATES FIRM UPTO VARIATION OF MINUS 30% ON THE BASIC CONTRACT VALUE. IN CASE THE ACTUAL VALUE OF EXECUTED WORK ON COMPLETION OF WORK BECOMES **LESS THAN 70%** OF THE BASIC CONTRACT VALUE THEN THE FOLLOWING METHOD SHALL BE ADOPTED.

THE ACTUAL EXECUTED VALUE SHALL BE RAISED BY 7% OF THE EXECUTED VALUE SUBJECT TO THE CONDITION THAT TOTAL VALUE OF WORK EXECUTED PLUS INCREASE BY 7% AS ABOVE SHALL BE LIMITED TO 70% OF THE BASIC CONTRACT VALUE. THE RATE QUOTED SHALL BE FIRM IRRESPECTIVE OF ANY UPWARD VARIATION IN THE CONTRACT PRICE.

IT IS FURTHER CLARIFIED THAT THE ENHANCEMENT/RATE REVISION @ 7% ON THE BASIC RATE AS PER CLAUSE NO. 11.7 SHALL NOT BE ACCOUNTED FOR THE PURPOSE OF OPERATING THIS CLAUSE (CLAUSE No. 11.8).

11.8

THE CONDITIONS STIPULATED VIDE CLAUSES 2.8.3 AND 2.8.4 OF GENERAL CONDITIONS OF CONTRACT INCLUDE WITHIN THEIR PURVIEW ALL TAXES AND DUTIES AND VARIATION IN WAGES/SALARIES /BENEFITS FOR ANY REASON WHATSOEVER WHICH ARE ALL TO BE BORNE BY THE CONTRACTOR.

### **11.10 TAXES,DUTIED & LEVICS**

**REFER SECTION 5 AND CONDITION OF CONTRACT CL. 5.9 IN THIS REGARD**

### **11.11 INTERST BEARING RECOVERABLE ADVANCE.**

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

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

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### **11.12 SECURED ADVANCE:**

INTEREST FREE SECURED ADVANCE UP TO A MAXIMUM 75% OF THE VALUE (INVOICE VALUE) AS GIVEN IN PAID UP PURCHASE VOUCHER OF THE FOLLOWING MATERIALS REQUIRED FOR INCORPORATION IN THE PERMANENT WORKS AND BROUGHT AT SITE DULY CERTIFIED BY ENGINEER SHALL BE PAYABLE TO CONTRACTOR.

- a) CEMENT(OPC 53 GRADE)
- b) HUME PIPES, PVC PIPES, GI DOWN COMER PIPES
- c) WATER PROOFING ITEMS
- d) ANY STEEL ITEMS (NOT SUPPLIED BY BHEL)
- e) STEEL, ALLUMINUM,PVC DOORS & WINDOWS WITH GLAZING & MDF/PARTICAL BOARD
- f) FIRE DOORS
- g) SANITARY WARES
- h) TILES OF DIFFERENT VARIETIES
- i) PAINTS OF DIFFERENT VARITIES

THE CLAIM FOR SECURED ADVANCE IS TO BE GIVEN IN THE PRESCRIBED FORM. A FORMAL DEED OF HYPOTHECATION IS TO BE DRAWN UP ON NON-JUDICIAL STAMP PAPER UNDER WHICH BHEL SECURED A LIEN ON THE MATERIALS AND SAFEGUARDED AGAINST LOSSES DUE TO CONTRACTOR POSTPONING THE EXECUTION OF THE WORK DUE TO STORAGE OR MISUSE OF

MATERIALS AND AGAINST EXPENSES INCURRED ON THEIR WATCH AND SAFE CUSTODY. SECURE ADVANCE SHALL BE ADJUSTED IN THE INTERIM BILLS PRORATED TO WORK BILLED.

NO SECURED ADVANCE WILL BE PAID BY BHEL AGAINST VALUE OF ANY ERECTION EQUIPMENT BROUGHT TO SITE BY THE CONTRACTOR.

### **11.12 Foreclosing of Contract**

#### **11.12.1**

BHEL, at its discretion may foreclose the contract at any time after the completion of contract period from the date of starting the work at site.

#### **11.12.2**

In case it is decided to withdraw any portion of work or foreclose the contract, the percentage value of the work withdrawn / left over shall be determined mutually. BHEL

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engineer's decision in regard to status of an item shall be final and binding on the contractor.

#### **11.12.3**

The date of completion of work for the purpose of guarantee vide clause 2.13 of general conditions will be the date on which the contract is foreclosed.

#### **11.12.4**

Clause 2.12 of GCC regarding force majeure shall, inter-alia, include stoppage of work due to 'local bandhs' arising out of external factors.

### **11.13 DEFINITION OF WORK COMPLETION**

The contractor's scope of work under these specifications will be deemed to have been completed in all respect, only when all the activities are completed satisfactorily and so certified by BHEL site in charge. The decision of BHEL in this regard shall be final and binding on the contractor.

## SPECIAL CONDITIONS OF CONTRACT

### SECTION-12

#### 12.0 TERMS OF PAYMENT

##### 12.0.1

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

##### 12.0.2

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

##### 12.0.3

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

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

However, on specific request of vendor, this amount may be released on pro rata basis for the value of work executed and accepted by BHEL, along with any RA Bill and onwards, subject to receipt and acceptance of bank guarantee of 5% of contract value in BHEL's prescribed format. The BG shall be kept valid till completion of such guarantee period and an additional six months claim period. This is also subject to the condition that the contractor has started the work and also furnished/remitted the initial Security Deposit as per contract.

##### 12.0.4

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

##### 12.0.5

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

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

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8. MICR Code of the Bank Branch  
BHEL may also choose to release payment by other alternative modes as suitable.

#### **12.1.0 PROGRESSIVE PAYMENT FOR CIVIL, STRUCTURAL AND ARCHITECTURAL WORK.**

THE PERCENTAGE OF PAYMENT FOR PROGRESSIVE COMPLETION OF WORK IN VARIOUS CATEGORIES OF WORK SHALL BE AS UNDER:

##### **12.1.1 CIVIL AND ARCHITECTURAL WORK**

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

##### **12.1.2 STRUCTURAL WORK**

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

AS PER SCHEDULE OF RATE, COMPOSITE RATE FOR ITEM NO.6.2 CAN BE FURTHER BREAK UP AS FOLLOWS:-

- (a) **ERECTION:** ON COMPLETION OF ERECTION - 80% OF THE QUOTED RATE
- (b) COMPLETION OF **WELDING & ALIGNMENT:** 20% OF THE QUOTED RATE .

#### **12.2 Currency of Payment**

a) The payments shall be made as below:

- 1) 70% of the Total Contract Price will be paid in Indian Rupees
- 2) Balance 30% of the Total Contract Price will be paid in local currency (i.e. BIRR )

The above payment mode is applicable for each Running Bills.

The exchange rate for amount to be paid as 30% of Indian Rupee into BIRR in each RA Bill shall be the date on which payment made by BHEL ( i.e. – Example- If Ra bill in Indian Rs has been admitted for Rs 100/- , then Rs 70/- shall be paid to bidder in Indian Rupees & Balance Rs 30/- shall converted to BIRR as per the exchange rate on the date of payment by BHEL. )

#### **12.1 PAYMENT FOR WORK COMPLETED**

##### **12.2.1**

THE CONTRACTOR SHOULD SUBMIT HIS ON ACCOUNT BILLS WITH ALL THE DETAILS REQUIRED BY BHEL ON 26<sup>TH</sup> OF EVERY MONTH COVERING PROGRESS OF WORK IN ALL RESPECTS AND AREAS UP TO 24<sup>TH</sup> DAY OF THE SAME MONTH.

##### **12.2.2**

THE PAYMENT FOR RUNNING BILLS WILL NORMALLY BE RELEASED WITHIN **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.

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### **12.2.3**

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 VIDE CLAUSE 12.0. IT SHALL BE FINAL AND BINDING ON THE CONTRACTOR.

### **12.2.4**

THE PAYMENT FOR RUNNING BILLS WILL NORMALLY BE RELEASED IN 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.

12.3

### **EXTRA/ADDITIONAL ITEMS OF WORK:-**

IF ANY EXTRA OR ADDITIONAL ITEMS, WHICH ARE NOT INCORPORATED IN THE BOQ SCHEDULE, HAVE TO BE EXECUTED BY THE CONTRACTOR, THE RATE OF SUCH EXTRA OR ADDITIONAL WORK SHALL BE AS PER THE FOLLOWING:

THE RATE OF SUCH ITEMS SHALL BE DERIVED, IF POSSIBLE, FROM THE AVAILABLE RATES, AGREED UPON IN THE RATE SCHEDULE OF THIS CONTRACT.

IF THE ITEMS ARE NOT COVERED UNDER ABOVE SCHEDULE, THE RATES HAVE TO BE MUTUALLY AGREED UPON ON THE BASIS OF EFFORTS AND PREVAILING MARKET RATES FOR WHICH ALL DOCUMENTARY EVIDENCES, AS REQUIRED BY BHEL SHALL HAVE TO BE PRODUCED BY THE CONTRACTOR. DECISION OF BHEL IN SUCH CASES SHALL BE FINAL AND BINDING ON THE CONTRACTOR.

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## **SECTION-13**

### **SPECIAL CONDITIONS OF CONTRACT**

#### **DETAILS TO BE FURNISHED BY THE BIDDER**

13.0 APART FROM OTHER DETAILS CALLED FOR IN THE TENDER DOCUMENT UNDER THE VARIOUS OTHER PROVISIONS, THE FOLLOWING DETAILS SHALL BE SUBMITTED BY THE TENDERERS 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 CONDITION OF CONTRACT*

**INSURANCE**

**INSURANCE SHALL BE AS PER SECTION- 5 CL NO: 5.10**

**SECTION-15**  
*SPECIAL CONDITION OF CONTRACT*

**15.0 EARNEST MONEY DEPOSIT, SECURITY DEPOSIT & BANK GUARANTEE**

**15.1 Earnest Money Deposit:**

- i) **Earnest Money Deposit (EMD) : EMD for this tender is Rs. 2,00,000/- (Rupees Two lakhs only)** shall be deposited by Account Payee Pay Order 'OR' Demand Draft in favour of "Bharat Heavy Electricals Limited" payable at Delhi, INDIA.
- i) EMD is to be paid in cash (as permissible under Income Tax Act), Pay order or Demand Draft in favour of 'Bharat Heavy Electricals Limited' and payable at Nagpur.
- ii) No other form of EMD remittance shall be acceptable to BHEL
- iii) 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 send their consent for converting the present EMD into a "One Time EMD" in their offer.
- iv) Bidders who have already deposited such "One Time EMD" of Rs. 2.00 lakh are exempted from submission of EMD for this tender. However a copy of 'One Time EMD' certificate issued by BHEL/PSWR, Nagpur shall be enclosed along with the Offer.

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

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

**15.1.2** EMD shall not carry any interest.

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

**14.2 Security Deposit**

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

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

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

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

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

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

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

**14.3** BANK GUARANTEE

It is the responsibility of the bidder to get the Bank Guarantees revalidated/extended for the required period as per the advice of BHEL Site Engineer / Construction Manager. BHEL shall not be held liable for issue of any reminders regarding expiry of the Bank Guarantees.

- i. In case extension/further extensions of any Bank Guarantees are not required, the bidders shall ensure that the same is explicitly conveyed through the Construction Manager to BHEL PSWR/HQ, Nagpur
- ii. In case the Bank Guarantees are not extended before the expiry date, BHEL reserves the right to invoke the same by informing the concerned Bank in writing, without any advance notice/communication to the concerned bidder.
- iii. **Bidders to note that any corrections to Bank Guarantees shall be done by the issuing Bank, only through an amendment in an appropriate non judicial stamp paper.**
- iv. Bidders to ensure that the Bank Guarantees submitted are exactly as per format given in the Tender documents.
- v. The Original Bank Guarantee shall be sent directly by the Bank to BHEL under Registered Post (Acknowledgement Due). However, in exceptional cases, where guarantee is directly received by Vendor, the Vendor shall instruct the Bank to send an unstamped duplicate copy of the guarantee directly to BHEL under Registered Post (Acknowledgement Due).

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15.3.1 Guidelines for acceptance of Bank Guarantees are as follows :

- Vendors are advised to obtain BG from any of the following BHEL consortium banks  
State Bank of India                      The Hongkong and Shanghai banking Corporation Ltd.  
  
ICICI Bank Ltd                      ABN Amro Bank N.V  
  
Bank of Baroda                      IDBI Ltd  
  
Canara Bank                      Punjab National Bank  
  
Citi bank N.A                      Standard Chartered Bank  
  
Corporation Bank                      State Bank of Travancore  
  
Detshe Bank                      State Bank of Hyderabad  
  
HDFC Bank Ltd                      Syndicate Bank
- The Bank Guarantees of all Public sector banks shall be accepted (Other than consortium banks also).
- The Bank Guarantees of Co-operative banks shall not be accepted.
- Bank Guarantees of other banks (banks other than consortium bank, public sector bank, & Co-operative banks) can be accepted subject to an overall exposure limit (at BHEL, PSWR, Nagpur) of RS. 10 crores for banks with net worth of more than Rs. 500 crores as on last balance sheet date and Rs 5 crores for banks with net worth between Rs. 350 to Rs 500 crores (A certificate and copy of latest Balance Sheet to be given at the time of submission of bank guarantees .
- In case Bank Guarantees given by non consortium banks (Private sector or Public sector), the bank Guarantees shall be enforceable at Nagpur, Maharastra.

## SECTION 16

### SUSPENSION OF BUSINESS DEALING WITH CONTRACTORS

- 16.1 A bidder may be put on HOLD for a period of 6 months, for future tenders for specific works on the basis of one or more of the following reasons:
- I. Bidder does not honour his own offer or any of its conditions within the validity period.
  - II. Bidder fails to respond against **three consecutive** enquires of BHEL.
  - III. After placement of order, Bidder fails to execute a contract.
  - IV. Bidder fails to settle sundry debt account, for which he is legitimately liable, within one year of its occurrence.
  - V. Bidder's performance rating falls below 60% in specific category.
  - VI. Bidder works are under strike/ lockout for a long period.
- 16.2 A Bidder may be de-listed from the list of registered Bidders of the region for a period of 1 year on the basis of one or more of the following reasons:-
- I. Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics.
  - II. Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL.
  - III. Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.
- 16.3 A Bidder can be banned from doing any business with all Units of BHEL for a period of 3 years on the basis of one or more of the following reasons:
- I. Bidder is found to be responsible for submitting fake/ false/ forged documents, certificates, or information prejudicial to BHEL's interest.
  - II. In spite of warnings, the Bidder persistently violates or circumvents the provisions of labour laws/ regulations/ rules and other statutory requirements.
  - III. Bidder is found to be involved in cartel formation.
  - IV. The Bidder has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage etc which are contrary to business ethics.
  - V. The Bidder is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings.
  - VI. The Bidder is declared bankrupt, insolvent, has wound up or been dissolved; i.e ceases to exist for all practical purposes.
  - VII. Bidder is found to have obtained Official Company information/ documentation by questionable means.
  - VIII. Communication is received from the administrative Ministry of BHEL to ban the Bidder from business dealings.

**ANNEXURE – I(A)****INDICATIVE LIST OF T & PS REQUIRED FOR THE JOB**

SUCCESSFUL BIDDER IS REQUIRED TO MOBILIZE THE FOLLOWING T&PS FOR SUCCESSFUL & SIMULTANEOUS WORKING IN ALL THE FRONTS. HOWEVER THIS LIST IS NOT EXHAUSTIVE & MAY REQUIRE SOME MORE DEPENDING UPON JOB REQUIREMENTS.

**A) T &Ps FOR STRUCTURAL WORKS**

<b>S .NO</b>	<b>Major T&amp;P items</b>	<b>Qty</b>
1	75 Ton 955/280TFC Crawler crane-	02Nos.
2	18 T Crawler crane	01Nos.
3	Hydra (8 / 10 T Cap.)	02Nos.
4	Radial drill machine	02Nos.
5	Pillar drill m/c	02Nos.
6	Drill M/C NW 10	05Nos.
7	Submerged Arch Welding machine	02nos.
8	MIG welding machine	02Nos.
9	Welding Rectifier	05Nos.
10	Welding m/c	05Nos.
11	Grinding machine	05Nos.
12	Portable diesel welding M/C	01Nos.
13	Pug cutting m/c	02Nos.
14	Power Driven HSFG bolt tightening m/c	01Nos.
15	Hand cutting set	05Nos
16	Plasma cutting m/c	01Nos.
17	Hydraulic jack of different capacity	10Nos.
18	Stationery oven	03Nos.

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19	Portable oven	05Nos.
20	Chain pulley of different capacity	05Nos.
21	Max puller	04Nos.
22	Electric winch of different capacity	02Nos.
23	DG set of 250KVA	01Nos.
24	Hand winch 5t CAP.	02Nos.
25	Screw jack	03Nos.
26	15t/20t tractor & trailer	02Nos.
27	Air compressor of reqd capacity for sand blasting	01Nos.
28	Ultrasonography testing M/c for str. Steel	01Nos.
29	Radiography sources	01Nos.

### **B) T & Ps FOR CIVIL WORKS**

1	Automatic Batching Plant (30 Cum/Hr)	01Nos..
2	Mini batching plant (5 Cub.m./Hr.)	01Nos.
3	Transit mixer	02Nos.
4	Concrete Pump (30 Cum/Hr min capacity & lift 50M)	02Nos.
5	Vibrators	10 nos.
6	Jack Hammer	02Nos
7	Self priming Dewatering pump of various capacity (Diesel/Electric) From 3 HP to 12 HP	03Nos.
8	Curing / dewatering pump – 1.5 / 2 HP	03Nos.
9	Hydraulic Excavator /Poclain with rock breaker attachment (mule/rock breaker as per requirements)	01Nos
10	Hydraulic Excavator /Poclain	01Nos..
11	JCB	01Nos..
12	Ply Shuttering board with adequate supporting structure – 6000 Sqm. (Old steel shuttering plates will not be allowed).	As per requirement.

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13	Pipe Scaffolding, Clamps / Swivel Couplers (One/Two Way), Props, Jacks, Screw Heads, MS Pipes, Wooden Battens, Planks, Bullies, H Frames, Tie Rods with Nuts, Adjustable Achro Span (Considering Individual Areas)	As per requirement.
14	Dumper	05Nos.
15	Reinforcement bending machine	02Nos.
16	Reinforcement cutting machine	02Nos.
17	RM MS scaffolding pipe with matching Couplers	5000RM
18	Power driven earth rammer	03Nos.
19	Vibromax (earth compacter)	01Nos.
20	a) 02 Nos. Electric Winch with hoist	Immediately (along the above item).
21	Total Station	01Nos.
22	Auto level & staff	02Nos.
23	Concrete Cube Moulds	24Nos.
24	Tractor with trolley	02Nos.
25	Road Roller	01Nos.
26	Water Tanker	01 No.
27	POLES, CABLES, HALOGENS,BULBS ETC FOR AREA ILLUMINATION	As per requirement

28	COMPUTER(with Latest OS) with printing & CD writing facility	2 sets
29	COMMUNICATION FACILITIES	As per requirement

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### **C) CIVIL WORKS - FIELD QUALITY LAB EQUIPMENTS –**

- (a) AUTOMATIC COMPRESSION TESTING MACHINE(2000KN) – 1NO
- (b) CUBE MOULDS(150MM SIZE) – 24 NOS
- (c) SLUMP CONE WITH TAMPING ROD – 01NO
- (d) SIEVES OF DIFFERENT SIZES FOR FINE & COARSE AGGREGATE TESTING
- (e) CORE CUTTER TEST APPARATUS – 03SETS
- (f) OVEN (CAPACITY 120LTR, RANGE – 250C) – 1NO
- (g) MOISTURE CONTAINER(STEEL/ALUMINIUM) – 05NOS
- (h) RAPID MOISTURE METER – 2NOS
- (i) VICAT APPARATUS WITH PLUNGERS FOR CEMENT TESTING – 1SET
- (j) CUBE MOULDS (70MM SIZE) – 05NOS
- (k) PHYSICAL BALANCE – 01NO.
- (l) AUTOMATIC VIBRATION M/C – 01 NO.
- (m) JARS – 2 NOS.

**Bidder must submit T&P deployment plan inclusive of above T&Ps as per format Annex – VII & VIII**

## **ANNEXURE – I (B) TENTATIVE MANPOWER REQUIREMENT**

PROJECT MANAGER – WITH ADEQUATE EXPERIENCE IN INDUSTRIAL FOUNDATION, BUILDING & STRUCTURAL WORKS.

EXPERIENCED CIVIL ENGINEERS – 8 HEADS

EXPERIENCED FOREMAN / SUPERVISORS - 16 HEADS

PLANNING & BILLING ENGINEER – 2 HEAD

STORES, GATE PASS – 2 HEAD

ACCOUNTS & ADMINISTRATION- 2 NO

QUALITY CONTROL ENGINEER – 01 HEAD

SAFETY ENGINEER – 01 NO

SURVEYOR – HEAD CAPABLE TO HANDLE TOTAL STATION – 1 NO.

OPERATOR, LICENSED ELECTRICIAN, MECHANIC - AS PER REQUIREMENT

EXPERIENCED CARPENTERS & HELPERS – LOT FOR SIMILAR NATURE OF WORK

EXPERIENCED BAR BENDERS & HELPERS – LOT FOR SIMILAR NATURE OF WORK

SECURITY GUARDS (ROUND THE CLOCK) – AS PER REQUIREMENT

**Bidder must submit manpower deployment plan that should also be inclusive of above manpower as per format Annex – II**

**APPENDIX- II**

**MONTHWISE MANPOWER DEPLOYMENT PLAN ( BIDDER MUST SUBMIT )  
(CATEGORYWISE NUMBERS TO BE INDICATED FOR EACH MONTH FOR TOTAL  
14 MONTHS CONTRCT PERIOD)**

SL. NO.	CATEGORY	14 M O N T H S											
		1	2	3	4	5	6	.....	14				
01	RESIDENT ENGINEER												
02	ENGINEER												
03	SUPERVISORS												
04	SURVEYOR												
04	MATERIALS MANAGEMENT												
05	ACOOUNTS & ADM												
06	IR & HR												
07	WELDERS												
08	PLUMBERS												
09	CARPENTERS												
10	BAR BENDERS												
11	TRUCK/TRAILER DRIVERS/ CONCRETE MIXER OPERATORS												
12	STORE KEEPERS												
13	ELECTRICIANS												
14	HELPERS/SEMISKILLED/UNSKILLED WORKERS												
15	MASONS												
---	MONTHWISE TOTAL												

**BIDDER MAY PL USE SEPARATE SHEET AND FILL UP THE DETAILS AS ABOVE**

BHEL : PS WR

TS: BHE/PW/PUR/FINSE-CVL/ 683

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SIGN OF BIDDER WITH SEAL



**APPENDIX-III**

**ANALYSIS OF UNIT RATE QUOTED ( BIDDER MUST FILL UP THE DETAILS )**

SL. NO.	DESCRIPTION	% OF UNIT RATE QUOTED	REMARKS (IF ANY)
01	SITE FACILITIES VIZ., ELECTRICITY, WATER, WORKSHOP AND OTHER INFRASTRUCTURE		
02	CEMENT, STEEL, STRUCTURES, AND ALL MATERIALS		
03	SALARY & WAGES		
04	CONSUMABLES		
05	DEPRECIATION & MAINTENANCE FOR T&P AND OTHER ITEMS		
06	ESTABLISHMENT & ADMINISTRATION EXPENSES OF SITE		
07	RETRENCHMENT BENEFIT		
08	OVERHEADS		
09	PROFIT		

SIGNATURE OF THE TENDERER

DATE:

BHEL : PS WR

TS: BHE/PW/PUR/FINSE-CVL/ 683

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SIGN OF BIDDER WITH SEAL

#### APPENDIX -IV

**CIVIL LABORATORY: THE CONTRACTOR SHOULD ESTABLISH THEIR OWN CIVIL LABORATORY AT SITE WITH MIN. FOLLOWING EQUIPMENTS.**

SL.NO.	DESCRIPTION OF EQUIPMENT	QTY	REMARKS
01	CUBE TESTING MACHINE	01NOS.	
02	CUBE MOULDS (15CM)	24 NOS.	
03	SIEVE SETS FOR COARSE & FINE AGGREGATES		AS REQUIRED PER RELEVANT IS CODE.
04	ELECTRICAL OVEN	01SET	
05	MEASURING JARS FOR VARIOUS CAPACITY		AS REQUIRED
06	WEIGHTS		AS REQUIRED
07	PHYSICAL BALANCE	01NOS.	
08	SLUMP TESTING CONE	01NOS.	
09	CORE CUTTER	03NOS.	
10	CEMENT TESTING EQUIPMENT	01 SET	
11	OTHER MISC. ITEMS/EQUIPMENTS.		AS REQUIRED

BHEL : PS WR

TS: BHE/PW/PUR/FINSE-CVL/ 683

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**APPENDIX-V**

**DETAILS OF CURRENT COMMITMENTS ( BIDDER MUST FILL UP THE DETAILS )**

SL. NO	DESCRIPTION OF WORK	W.O. NO. & DATE	CONTRACT VALUE	SCHEDULE DATE OF COMPLETION	ACT. DATE OF COMPLETION	STATUS	REMARK

**PLEASE ATTACH SEPARATE SHEET IF REQUIRED.**

BHEL : PS WR

TS: BHE/PW/PUR/FINSE-CVL/ 683

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**APPENDIX-VI**

**DETAILS OF SIMILAR WORK DONE DURING THE LAST SEVEN YEARS ( BIDDER MUST FILL UP THE DETAILS )**

SL. NO.	FULL POSTAL ADDRESS OF CLIENT & NAME OF OFFICER IN CHARGE	DESCRIP- TION OF WORK	VALUE OF CONTRACT	DATE OF AWARD OF WORK	DATE OF COMMENCE MENT OF WORK	ACTUAL COMPLETION TIME (MONTHS)	DATE OF ACTUAL COMPLETION OF WORK	REMARKS
1								
2								
3								
4								
5								
6								
7								
8								
9								

**BIDDERS SHALL ENCLOSE COPIES OF DETAILED WORK ORDER (GIVING BILL OF QUANTITIES AND SCOPE OF WORK) AND COMPLETION CERTIFICATE IN SUPPORT OF THIS STATEMENT.**

DATE  
BHEL : PS WR

SIGNATURE OF TENDERER WITH SEAL

# **APPENDIX-VII**

## **FORMAT FOR DEPLOYMENT PLAN FOR MAJOR TOOLS AND PLANTS FOR CIVIL & STRUCTURAL EQUIPMENTS AS GIVEN IN APPENDIX-I**

**\* USE ADDITIONAL SHEETS TO COVER THE TOTAL CONTRACT PERIOD**

S.NO	DESCRIPTION T&P	QUANTITY OF DEPLOYMENT IN THE MONTH					
		1	2	3	4	5	6.....and so on UP TO 14 MONTHS
01							
02							
03							
04							
05							
06							
07							
08							
09							

BHEL : PS WR

TS: BHE/PW/PUR/FINSE-CVL/ 683

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SIGN OF BIDDER WITH SEAL

## APPENDIX- VIII

### FORMAT FOR ESTABLISHMENT OF CIVIL LABORATORY AS GIVEN IN APPENDIX-IV

- USE ADDITIONAL SHEETS TO COVER THE TOTAL CONTRACT PERIOD

S.NO	LSIT OF EQUIPMENT	QUANTITY OF DEPLOYMENT IN THE MONTH					
01		1	2	3	4	5	6.....and so on UP TO 14 MONTHS
02							
03							
04							
05							
06							
07							
08							
09							
10							

BHEL : PS WR

TS: BHE/PW/PUR/FINSE-CVL/ 683

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## APPENDIX – IX

### LIST OF DRAWINGS

FOLLOWING DRAWINGS ARE ENCLOSED WITH THE TENDER.

SL.NO.	DRAWING /SKETCH No.	TITLE
<b>ENABLING WORK:</b>		
1)	BHE/PW/CS - 01:	PLAN AT PLINTH LEVEL OF CLOSED SHED CUM OFFICE (60M X 15M)
2)	BHE/PW/CS - 02:	SECTIONAL DETAILS OF RCC FOOTING AND COLUMN FOR CLOSED STORAGE SHED
3)	BHE/PW/CS - 03:	PLAN OF FOOTINGS FOR CLOSED SHED
4)	BHE/PW/CS - 04:	SECTION OF PLINTH BEAM
5)	BHE/PW/CS - 05:	SECTION OF STUB COLUMN FOR CLOSED STORAGE SHED
6)	BHE/PW/CS - 06:	SECTION OF LINTEL AND PROJECTION FOR CLOSED STORE SHED (AT ROLLING SHUTTER)
7)	BHE/PW/CS - 07:	DETAILS OF TRUSS FOR CLOSED STORAGE SHED OF WIDTH 15M
8)	BHE/PW/CS - 08:	DETAILS OF BASE PLATE AT TRUSS LEVEL OF CLOSED STORAGE SHED
9)	BHE/PW/CS – 09	SECTION OF TIE BEAM
10)	BHE/PW/CS –10	FOUNDATION PLAN FOR CLOSED SHED (60M X 15M)
11)	BHE/PW/CS –11	PLAN OF CLOSED SHED WITH OFFICE (60M X 15M)
12)	BHE/PW/CS –12	DETAILS OF BRICK FOUNDATION.
13)	BHE/PW/CS –13	SECTION OF LINTEL& PROJECTION FOR CLOSED SHED STORE OFFICE.
14)	BHE/PW/OY-01	LAYOUT OF DRAINS AND ROADS IN OPEN STORAGE AREA
15)	BHE/PW/OY-02	SECTIONAL DETAILS OF WBM ROADS
16)	BHE/PW/OY-03	DRAIN DETAILS 0.5M DEPTH
17)	BHE/PW/OY-04	DRAIN DETAILS 0.6M DEPTH
18)	BHE/PW/OY-05	DRAIN DETAILS 0.8M DEPTH
19)	BHE/PW/OY-06	CULVERT DETAILS FOR 400MM DIA. RCC HUME PIPE
20)	BHE/PW/OY-07	CULVERT DETAILS FOR 600MM DIA. RCC HUME PIPE
21)	BHE/PW/ SEPTIC TANK	SEPTIC TANK
22)	BHE/PW/ SOAK PIT	SOAK PIT
23)	BHE/PW/ STAGING	STAGING OF OVER HEAD WATER TANK

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TS: BHE/PW/PUR/FINSE-CVL/ 683

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**MAIN CIVIL PACKAGE:**

24)	DRAWING NO. -0-381-01-01032	PLOT PLAN
25)	DRAWING NO -0-381-01-03567(SHEET NO 01/03)	STG HALL EQUIPMENT LAYOUT AT EL 0.00 M
26)	DRAWING NO -0-381-01-03567(SHEET NO 02/03)	STG HALL EQUIPMENT LAYOUT AT EL 4.00 M
27)	DRAWING NO -0-381-01-03567(SHEET NO 03/03) -	STG HALL EQUIPMENT LAYOUT AT EL 8.50 M & OHT PLATFORM AT EL 15.50 M.

**NOTE:**

The above drawings are tentative and strictly for tender purpose only . Changes in the drawing as per site requirement will be intimated during execution.

These drawings are the property of BHEL and should not be made use of by the contractor except for the purpose of implementing this contract.

All these drawings should be returned to BHEL on completion of the work.

The interpretation of BHEL engineer regarding the details shown in the drawing shall be final, conclusive and binding.

BHEL : PS WR

TS: BHE/PW/PUR/FINSE-CVL/ 683

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