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|  | <p style="text-align: center;">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p style="text-align: center;">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p style="text-align: center;">Revision No. 01 (For supply and turnkey projects)</p> |
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GENERAL CONDITIONS OF CONTRACTS (GCC)

DEFINITIONS OF TERMS

ABBREVIATIONS

INSTRUCTIONS TO BIDDERS


GENERAL COMMERCIAL TERMS & CONDITIONS

ANNEXURES

**INDUSTRIAL SYSTEMS GROUP
BHARAT HEAVY ELECTRICALS LIMITED**
(A Govt. of India Undertaking)
PROF. CNR RAO CIRCLE, IISc POST
MALLESHWARAM
BANGALORE - 560012

Not for Publication


For Official Use

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DEFINITION OF TERMS

Throughout the Tender Documents including the Enquiry Letter, the following words shall have the meanings assigned to them herein, unless the subject matter or the context requires otherwise.

- 1 **Purchaser** shall mean **M/s Bharat Heavy Electricals Limited** (A Govt. of India Undertaking) incorporated under the Companies Act 1956 acting through its **Industrial Systems Group Division (ISG)**, IISc Post, Prof. CNR Rao Circle, Malleshwaram, Bangalore - 560012 (Karnataka) which expression shall include its successors and assigns. It may also be referred to as **BHEL**.
- 2 **Owner** shall mean the **Customer or Client** for whose project the enquiry is issued by Purchaser and shall include its successors and assigns as well as authorized officer(s)/ representative(s).
- 3 **Consultant** shall mean the agency appointed by Owner or Purchaser to provide consultancy services for the project and shall include its successors and assigns as well as authorized officer(s)/ representative(s).
- 4 **Tenderer** shall mean the Firm/ Company/ Organization which quotes against the Tender Enquiry issued by Purchaser. It may also be referred as **Bidder or Vendor**.
- 5 **Order/ Contract** shall mean and include the general conditions, bidding conditions, specific conditions, specifications, schedules, drawings, form of tender, covering letters, schedule of prices and quantities, letter of intent/ award of the Purchaser, Integrity Pact (if applicable), special conditions applicable to the project and subsequent amendments mutually agreed upon. It may also be referred as **Purchase Order**.
- 6 **Seller/Contractor** shall mean the Firm/ Company/ Organization with whom the Order/Contract is made and shall be deemed to include its successors, representatives, heirs, executors, administrators and permitted assigns, as the case may be. It may also be referred as **Supplier**.


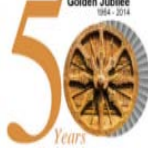
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|---|--|--|---|

- 7 Sub-Contractor** shall mean the person/ firm/ company/ organization to whom any part of the work has been sub-contracted by Seller/ Contractor, with the written consent of Purchaser, and shall include sub-contractor's heirs, executors, administrators, representatives and assigns.
- 8 Engineer** shall mean the authorized officer of Purchaser to act as the engineer on its behalf for the purpose of the Order/ Contract.
- 9 Site** shall mean and include the land and place on which the power station and related facilities are to be constructed and any adjacent land which may be allocated or used by Owner or Seller/ Contractor in performance of the Order/ Contract.
- 10 Tests on completion** shall mean such tests as prescribed in specifications and/ or tests mutually agreed upon by Purchaser and Seller/ Contractor, to be performed by Seller/ Contractor after erection of equipment to establish its satisfactory operation as per specifications.
- 11 Commissioning** shall mean successful completion of Trial Operation and readiness of the contracted/ ordered plant and materials for commercial use. This will include all consumables and inputs required for pre-commissioning.
- 12 Initial Operation or Trial Operation or Reliability Run** shall mean continuous integrated operation of the contracted/ ordered plant and materials under varying loads as proof of satisfactory operation for a specified period.
- 13 Inspection Agency (IA)** shall mean person(s) authorized by Purchaser / Owner to inspect the stores as per Order/ Contract at Contractor's/ Sub-Contractor's works. Vendors to raise inspection call on BHEL ISG.
- 14 Month** shall mean calendar month and week shall mean 7 days.
- 15 Consignee** shall mean the official(s)/ person(s) to whom the stores are required to be delivered in the manner indicated in the Order/ Contract.
- 16 Plant/ Equipment/ Stores** shall mean the goods, machinery, components, parts, spares etc. required to be supplied by Seller/ Contractor as per Order/ Contract.

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|---|---|---|--|
|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects)</p> | <p align="center">DEFINITION OF TERMS Issued on 28-08-2014</p> |
|---|---|---|--|


- 17 Contract Engineer (CE)** shall mean the official who signs the Order/ Contract on behalf of Purchaser.
- 18 Site Engineer** shall mean officer of Purchaser/ Owner authorized to receive and verify the in-coming stores, and issue Material Receipt Certificate (MRC)/ Stores Receipt Voucher (SRV).
- 19 Site Inspection Agency (Site IA)** shall mean person(s) authorized by Purchaser/ Owner to inspect the stores/ works included in Order/ Contract at the Project Site.
- 20 GENERAL**

The words incorporating singular shall include plural and vice-versa, the words incorporating masculine gender shall include feminine gender and vice-versa, and the words incorporating persons shall include bodies, corporate, limited liability companies, partnership and other legal entities.


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|---|---|---|--|

ABBREVIATIONS

| | |
|-----------|--|
| AWB | Airway Bill |
| BL | Bill of Lading |
| BOQ | Bill of Quantity |
| GIF | Cost, Insurance and Freight |
| CQ | Corporate Quality |
| CVD | Countervailing Duty |
| DMS | Document Management System |
| EMD | Earnest Money Deposit |
| E&C | Erection and Commissioning |
| FOB | Free on Board |
| GR | Goods Receipt |
| H bidder | Bidder quoting highest landed cost to BHEL |
| IP | Integrity Pact |
| IEM | Independent External Monitor |
| L1 Bidder | Bidder quoting lowest landed cost to BHEL |
| LC | Letter of Credit |
| LOI | Letter of Intent |
| LOA | Letter of Award |
| LR | Lorry Receipt |
| MDCC | Material Despatch Clearance Certificate |
| MRC | Material Receipt Certificate |
| MSMED | Micro Small and Medium Enterprises Development |
| NIT | Notice Inviting Tender |
| O&M | Operation & Maintenance |
| PBG | Performance Bank Guarantee |
| P&ID | Process & Instrumentation Diagram |
| PO | Purchase order |
| PQR | Pre-Qualification Requirement |

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects)</p> | <p align="center">ABBREVIATIONS Issued on 28-08-2014</p> |
|---|---|---|--|



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| PVC | Price Variation Clause |
| QS | Quality Surveillance |
| RA | Reverse Auction |
| RBI | Reserve Bank of India |
| RFQ | Request for Quotation |
| RR | Railway Receipt |
| SAD | Special Additional Duty |
| SCC | Special Conditions of Contract |

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|---|---|---|--|
|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects)</p> | <p align="center">INSTRUCTIONS TO BIDDERS Issued on 28-08-2014</p> |
|---|---|---|--|

INSTRUCTIONS TO BIDDERS

TABLE OF CONTENTS

| Sl. No. | DESCRIPTION |
|---------|---|
| 1.0 | GENERAL INSTRUCTIONS |
| 2.0 | PROCEDURE FOR SUBMISSION & OPENING OF TENDERS |
| 3.0 | MINIMUM E&C CHARGES |
| 4.0 | AUTHORITY FOR TENDER SIGNING |
| 5.0 | CLARIFICATIONS REQUIRED BY BIDDERS |
| 6.0 | DEVIATIONS - LISTING |
| 7.0 | VALIDITY OF OFFER |
| 8.0 | LANGUAGE & CORRECTIONS |
| 9.0 | PRICE DISCREPANCY |
| 10.0 | TENDERER TO INFORM HIMSELF FULLY |
| 11.0 | ETHICS IN BUSINESS DEALINGS |
| 12.0 | INTEGRITY PACT |
| 13.0 | REVERSE AUCTION |
| 14.0 | REJECTION OF TENDER AND OTHER CONDITIONS |
| 15.0 | DEVIATIONS FROM NIT |
| 16.0 | LOADING FOR COMMERCIAL DEVIATION (WHERE COST OF WITHDRAWAL NOT GIVEN) |
| 17.0 | INTEREST RATE FOR LOADING |
| 18.0 | DISCOUNT |
| 19.0 | EVALUATION CRITERIA |
| 20.0 | FOREIGN SUPPLIERS & INDIAN AGENTS OF FOREIGN SUPPLIERS |
| 21.0 | MICRO, SMALL & MEDIUM ENTERPRISES |

| | | | |
|---|---|---|--|
|   | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects) | INSTRUCTIONS TO BIDDERS Issued on 28-08-2014 |
|---|---|---|--|

1.0 GENERAL INSTRUCTIONS

- 1.1 Tenderers are advised to study all the tender documents carefully. Any submission of tender by the tenderer shall be deemed to have been done after careful study and examination of the tender documents and with full understanding of the implications thereof. The specifications and terms & conditions shall be deemed to have been accepted unless otherwise specifically commented upon in 'Deviation sheets by the tenderer in his offer. Non-compliance with any of the requirements and instructions in the Tender Enquiry may result in rejection of the tender.

Integrity Pact (IP) will be applicable for all tenders/ contracts valuing more than a specific value or if specified in NIT/ RFQ. Integrity Pact document shall be issued as part of tender and shall be returned by bidders along with their techno-commercial bids, duly signed by authorized signatories. Only those vendors/ bidders who enter into Integrity Pact with BHEL would be qualified to participate in the bidding process.

- 1.2 All commercial terms and conditions, except prices, should be submitted as part of techno-commercial offer (Part-I) along with unpriced copy of Annexure-II, which may be opened first. The price part (Part-II) along with price copy of Annexure-II is to be submitted in a separate sealed cover along with techno-commercial offer. Purchaser reserves the right to open both the Parts at the same time.
- 1.3 A declaration as per Annexure-III must be sent before opening of Price Bids.

2.0 PROCEDURE FOR SUBMISSION & OPENING OF TENDERS


- 2.1 Tenders shall be submitted in **Two parts** on or before the Due Date and time indicated in the NIT/ RFQ.

PART - I : Techno-Commercial Bid

comprising of Technical Offer, Annexure-I, Commercial Terms & Conditions, Unpriced copy of Price Bid & Annexure II, PQR documents (if applicable) in five (5) sets.

PART - II : Price Bid

Containing Prices, cost of withdrawal of deviation as per Annexure-II, to be submitted in original, strictly, as per Price Schedule of BHEL for complete scope of Tender Enquiry.

| | | | |
|---|---|---|--|
|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects) | INSTRUCTIONS TO BIDDERS Issued on 28-08-2014 |
|---|---|---|--|

NOTE: Offers are liable to be rejected for changes made by vendors in the Price Schedule, except those specified in the unpriced bid and accepted by Purchaser.

- 2.1.1 PART-I (Techno-Commercial bid) may be opened on Due Date and time specified in the NIT/ RFQ, or extension thereof, in presence of tenderers who may like to attend. Incomplete offers are liable to be rejected. Purchaser reserves the right to open both Part-I and Part-II together.
- 2.1.2 PART-II containing prices shall be submitted along with Part-I but in a separate sealed cover. Corrections/amendments shall be properly authenticated, else the offer is liable to be rejected.
- 2.1.3 Any discount/revised offer submitted by a bidder on its own shall be accepted provided it is received on or before the due date and time of offer submission. The discount shall be applied on pro-rata basis to all items unless specified otherwise by the bidder.

Unsolicited discounts/revised offers given after due date and time of offer submission shall not be accepted.

In case there is no change in the technical scope and/or specifications and/or commercial terms & conditions, the bidder/s shall not be allowed to change his/their price bids after the due date, within the validity period.



In case of changes in scope and/or technical specification and/or commercial terms & conditions, having price implications, techno-commercially acceptable bidders shall be asked by BHEL (after freezing the scope, technical specifications and commercial terms & conditions) to submit the impact of such changes on their price bid. A cut-off date and time shall be given to all the techno-commercially acceptable bidders to submit the impact on their price bids.

In the event of any bidder, after finalizing the technical specification & scope of supply, opting to revise and submit their latest price bid instead of submitting impact on their price bid asked by BHEL, then their original price (i.e. the previous bid) shall also be opened.

Price Impact/ Discount/ Revised Price Bid shall be duly superscribed as:

“Price Impact / Discount/ Revised Price Bid (Part-II) (delete whichever is not applicable), Revision No. ___ against Tender Enquiry No. _____ dated ____”

- 2.2 After technical & commercial examination of the offers received and clarifications obtained (if required), Part-II (Revised Price Bid/ Original Price Bid along with

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|---|---|---|--|
|   | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects)</p> | <p align="center">INSTRUCTIONS TO BIDDERS Issued on 28-08-2014</p> |
|---|---|---|--|

Price Impact and Discount, if any) shall be opened, for which the date and time shall be intimated to technically and commercially acceptable bidders in case of public opening. BHEL may opt to finalise the prices through Reverse Auction amongst technically and commercially acceptable bidders. BHEL reserves the right to open the earlier price bids, if any, submitted by the bidder(s), if required.

2.3 No correspondence shall be entertained from the tenderers after opening of Part-II (Price bid), except clarifications (if any) asked by BHEL in writing.

2.4 Only one representative of the bidder will be permitted to be present for tender opening. The representative to be present for tender opening should have proper authentication/ Photo Identity Proof which needs to be produced on demand by BHEL.

2.5 Purchaser may negotiate the tender with L1 bidder after RA/ price bid opening.

2.6 MARKING ON ENVELOPES

2.6.1 Following shall be superscribed on the envelopes which shall be addressed by name and designation to the official inviting tender:

PART-I : 1. TENDER ENQUIRY No. AND ITEM DESCRIPTION
 2. DUE DATE FOR OPENING
 3. "TECHNO-COMMERCIAL BID".

PART-II : 1. TENDER ENQUIRY NO AND ITEM DESCRIPTION
 2. DUE DATE FOR OPENING
 3. "PRICE BID".


2.6.2 Both Parts - I & II shall be submitted in separate sealed covers duly superscribed as indicated above and shall be enclosed further in a main cover duly sealed and superscribed as:

"TENDER FOR _____ AGAINST TENDER ENQUIRY NO. _____ DUE ON _____ CONTAINING PART-I & PART-II BIDS"

2.6.3 Envelope not marked with tender enquiry number is liable to be ignored and may not be opened.

2.7 BID SUBMISSION

2.7.1 Tenders shall be addressed to BHEL officials by name & designation and sent to the following address:

| | | | |
|---|---|---|--|
|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects) | INSTRUCTIONS TO BIDDERS Issued on 28-08-2014 |
|---|---|---|--|


Tender Box at the reception of EPD & ISG,
 Bharat Heavy Electricals Ltd.
 Industrial Systems group
 Opp. IISc, PROF. C N R RAO CIRCLE ,
 MALLESWARAM , BANGALORE - 560 012
 Attention: 1) Mr.
 2) Mr.

- 2.7.2 Tenders can either be deposited in tender room in person or sent by Courier/Registered or Speed Post to the above mentioned address. It shall be bidders' responsibility to ensure that tenders are delivered in time.
- 2.7.3 Name of vendor's dealing person with Contact No(s), Email ID and Address of correspondence shall be provided in the bid.
- 2.8 Tenders received after the Due Date and Time of submission shall be rejected.
- 2.9 Unsolicited tenders will not be entertained.
- 3.0 Total **erection & commissioning charges** including service tax should be minimum 20% (or as specified in NIT) of the total quoted package price (excluding mandatory spares but including all taxes and freight), failing which the break-up of prices shall be adjusted accordingly for ordering.
- 4.0 **Authority of the person signing the tender on behalf of the tenderer:**

A person signing the tender or any other document in respect of Order/Contract on behalf of the tenderer, without disclosing his authority to do so shall be deemed to warrant that he has the authority to bind the tenderer. If it is discovered at any time that the person so signing had no authority to do so, the Purchaser may, without prejudice to any other right or remedy, cancel the Order/Contract and make or authorise the purchase of the stores at the risk and cost of such tenderer and hold such tenderer liable to Purchaser for all costs and damages arising from cancellation of the Order/Contract including any loss which Purchaser may sustain on account of such purchase.

Notes:

- a) Bids of Indian supplier shall be in Indian Rupee only.
- b) Bids of foreign suppliers shall preferably be in currency of the country of origin and on FOB basis.

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|---|--|--|---|
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|---|--|--|---|

c) An authorized representative/ agent can represent only one bidder for the given package.

5.0 CLARIFICATIONS REQUIRED BY BIDDERS

Technical and commercial clarifications required before submission of the tender should be addressed to the official(s) inviting the tender. The bidders are requested to submit all their queries/clarifications by the date specified in the NIT after which it will be presumed that there are no queries/clarifications and BHEL will be under no obligation to reply queries/clarifications raised after the date.

6.0 DEVIATIONS - LISTING

6.1 Tenders shall be submitted strictly in accordance with the requirements of tender documents. In case of deviations from NIT, the tenderer shall give cost of withdrawal of such deviation in Sealed Cover as per Annexure-II.

6.2 If bidder insists for price variation clause (PVC) where NIT specifies Firm price, the offer should contain:-


- a) PVC Formula
- b) Ceiling for PVC
- c) Base date and applicable indices for the base date.

Open ended PVC formula is not acceptable. Indices shall be based on Government of India/ RBI publications/ IEEMA/ LME etc. However, BHEL reserves the right to accept/ reject the offer with PVC.

7.0 VALIDITY OF OFFER

Vendors' offers shall be submitted with the following validity periods:

- i) Original offer shall be valid for **four** months from Part-I opening.
- ii) If revised price bid/ price impact is asked by BHEL, the validity of the same shall be two months from the date of revised price bid/ price impact or four months from Part-I opening, whichever is later.
- iii) Prices of Recommended Spares, O&M Spares and Mandatory Spares (wherever these are Optional items) shall be valid till two years from the date of PO.
- iv) Unit prices for scope addition/deletion shall be valid till two years from the date of PO.

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|---|---|---|--|
|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects) | INSTRUCTIONS TO BIDDERS Issued on 28-08-2014 |
|---|---|---|--|

v) Prices of optional items shall be valid till the contract period for placement of order.

vi) Offers with shorter validity are liable to be rejected.

8.0 LANGUAGE & CORRECTIONS

a) Tenderer shall quote the rates in Hindi/English language and international numerals only. Total Price shall be entered in figures as well as in words. For the purpose of tender, metric system of units shall be used.

b) All entries in the tender shall either be typed or written legibly in ink. Cancellations, corrections, insertions, erasements, over-writing (if unavoidable) shall be authenticated with signature and seal by the bidder.

9.0 PRICE DISCREPANCY

Following shall be considered for evaluation and ordering for non-conformities/ errors/ discrepancies in price bid:

(a) If, in the price structure quoted for the required goods/ services/ works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.

(b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.


(c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject of (a) and (b) above.

(d) If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date upto which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the Purchaser, the bid is liable to be ignored.

(e) Taxes and duties if not specified clearly as extra shall be considered as included in the basic price and, therefore, shall not be reimbursed.

10.0 TENDERER TO INFORM HIMSELF FULLY

10.1 Tenderer shall closely peruse all clauses, specifications & drawings etc. indicated in tender documents before quoting. In case of any doubt about meaning of any

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|---|--|--|---|
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|---|--|--|---|

portion of tender specifications or discrepancies or omissions in drawings/tender document or clarifications regarding scope of work etc., tenderer shall contact the official(s) inviting the tender for clarifications, before submitting the offer.

- 10.2 Tenderer shall make independent enquiries as to conditions and circumstances affecting cost estimates, and possibility of executing supplies/works as described. Tenderer shall be deemed to have inspected and examined the site and its surroundings and to have satisfied himself as to the form and nature of the site, the quantities and materials necessary for completion of the work and means of transport and access to the site, the accommodation required, general labour position at site and to have quoted prices taking into consideration the risks, contingencies and other circumstances which may influence or affect execution of the Order/Contract.
- 10.3 It is the responsibility of tenderer to keep himself informed about all taxes & duties applicable on materials/services as prevailing at the time of tendering. If the rates assumed by tenderer are less than the tariff rates prevailing at the time of tendering, the tenderer will be himself responsible for such under quotations.

11.0 ETHICS IN BUSINESS DEALINGS

- 11.1 In order to protect its commercial interests, BHEL may take action against suppliers/ contractors by way of suspension of business dealings with them, who either fail to perform or are in default without any reasonable cause, cause loss of business/ money/ reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price as per extant policy of the company.


12.0 INTEGRITY PACT

Vendors shall have to enter into Integrity Pact with BHEL if specified in NIT/ RFQ, failing which vendor's offer will be rejected (Refer Annexure-IX).

13.0 REVERSE AUCTION

BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.

In case BHEL decides to go for Reverse Auction, only those bidders who have given their unconditional acceptance to participate in RA will be allowed to

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|---|--|--|---|
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|---|--|--|---|

participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit „online sealed bid“ in the Reverse Auction. Non-submission of “online sealed bid“ by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.

Information and General Terms and Conditions governing RA shall form part of the RFQ/ Enquiry (Annexure-XI). Business Rules for RA shall be sent to the bidders before conducting RA.

14.0 REJECTION OF TENDER AND OTHER CONDITIONS

14.1 Acceptance of tender will rest with Purchaser and does not bind him to accept the lowest or any tender and reserves to itself full rights for the following without assigning any reasons whatsoever:

- a) To reject any or all the tenders.
- b) To split the work amongst two or more tenderers (where E&C is not in tenderer’s scope).
- c) To award the work in part. (where E&C is not in tenderer’s scope).
- d) To increase or decrease the quantities.
- e) To reject any commercial or technical deviation given in offer.


14.2 Standard pre-printed conditions of tenderer attached to offer will not be accepted and only those mentioned in the body of offer will be considered.

14.3 Purchaser will not be bound by any power of attorney granted by tenderer or by changes in composition of the firm made subsequent to award of Order/Contract. Purchaser may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Seller/Contractor concerned.

14.4 If tenderer deliberately gives wrong information, Purchaser reserves the right to reject such an offer at any stage or cancel the Order/Contract, if awarded, and forfeit the security deposit and bank guarantee.

15.0 DEVIATIONS FROM NIT

15.1 Deviations (Commercial as well as Technical) from NIT are generally not acceptable. In case of deviations from NIT, the tenderer shall give cost of withdrawal of such deviation in Sealed Cover as per Annexure-II.

| | | | |
|---|--|--|---|
|  | <p style="text-align: center;">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p style="text-align: center;">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects)</p> | <p style="text-align: center;">INSTRUCTIONS TO BIDDERS Issued on 28-08-2014</p> |
|---|--|--|---|

16.0 Loading For Commercial Deviations (where cost of withdrawal not given)

- 16.1 For deviations w.r.t. Payment terms, Liquidated damages, Firm prices and submission of E1/ E2 forms before claiming 10% payment, if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VIII will apply.
- 17.0 Interest Rate for loading will be taken as Base rate of SBI (as applicable on the date of bid opening, Techno-commercial bid, in case of 2 part bids) + 6% for the period of relaxation sought by the bidders.

18.0 DISCOUNT


Discount offered by any bidder in the original price bid, against the present Tender Enquiry, which is also indicated to be applicable to any other Enquiry, shall be considered against the present Tender Enquiry only. In case only percentage discount is indicated, the same shall be applicable to optional prices also.

Discount offered shall be valid for full duration of offer validity.

Any conditional discount shall not be considered for evaluation.

19.0 EVALUATION CRITERIA

- 19.1 Though foreign bidders are required to quote FOB prices, Price evaluation and comparison will be made on the basis of Free Delivery at the Project site.
- 19.2 Tenders will be evaluated on the basis of delivered cost, i.e. total cost to the Purchaser, taking into consideration loadings, if any, and all available financial advantages, including those available from Owner, taxation authorities etc.
- 19.3 For evaluation, exchange rate (TT selling rate of State Bank of India) as on scheduled date of tender opening (Part-I bid in case of two part bid) shall be considered.
- 19.4 In case of foreign bidders, the quoted FOB price shall be loaded by following factors to arrive at total FOR Site price:
- a) Marine freight and insurance - @ 3% of FOB value for despatches from Europe/ Asia/ Australia/ African continent and 5% of FOB value for despatches from USA/ American continent.

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|  | <p style="text-align: center;">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p style="text-align: center;">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects)</p> | <p style="text-align: center;">INSTRUCTIONS TO BIDDERS Issued on 28-08-2014</p> |
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b) Custom Duty (including CVD & SAD) as per Special Conditions of Contract – as prevailing on date of price bid opening.

c) Port handling/clearing charges – @ 1% of CIF value.


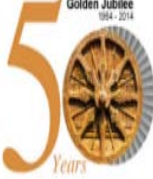
d) Inland freight – @ 1% of CIF value.

20.0 FOREIGN SUPPLIERS & INDIAN AGENTS OF FOREIGN SUPPLIERS

Please refer 'Annexure-V' for guidelines.

21.0 MICRO, SMALL & MEDIUM ENTERPRISES

Extant regulations of Govt. of India will be applicable.

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|   | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects) | GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014 |
|---|---|---|--|

GENERAL COMMERCIAL TERMS & CONDITIONS

TABLE OF CONTENTS

| Sl. No. | DESCRIPTION |
|---------|---|
| 1.0 | ACCEPTANCE OF ORDER |
| 2.0 | CONTRACT |
| 3.0 | PRICES |
| 4.0 | TAXES AND DUTIES |
| 5.0 | STATUTORY VARIATION |
| 6.0 | VARIATION OF CONTRACT VALUE |
| 7.0 | DRAWING SUBMISSION & APPROVAL |
| 8.0 | TRANSPORTATION & FREIGHT CHARGES |
| 9.0 | TERMS OF PAYMENT |
| 10.0 | RECOVERY OF OUTSTANDING AMOUNT |
| 11.0 | CONTRACT PERFORMANCE BANK GUARANTEE |
| 12.0 | GUARANTEE FOR PLANT/EQUIPMENT/STORES |
| 13.0 | DELIVERY/COMPLETION SCHEDULE |
| 14.0 | INSPECTION AND TESTING AT CONTRACTOR'S PREMISES |
| 15.0 | MATERIAL DESPATCH CLEARANCE CERTIFICATE (MDCC) |
| 16.0 | DELIVERY FAILURE AND TERMINATION / LIQUIDATED DAMAGES |
| 17.0 | INSURANCE |
| 18.0 | INTER CHANGEABILITY AND CHANGES |
| 19.0 | PACKING |
| 20.0 | STORAGE INSTRUCTIONS |
| 21.0 | MATERIAL RECEIPT CERTIFICATE |



**INDUSTRIAL
SYSTEMS
GROUP
(BG-1A)**


**GENERAL CONDITIONS
OF CONTRACT (GCC)**

**Revision No. 01
(For supply and
Turnkey projects)**

**GENERAL COMMERCIAL
TERMS & CONDITIONS**

Issued on 28-08-2014

| | |
|------|---|
| 22.0 | CONSIGNEE'S RIGHT OF REJECTION |
| 23.0 | RISK IN STORES (FOR E&C CONTRACTS) |
| 24.0 | SHORTAGES/DAMAGES |
| 25.0 | CONFIDENTIALITY |
| 26.0 | DEFAULT/ BREACH OF CONTRACT, INSOLVENCY & RISK PURCHASE |
| 27.0 | TERMINATION OF THE CONTRACT |
| 28.0 | TRANSFER, SUB-LETTING/ ASIGNMENT/ SUB-CONTRACTING |
| 29.0 | FORCE MAJEURE |
| 30.0 | INDEMNIFICATION |
| 31.0 | SETTLEMENT OF DISPUTES |
| 32.0 | ARBITRATION |
| 33.0 | LAWS GOVERNING THE CONTRACT |
| 34.0 | JURISDICTION OF COURT |
| 35.0 | ORDER OF PRECEDENCE |
| 36.0 | SUPPLIER PERFORMANCE MONITORING AND RATING SYSTEM |
| 37.0 | DEALING WITH BANNED SUPPLIERS/ CONTRACTORS IN BHEL |
| 38.0 | CLAUSES APPLICABLE FOR E&C PACKAGES |

| | | | |
|--|---|---|---|
|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
|--|---|---|---|

1.0 ACCEPTANCE OF ORDER

Seller/Contractor should acknowledge and accept the LOI/ Purchase Order issued by BHEL within 7 days of its receipt. Seller/Contractor should examine the LOI/ Purchase Order immediately upon receipt and bring to the notice of BHEL, within 7 days of receipt, any discrepancy with regard to scope of work, rates, taxes & duties, agreed terms & conditions etc. for due rectification. If the Seller/Contractor fails to give such intimation / acceptance within seven days, the Seller/Contractor shall be deemed to have agreed to supply the stores as per LOI/ Purchase Order.

2.0 CONTRACT

Contract between Purchaser and Seller/Contractor is merely a contract and shall not be treated as partnership between the parties to the contract.

3.0 PRICES

Prices shall be for the entire scope of work in line with the tender documents and subsequent clarifications/confirmations.

4.0 TAXES AND DUTIES

4.1 EXCISE DUTY


4.1.1 Seller/Contractor is required to ensure that excise duty including education cess, if any, is quoted as per the existing tariff on the date of the offer and all benefits as per existing rules have been considered.

4.1.2 Excise duty actually incurred by Seller/Contractor on self-manufactured items alone shall be reimbursed against documentary evidence.

Excise duty paid by bidder on inputs, bought out items, raw materials and components consigned directly to site from sources other than Seller/Contractor's factory/works shall be included by the bidder in the quoted ceiling amount of excise duty and the same shall be payable extra at actuals limited to the ceiling amount.

4.1.3 If excise duty is paid under protest or dispute, it shall not be reimbursed till the dispute is settled. If the Seller/Contractor claims/obtains any refund of the excise duty paid, the same shall be refunded to the Purchaser immediately

4.1.4 Invoice cum Excise duty gate pass (Excise Invoice) should contain the name of the ultimate consignee as per Order/Contract/ Special Conditions of Contract.

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|--|--|--|---|
|  | <p style="text-align: center;">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p style="text-align: center;">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects)</p> | <p style="text-align: center;">GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014</p> |
|--|--|--|---|

4.1.5 If required by Purchaser, the Seller / Contractor will provide a certificate stating that CENVAT benefit has been availed of on the inputs and the same has been passed on to the Purchaser.

4.1.6 Excise duty shall be paid at actuals against documentary evidence but restricted to the amount and percentage indicated in the Order/Contract.

4.2 SALES TAX/VALUE ADDED TAX(VAT)

4.2.1 Central Sales Tax / Value Added Tax shall be reimbursed only if the same is paid by the Seller / Contractor to the respective Govt. authorities on direct sales by the Seller/ Contractor to the Purchaser, meeting all statutory requirements and availing all exemptions/concessions under the respective Central Sales Tax / Value Added Tax Acts. The offer should clearly indicate CST/VAT percentage and the total amount along with concessional form(s), if any.

4.2.2 Purchaser is registered in Bangalore, Karnataka vide following Registration Numbers:

Central Sales Tax Registration No. : 70160429 w.e.f. 19-09-2002.

Karnataka Sales Tax Registration No. : 70110426 w.e.f. 19-09-2002.

Karnataka TIN. : 29630078284


4.2.3 Central Sales Tax/Value Added Tax shall be reimbursed, as per tariff applicable, but restricted to the percentage and amount shown in the Order/Contract. If it is shown as included in the quoted price/ not applicable, it will not be reimbursed by the Purchaser.

4.2.4 Purchaser proposes to make sale-in-transit under section 6 (2) (b) of Central Sales Tax Act where goods movement is inter-state. Form-C shall be issued and exchanged against Form-E1/E2 based on quarterly transactions. Seller/Contractor is required to submit his request in the format enclosed at Annexure-VI within 30 days from end of the Quarter, giving State-wise invoice details.

4.2.5 In compliance with the notification No. CCW/CR-44-2013-14 dt. 29/04/2014 issued by Commercial Tax Dept., Govt. of Karnataka, vendors shall submit all the requisite documents within 10 days of dispatch for the purpose of issuance of 'C' forms. Timely issuance of 'C' form will depend on the compliance of this condition.

Note: In case of non-receipt of E1/E2 forms amount of differential tax payable by BHEL shall be to vendors' account

4.2.6 VAT invoices, in format prescribed by the respective State Sales Tax Act, have to be submitted in the name of Nodal Agency specified in Special Conditions of Contract.

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
|--|---|--|---|

4.3 SERVICE TAX


- 4.3.1 Service Tax paid by the Service Provider /contractor to the Government authorities directly shall only be paid at actuals against documentary evidence of Service tax payment (Service Tax remittance challan) made to concerned Service tax authorities corresponding to the tax claimed in the previous invoice / RAB, but restricted to the rate and amount mentioned in the order/contract. The offer should clearly indicate the percentage and the total amount of service tax.
- 4.3.2 Service provider/Contractor to ensure their registration for “Intended Service” to be provided, before claiming Service tax under the “intended category”. Decision of BHEL shall be final w.r.t. the “Intended category” in which the service will be falling.
- 4.3.3 If required by the Purchaser, the Service Provider/Contractor will provide a certificate stating that “CENVAT Benefit has been availed of on the input and the same has been passed on to the purchaser” or “CENVAT Benefit has not been availed of on the inputs”.
- 4.3.4 Vendor shall comply with the Point of Taxation Rules, as contemplated under the Service Tax Rules. In case, the CENVAT credit could not be availed by BHEL within the time limit (statutory), due to delay in submission of invoice(s) or for any other reason(s) attributable to vendor(s)/contractor(s), liability towards the loss of such CENVAT credit shall be to the vendor(s)/contractor(s) account. TDS shall be made for IT as per Income Tax act.

4.4 OTHER TAXES & LEVIES

All taxes and duties other than Excise Duty, Sales Tax/ VAT, Service Tax shall be deemed to be included in the Ex-Works prices unless specified otherwise by the bidder in the price bid. No variation in other taxes and duties shall be payable by Purchaser. However, statutory variation in Octroi will be payable extra against documentary evidence.

4.5 CUSTOMS DUTY

- 4.5.1 Customs Duty element for imported items as per Special Conditions of Contract shall be included in the Ex-Works prices. No variation in customs duty and exchange rate for imported items shall be payable by Purchaser.
- 4.5.2 Seller/Contractor shall arrange for his own import license, if required, since Purchaser will not provide any import license. Therefore, Seller/Contractor alone shall be responsible for any delay in getting import license or non-availability of the

| | | | |
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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
|--|---|--|---|

same or completion of other related formalities. Purchaser shall not be responsible for any financial liability, whatsoever, on this account.

4.5.3 Essentiality Certificate or Project Authority Certificate (PAC) as per Import Policy, if required to avail concessional customs duty, shall be clearly specified in the offer. Import content (CIF value in rupees) with list of items, quantity, foreign currency, country of origin etc., shall be submitted by the bidder as part of Price bid.

4.6 **DIRECT TAX**

4.6.1 Purchaser shall not be liable towards income tax of whatever nature including variations thereof, arising out of this Order/Contract, as well as tax liability of the Seller/Contractor and his personnel.


4.6.2 Deductions of Tax at source at the prevailing rates shall be effected by the Purchaser before release of payment, as a statutory obligation, if applicable. TDS certificate will be issued by the Purchaser as per statutory provisions.

5.0 **STATUTORY VARIATION**

5.1 If the rates for taxes and duties in respect of the quoted materials and/or services assumed by the Seller/Contractor are less than the tariff prevailing at the time of tendering, Seller/Contractor will be responsible for such under quotations. However, if the rates assumed are higher than the correct rates prevailing at the time of tendering, the difference will be to the credit of the Purchaser.

5.2 Statutory Variations in Excise Duty, Service Tax and Central Sales Tax/Value Added Tax only on self manufactured items/services rendered by vendor himself on the rates prevailing at the time of delivery/ completion in comparison to the date of offer, will be to the account of the Purchaser. No other variations such as on customs duty, exchange rate, minimum wages, prices of controlled commodities, any other input etc. shall be payable by the Purchaser.

5.3 Notwithstanding the above, where the actual completion of the supply occurs beyond the period stipulated in the Order/Contract or any extension thereof, variations referred to above, will be limited to the rates prevailing on the dates of such agreed completion periods only. For variations after the agreed completion periods, the Seller/Contractor alone shall bear the impact for the upward revisions and for downward revisions, purchaser shall be given the benefit of reduction in taxes/duties. This will be without prejudice to the levy of penalty for delay in delivery/completion schedule.

| | | | |
|--|---|---|--|
|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects) | GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014 |
|--|---|---|--|

5.4 Any new tax structure (like Goods & Services Tax) as and when implemented by the Government shall become applicable in addition to or in lieu of existing tax structure.

6.0 VARIATION OF CONTRACT VALUE:

Prices shall remain Firm (or with PVC as specified in NIT) for any increase or decrease in the Order/Contract value (Ex-works) upto plus or minus 30% within 2 years from the date of original PO unless specified otherwise in NIT. The Purchaser shall have the right to increase or decrease quantities and scope upto the above extent of value and Seller/Contractor shall be bound to accept the same at the contracted prices without any escalation.

7.0 DRAWING SUBMISSION & APPROVAL :

Drawing submission as per L2 network (to be furnished by the Vendor and approved by BHEL). Obtaining drawing approval from customer is the responsibility of the vendor. However, BHEL shall assist the vendor in getting the approvals.

8.0 TRANSPORTATION & FREIGHT CHARGES

8.1 All dispatches shall be through road carriers approved by Purchaser/Bank, on freight pre-paid basis.

8.2 Road permit/entry permit, if required as per law of the State, shall be arranged by Purchaser.


8.3 Freight charges (including Service Tax) shall be payable after delivery of the goods at the project site, on receipt of MRC or receipted LR on pro-rata basis.

9.0 TERMS OF PAYMENT

9.1 SUPPLY PACKAGES (Main Supply and Mandatory Spares)

9.1.1 Ninety percent (90%) of basic price of materials supplied, as per PO, along with 100% taxes and duties (as applicable), shall be paid against clean receipted LR on pro-rata basis.

9.1.2 Ten percent (10%) of basic price of materials supplied will be released on pro-rata basis after receipt of Material Receipt Certificate (MRC) from project site engineer of Owner/ Purchaser, on submission of all final documents for the packages as detailed below, duly certified by Engg. Deptt. of purchaser, and submission of Form E1/ E2 against Form-C, if applicable.

| | | | |
|--|---|---|--|
|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects) | GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014 |
|--|---|---|--|

List of packages which requires final documents shall be as per technical specification

9.2 **SUPPLY PACKAGES WITH PERFORMANCE GUARANTEE / DEMONSTRATION TEST AT SITE IN VENDOR'S SCOPE (Main Supply)**

- 9.2.1 Eighty Five percent (85%) of basic price of materials supplied, as per PO /approved billing schedule, along with 100% taxes and duties (as applicable), shall be paid against clean receipted LR on pro-rata basis.
- 9.2.2 Ten percent (10%) of basic price of materials supplied will be released on pro-rata basis after receipt of Material Receipt Certificate (MRC) from project site engineer of Owner/ Purchaser and submission of Form E1/ E2 against Form-C, if applicable.
- 9.2.3 Five percent (5%) of the total basic price of materials and PG/ Demonstration test charges shall be released after submission of all final documents as per Technical Specifications and successful completion of the Performance Guarantee (PG)/Demonstration Test at site.


Note: If the Performance Guarantee/ Demonstration Test is not conducted up to 24 months from supply completion for reasons not attributable to the vendor, then last 5% payment will be released against Bank Guarantee of an equivalent amount, valid for 12 months. This bank guarantee will be in addition to Contract Performance Bank Guarantee for 10% of the contract value (excluding taxes, duties and freight).

9.3 **SUPPLY PAYMENT FOR TURNKEY PACKAGES (E&C IN VENDOR'S SCOPE -**

- 9.3.1 Eighty Five percent (85%) of basic price of materials supplied, as per approved billing schedule, along with 100% taxes and duties (as applicable), shall be paid against clean receipted LR on pro-rata basis.

OR

- i) Five percent (5%) lump sum payment of total basic price (excluding taxes, duties & freight) against approval of design documents and quality plans certified by Engineering. Design documents and quality plan shall be as defined in the Technical Specifications.
- ii) Eighty percent (80%) of basic price of materials supplied, as per approved billing schedule, along with 100% taxes and duties (as applicable), shall be paid against clean receipted LR on pro-rata basis.
- 9.3.2 Five percent (5%) of basic price of materials supplied along with freight, if applicable, will be released on pro-rata basis after submission of Material Receipt

| | | | |
|--|---|---|--|
|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects) | GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014 |
|--|---|---|--|

Certificate (MRC) from project site engineer of Owner/ Purchaser and submission of Form E1/ E2 against Form-C, if applicable.

Collection of Material Receipt Certificate from Site/ Owner and its submission for claiming the payment shall be the responsibility of the Seller/Contractor. 9.3.3

9.3.3 Ten percent (**10%**) of the total basic price shall be released after i) submission of all final documents as per Technical Specification and ii) successful completion of Performance Guarantee (PG)/Demonstration Test and handing over of the system/package, if applicable, as per Order/Contract.

9.4 **ERECTION & COMMISSIONING PAYMENT FOR TURNKEY PACKAGES**

9.4.1 Eighty percent (**80%**) payment on pro-rata basis for the work completed, as per approved billing schedule, shall be released by BHEL-ISG, HQ on submission of protocols, duly signed by BHEL Site/Owner.

9.4.2 Ten percent (**10%**) of the total value shall be released by BHEL-ISG, HQ on successful commissioning of the complete system/package.

9.4.3 Ten percent (**10%**) of the total value shall be released by BHEL-ISG, HQ on successful completion of PG/ Demonstration test(s) and handing over system/package to the Owner, as applicable.


9.5 **PG TEST, INSTALLATION CHECK, SUPERVISION OF ERECTION / COMMISSIONING CHARGES**

100% payment shall be released after successful completion of the activity, on Site certification.

9.6 **Vendors shall submit documents for payment directly to BHEL. Payment will be released within 45 days after receipt of complete documents as per order/ contract.**

Note:

- 1) For indigenous suppliers, if the documents are routed through Bank, then all bank charges will be to vendor's account.
- 2) Foreign bidders can opt for payment (less agency commission, if applicable) through irrevocable and unconfirmed letter of credit. In that case for evaluation purpose, prices of foreign bidders will be loaded on account of payment through LC, equal to loading specified against 'Payment through Bank' in Annexure-VIII. No loading will be done if foreign vendors agree for 90 days issuance LC or

| | | | |
|--|---|---|--|
|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects) | GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014 |
|--|---|---|--|

submit the documents on collection basis for payment within 90days of submission of complete documents.

- 3) LC opening/ negotiation/ confirmation charges will be to vendor's account.
- 4) Form C/ E1/E2 are not applicable for foreign bidders.
- 5) In extreme case of vendors not agreeing to link 10% payment with submission of Form E1/ E2 against Form-C as above, their prices will be loaded as per Annexure-VIII.
- 6) Any negative PVC, if not adjusted in earlier payments, will be adjusted at the time of MRC payment.
- 7) Payment terms for mandatory spares shall be as per clause 9.1.

9.7 **DOCUMENTS TO BE SUBMITTED BY VENDOR**

9.7.1 **For Recognition of Dispatch**

Copy of the following documents by e-mail/ fax immediately on despatch:


- a. Invoice
- b. LR along with Delivery Order
- c. Packing List
- d. Insurance Intimation
- e. Dispatch Clearance

9.7.2 **For Claiming Payments (under clause 9.1.1, 9.2.1, 9.3.1):**

- a. Invoice - original+3 copies
- b. Receipted LR (signed & stamped)- original+3 copies (applicable only for clause 9.1.1, 9.2.1) or LR - original+3 copies (applicable only for clause 9.3.1)
- c. Packing List - clearly showing number of packages, gross weight and net weight. - original+3 copies
- d. MDCC from BHEL/ Customer - as per SCC - 4 copies
- e. Guarantee Certificate - Original + 3 copies
- f. Insurance Intimation - 4 copies
- g. PVC Calculation and copy of all applicable indices, if PVC applicable. - 4 copies
- h. Duty drawback documents (original excise invoice, original disclaimer certificate, original certificate from excise authority for payment of excise duty), if applicable. - original + 3 copies

9.7.3 **For Claiming Freight Payment**

- a. Invoice - Original + 3 copies

| | | | |
|--|---|---|--|
|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects) | GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014 |
|--|---|---|--|

- b. Receipted LR (signed & stamped)/ confirmation from site regarding receipt of packages/Boxes – original / copy.
- c. Transporter's document indicating the freight amount. Original money receipt to be submitted if required as per SCC.

9.7.4 For Claiming MRC Payment

- a. Invoice – Original + 3 copies
- b. Copy of MRC

9.7.5 For Claiming Payment for Services involving Service Tax

- a. Invoice as per rule 4A of Service Tax Act – Original + 1 copy
- b. Copy of Service Tax registration certificate
- c. Copy of challan for Service Tax payment corresponding to service tax claimed in the previous invoice / RAB

9.7.6 All your invoices against our order shall reach BHEL -ISG within one month from the date of LR/RR ,addressed to:

BHEL - ISG VENDOR BILLS BOX ,
 BHEL - Industrial Systems Group ,
 Opp. IISc, PROF. C N R RAO CIRCLE ,
 MALLESWARAM , BANGALORE - 560 012

- a. The envelope shall be super-scribed with Project Name / P.O No. / W.O No., and the Bill / Invoice numbers & Contact person.
- b. Bills / invoices which are brought personally by vendors to ISG are to be dropped in the "BHEL-ISG vendor bills Box" kept near Tender Box at the Reception Office.
- c. Any additional tax implication to BHEL due to delay in submission of bills by Vendor beyond one month shall be to vendor's account.


9.8 LOADING DETAILS IN CASE OF DEVIATIONS:-

Loading details in respect to deviations in Payment Terms, LD, PVC and Form-E1/E2 indicated in Annexure – VIII.

9.9 BHEL'S BANKERS

List of the consortium bankers of BHEL-ISG is as per Annexure-X.

9.10 MODE OF PAYMENT

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
|--|---|---|---|

Payments shall be made directly to the Seller/Contractor by E-transfer. Seller/Contractor to provide necessary information for the same as per Annexure-VII.

- 9.11 No interest shall be payable by the Purchaser on the security amount, bank guarantee amount or balance payment or any money which may become due owing to difference or misunderstanding or any dispute between the Purchaser and the Contractor, or any delay on the part of Purchaser in making periodical or final payment or any other aspects incidental thereto.
- 9.12 In case of Turnkey packages (refer clause 9.3.3 & 9.4.3) , if the PG test is not conducted up to 24 months from the date of last dispatch for reasons not attributable to vendor, the last 5% payment will be released against Bank Guarantee of an equivalent amount, valid initially for 12 months and extendable till completion of PG test. This BG will be in addition to contract Performance Bank Guarantee for 10% of the contract value (Ex-Works / F.O.B.).


10.0 RECOVERY OF OUTSTANDING AMOUNT

In event of any amount of money being outstanding at any point of time against the Seller/Contractor due to excess payment or any other reason whatsoever, in the present order/contract or any other order/contract from any BHEL Unit, the outstanding amount shall be recovered from the payments due to the Seller/Contractor or at any other appropriate time and manner/mode as deemed fit by the Purchaser at its sole discretion.

11.0 CONTRACT PERFORMANCE BANK GUARANTEE

- 11.1 No Bank Guarantee is required where original Order/ Contract value is up to Rs. 25 Lakhs (excluding taxes, duties and freight).
- 11.2 For original order / contract values above Rs. 25 Lakhs (excluding taxes, duties and freight), the vendor shall submit Contract Performance Bank Guarantee (as per Annexure-IV) for 10% of Order/ Contract value (excluding taxes, duties & freight) before first submission of documents for payment to cover the due performance of Order/ Contract and to fulfill the guarantee conditions stipulated in the Order/ Contract. However, BG value can be proportionality reduced after completion of Guarantee period Unit-wise/ Lot-wise/ Set-wise, as applicable.


Foreign vendors seeking payment through Letter of Credit (LC) should submit the Bank Guarantee before LC opening.

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|--|---|---|--|
|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014</p> |
|--|---|---|--|

- 11.3 Value of the Bank Guarantee (at the time of submission) shall remain unchanged for any subsequent variations in order/ contract value up to 20%. Beyond this, the Seller/ Contractor shall arrange to enhance or reduce the value of the Bank Guarantee accordingly.
- 11.4 Validity of the Bank Guarantee shall be for the entire Guarantee period + 3 months claim period. Initially, it should be at least 18 months + 3 months claim period, later extended to cover the entire guarantee period, two months before its expiry.
- 11.5 Purchaser reserves the right to encash the bank guarantee and forfeit the amount in the event of any default, failure or neglect on part of the Seller/ Contractor in fulfillment of performance of the Order/ Contract.
- 11.6 Equivalent amount shall be recovered from payment due to the Seller/ Contractor, before releasing any payment, in absence of a valid bank guarantee.
- 11.7 Bank Guarantees shall be from Consortium Bank as per Annexure-X. Bank guarantees from cooperative banks/ non-scheduled banks are not acceptable.
- 11.8 In case of private sector banks, a clause to be incorporated in the text of bank guarantee that it can be enforced by being presented at any branch of the bank located in Bangalore.
- 11.9 Two witness signatures from bank officials, other than the bank official who has already signed is a must. BG is to be submitted directly by the issuing bank to Sr. DGM/MM/BG-1A, under registered post (A/D).

12.0 GUARANTEE FOR PLANT/ EQUIPMENT/ STORES

- 12.1 Seller/ Contractor shall warrant that the stores supplied shall be free from all defects and faults in design & engineering, material, workmanship & manufacture and shall be of the highest grade and consistent with the established and generally accepted standards and in full conformity with the Order/ Contract specifications, drawing or samples, if any.
- 12.2 a) Guarantee period for **Supply** packages shall be eighteen (18) months from the date of last dispatch or as per SCC whichever is later.
- b) Guarantee period for **Turnkey** packages shall be as stipulated in Special Conditions of Contract or otherwise, 18 calendar months from the date of completion of supplies or 12 calendar months from the date of satisfactory commissioning of the package, whichever is later. Seller/ Contractor's liability in respect of any complaints, defects and claims shall not be limited to supply and

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|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects) | GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014 |
|--|---|---|--|

installation of replaced parts free of charge, or repair of defective parts to the extent that such replacements are attributable to or arise from faulty workmanship, material or design, in the manufacture, of the stores but at the option of the Purchaser, to the payment of the value, expenditure and damages as mentioned hereafter, provided defects on being discovered are brought to the notice of the Seller/ Contractor within a period of three (3) months from the date of expiry of the guarantee period.


- 12.3 All replacements and repairs during the guarantee period shall be delivered and completed promptly and satisfactorily within a period of three months from the time of reporting the defect/ loss/ rejection etc. If the Seller/ Contractor so desires and the Purchaser agrees, subject to import control regulations, the replaced parts can be taken over by Seller/ Contractor or his representative or can be dispatched at Seller/ Contractor's cost. No claim, whatsoever shall be entertained by Purchaser on account of such replaced parts.
- 12.4 All the replaced and replenished stores shall also be guaranteed as per above clauses.
- 12.5 Decision of Purchaser with regard to Seller/ Contractor's liability and the amount involved, if any, payable by Seller/ Contractor under the guarantee shall be final, conclusive and binding. However, vendor's maximum liability will be limited to the total contract value including taxes, duties and freight.

13.0 DELIVERY / COMPLETION SCHEDULE

- 13.1 Supply of plant/equipment/stores shall not be considered complete until they have been inspected and accepted at the place and destination specified for delivery by the time stipulated under the terms & conditions of the Order/Contract. Mere payment by itself shall not constitute acceptance of the goods or materials in any manner, whatsoever.
- 13.2 Terms of delivery shall be FOR dispatch station for indigenous supplies.
- 13.3 Vendor shall strictly adhere to 'L2' schedule. In case of non compliance to agreed schedules / milestones, then it would be presumed that vendor / contractor is not fulfilling contractual obligations. BHEL reserves the right to take suitable action like operating "Risk & cost clause".

14.0 INSPECTION AND TESTING AT CONTRACTOR'S PREMISES

- 14.1 Purchaser's nominated Inspection Agency shall have at all reasonable times access to Seller/ Contractor's premises or works and shall have the power at all reasonable

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
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times to inspect drawings of any portion of the work or examine the materials and workmanship of the stores during their manufacture, and if part of the stores is manufactured at other premises, the Seller/Contractor shall arrange for inspection, examination and testing by the Inspection Agency as if the store is manufactured on the Seller/Contractor's premises.

Inspection calls should be given 15 working days in advance by indigenous supplier and 30 working days in advance by foreign supplier.

Such inspection, examination and testing by itself shall not relieve the Seller/Contractor from any obligation under the Order/Contract.

14.2 Seller/Contractor shall give Inspection Agency reasonable notice of any material being ready for testing and the Inspection Agency shall (unless the inspection of tests is voluntarily waived) attend at the Seller/Contractor's premises within fifteen (15) days of the date on which the material is notified as being ready. All standard shop tests, physical and chemical tests required by the standards or as may be prescribed or approved as per Order/ Contract shall be conducted by the Seller/Contractor. Purchaser/Inspection Agency reserves the right to waive any of the above tests requirements and to prescribe new tests, if found necessary, to complete the work so as to conform to the best practices. Seller/Contractor shall forthwith forward to the Inspection Agency, duly certified copies of the test certificates in quadruplicate, for approval. Further copies of the shop test certificates shall be bound with the instruction manuals referred to in "Seller/Contractor's documents, drawings and instruction manuals".


14.3 Where the Order/Contract provides for tests/inspections at the premises or works of the Seller/Contractor or any sub-contractor, the Seller/Contractor, except specified otherwise, shall provide free of charge such assistance, labour, materials, electricity, fuel, water, stores, apparatus, measuring instruments and test equipment including any other facilities as may be reasonably required to carry out such tests efficiently.

14.4 INSPECTION MEASURING AND TEST EQUIPMENTS

14.4.1 Inspection Measuring and Test Equipments (IMTE) whether used by the Seller/Contractor or sub-contractor shall be calibrated, maintained and controlled. Calibration shall be valid and IMTE maintained in sound condition during usage.

14.4.2 In addition to above, Seller/ Contractor shall ensure the following :

- a) Measurement uncertainty is known and consistent with required measurement capability of the IMTE.

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
|--|---|--|---|

- b) Selection of IMTEs is compatible with the necessary accuracy and precision of required measurement.
- c) IMTEs are calibrated at the required intervals against certified equipments having known valid relationship to nationally recognized standards, at recognized calibration labs.
- d) Calibration records are available and traceable to the particular IMTE.
- e) In case, during recalibration, the IMTE is found out of calibration, report on action taken to validate the previous results along with both calibration records of the IMTE to be furnished to Inspection Agency.
- f) IMTEs are stored, handled and preserved such that accuracy and fitness are maintained and safeguarded from adjustments.

NOTE: Purchaser's decision on acceptability of the product in such cases shall be binding.

14.4.3 Responsibility of usage of valid and calibrated IMTEs by his sub-contractor(s) shall be of the Seller/ Contractor.

14.4.4 In case, calibration records are required by purchaser, copies of the same shall be furnished.

14.5 Seller/Contractor shall be fully responsible for the Quality of products supplied by sub-contractors.


15.0 MATERIAL DESPATCH CLEARANCE CERTIFICATE (MDCC)

15.1 When the tests have been satisfactorily completed at Seller/Contractor's works, the Inspection Agency shall issue a certificate to that effect within fifteen (15) days after completion of the tests, but if the tests were not witnessed by the Inspection Agency or his representative, the certificate would be issued within fifteen (15) days after receipt of the test certificates by the Purchaser.

15.2 Purchaser/Owner will issue MDCC to the Seller/Contractor based on inspection report/ test certificates.

15.3 **Seller/ Contractor shall not dispatch any material before issue of MDCC by Purchaser/Owner.**

15.4 Satisfactory completion of tests or issue of MDCC shall not bind the Purchaser/Owner to accept the supply/ equipment should it, on further tests after erection, be found not to comply with the contract provisions.

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
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16.0 DELIVERY FAILURE AND TERMINATION/LIQUIDATED DAMAGES

16.1 Timely dispatch/delivery and completion of other schedules as stipulated in Order/Contract shall be the essence of Order/Contract. If the Seller/Contractor fails to complete the dispatch/delivery and other schedules within the time period stipulated in Order/Contract, or within any extension of time granted by Purchaser, it shall be lawful for Purchaser to recover damages for breach of Order/Contract without prejudice to any other rights and/or remedies provided for, in the Order/Contract and hereunder. For any delay not attributable to the Seller/Contractor, the Seller/Contractor must report the same to Purchaser immediately.


16.2 DELAYED DELIVERY

16.2.1 Purchaser reserves the right to recover from the Seller/Contractor, as agreed liquidated damages and not by way of penalty, a sum equivalent to half (½) percent of the total contract price per week or part thereof, subject to a maximum of ten (10) percent of the total contract price **excluding** elements of taxes, duties and freight, if the Seller/ Contractor fails to deliver any part of the ordered stores within the period stipulated in the Order/Contract.

For Turnkey packages (Supply and E&C in vendor's scope), Liquidated Damages shall be levied on the total contract value of both Supply and E&C orders (excluding taxes, duties and freight) if E&C completion of the package is delayed beyond the contractual completion date or extension thereof. Liquidated Damages will not be withheld from supply payment.

NOTE:

1. LR/ GR/ RR date for indigenous supplies and AWB/ BL date for FOB contracts shall be treated as the date of dispatch for levying LD as per Clause 16. However, for indigenous supply if receipted LR date is beyond three months from the date of LR, such excess period shall also be considered for LD purpose.
2. In case of any amendment/revision, LD shall be linked to the amended/ revised contract value and delivery date(s).
3. If Order/ Contract involves two or more Units/ Sets/ Lots, then Liquidated Damages shall be for order/ contract value of the delayed Unit/ Set/ Lot, provided delivery stipulated in the Order/ Contract is Unit/ Set/ Lot wise, however total LD amount shall be limited to 10% of total order value. (excluding taxes, duties and freight)

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014</p> |
|--|---|--|--|

16.2.2 Purchaser reserves the right to purchase from elsewhere on account of and at the risk and cost of Seller/Contractor, with notice to Seller/Contractor, the stores due for delivery but not so delivered, or their equivalent without cancelling the Order/Contract in respect of stores not yet due for delivery. The manner and method of such purchase shall be at the discretion of the Purchaser. The actual cost incurred for such purchases along with the departmental charges @ 15% will be recovered from the bidder.

16.2.3 Purchaser reserves the right to cancel the Order/Contract or a portion thereof for the stores not so delivered at the risk and cost of the Seller/Contractor and the Seller/Contractor shall be liable to the Purchaser for any excess cost thereof. The actual cost incurred for such purchases along with the departmental charges @ 15% will be recovered from the bidder.

16.2.4 Seller/Contractor shall continue performance of the Order/Contract, under all circumstances, to the extent not cancelled.

17.0 INSURANCE

17.1 Insurance shall be arranged by BHEL.

17.2 Vendors shall inform the Underwriters, appointed/ nominated by BHEL/ Purchaser, the details of dispatches under intimation to BHEL such as LR No. and date, Truck No., P.O. No., project and value.


17.3 Insurance as applicable for field work such as third party liability, workmen compensation, Seller/Contractor's own Tools & Plants and automobile shall be arranged by the Seller/ Contractor.

18.0 INTER-CHANGEABILITY AND CHANGES

18.1 All similar components or parts of similar equipment supplied by Seller/Contractor shall be interchangeable with one another.

18.2 Even though all the work and materials necessary for satisfactory completion of the works may not be detailed in the specifications and schedules, the cost will be considered to be within the contract price and no extra charges shall be payable. However, if there are substantial changes in the specifications of the stores/plant, consequential changes in prices shall be mutually agreed between Purchaser and Seller/Contractor.

19.0 PACKING

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
|--|---|--|---|

- 19.1 Packing shall be in conformity with specifications and shall be such as to ensure prevention of damages, corrosion, deterioration, shortages, pilferage and loss in transit or storage.
- 19.2 In case of shipment by sea, the packing shall be sea-worthy and of international standards.
- 19.3 Packing List shall be submitted as per standard format along with advance set of documents for claiming payment which shall also indicate:-
- a) Packing size.
 - b) Gross weight and net weight of each package.
 - c) Contents of the package with quantity of each item separately.

19.4 PACKING FOR SPARES

Different types of spares i.e. start-up/commissioning spares and initial spares (Mandatory spares and recommended O&M spares) are to be packed separately. Mandatory and Recommended Spares shall not be packed with main equipment but shall be packed separately.

Packing of Mandatory Spares should have a Red colour band all around the box/package and words "MANDATORY SPARES" written in red colour, Project, Package description, BHEL's PO No. and date should also be clearly mentioned on the box.


19.5 COLOUR CODING OF TAGS/MARKING/STICKERS

- 19.5.1 Aluminium stickers are required to be attached to large components but plastic sheet tags should be tied with small components, giving details like purchase order, description of the component, quantity etc.
- 19.5.2 Tags should be of the colour as mentioned below:
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| Main equipment | : Yellow or White tag |
| Mandatory spares | : Pink or Red tag |
| Start-up/Commissioning spares | : Blue tag |
| O&M spares | : Green tag |

19.5.3 Similar colour scheme to be followed wherever stickers are pasted on components.

20.0 STORAGE INSTRUCTIONS

Successful tenderer shall be required to submit detailed instructions for storage of supplies within three months of date of issue of LOA/ Order/ Contract.

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
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21.0 MATERIAL RECEIPT CERTIFICATE

Seller/Contractor shall arrange Material Receipt Certificate from the project site, duly signed by Purchaser/Owner Site Engineer after receipt & physical verification of the material at site, wherever E&C is in the scope of Seller/ Contractor.

For Supply packages, Material Receipt Certificate shall be arranged by BHEL. Vendor to provide copy of receipted LRs to enable BHEL to obtain MRC from site.

22.0 CONSIGNEE'S RIGHT OF REJECTION

22.1 Notwithstanding any approval of Purchaser or Engineer in respect of stores or materials or other particulars or work or workmanship involved in performance of order/contract (with or without any test carried out by Seller/Contractor or Inspection Agency or under direction of Contract Engineer), and notwithstanding delivery of the stores where so provided to the consignee, it shall be lawful for the consignee, on behalf of the Purchaser, to reject the stores or any part/ portion of consignment thereof, within 30 days after actual delivery at the stipulated place or destination, if such stores or part/ portion of consignment thereof is not in conformity with terms and conditions of order/contract whether on account of any loss, storage, deterioration or damage before despatch or otherwise, whatsoever.


22.2 Rejected goods or materials shall be removed by Seller/Contractor within a period of 15 days from the date of receipt of notice of such rejection. The expenses to be incurred in respect thereof shall be borne entirely by the Seller/Contractor.

23.0 RISK IN STORES (FOR E&C CONTRACTS)

Seller/ Contractor shall perform the order/ contract in all respects in accordance with terms and conditions thereof. Stores and every constituent part thereof, whether in possession or control of the Seller/Contractor, his agents or servants, or a carrier, or in joint possession of Seller/ Contractor, his agent or servants and Purchaser, his agents or servants, shall remain in every respect at the risk of Seller/Contractor until their actual delivery to consignee at the stipulated place or destination or where so provided in acceptance of offer, until their delivery to a person specified by Purchaser as interim consignee for the purpose of despatch to the consignee. Seller/Contractor shall be solely responsible for all losses, destructions, damages or deterioration to the stores from any cause whatsoever, while the stores await dispatch after approval by the Inspection Agency.

24.0 SHORTAGES/DAMAGES

24.1 FOR SUPPLY PACKAGES

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
|--|---|--|---|

- a) Shortages in sound cases shall be replenished free of cost by the vendor, as early as possible.
- b) For shortages/damages during transit/ handling at site, vendor shall supply replacements, as early as possible, at the old contractual rates upon intimation to vendor within 3 months of receipted LR.

24.2 FOR E&C PACKAGES


Any shortages or damages during unloading and handling at site, including at the time of erection and commissioning, shall be made good by the Seller/ Contractor at his risk and cost, to meet the project schedule. In case of faults/ discrepancies in any material, component, sub-assembly, assembly, etc., the same shall be supplied/replenished free of cost to enable the equipment to be put to service.

25.0 CONFIDENTIALITY

Seller/Contractor shall, at all times, undertake to maintain complete confidentiality of all data, information, software, drawings & documents, etc. belonging to the Purchaser and also of systems, procedures, reports, input documents, manuals, results and any other company documents discussed and/or finalised during the course of execution of order/contract.

26.0 DEFAULT/BREACH OF CONTRACT, INSOLVENCY AND RISK PURCHASE

- 26.1 If Seller/Contractor fails to deliver goods or materials or any installment thereof within the period(s) fixed for such delivery or delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications or at any time repudiates or otherwise abandons the contract before expiry of such period or refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract or commits any breach of Order/Contract not herein specifically provided for or in the event of the death or insanity or if the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm is dissolved under the Partnership Act or if the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager, the purchaser without prejudice to his right to recover any

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|--|---|---|--|
|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects) | GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014 |
|--|---|---|--|

expenses, losses or damages to which the Purchaser may be put to incur or sustain by reason of Seller/Contractor's default or breach of Order/Contract, Purchaser shall be entitled to cancel the Order/Contract either in whole or portion thereof without compensation to Seller/Contractor and if the Purchaser so desires, may procure upon such terms and in such manner as deemed appropriate, stores not so delivered or others of similar description where stores exactly complying with particulars are not, in the opinion of the Purchaser, which shall be final, readily procurable, at the risk and cost of the Seller/Contractor and the Seller/Contractor shall be liable to the Purchaser for any excess costs provided that the Seller/Contractor shall continue the performance of the Order/Contract to the extent not cancelled under the provisions of this clause. The Seller/Contractor shall on no account be entitled to any gain on such repurchases.

Except for Clause 26.2, vendor's maximum liability will be limited to the total contract value including taxes, duties and freight.


- 26.2 Recovery on account of purchases made by Purchaser at the risk and cost of Seller/Contractor shall be worked out as follows:
- a. Excess of new purchase cost over old purchase cost, where the total value of new PO is more than total value of old PO.

And

- b. Additional 15% overheads as departmental charges on the ex-works value of new PO" as per clause 16.2.2 and 16.2.3 above.

27.0 TERMINATION OF CONTRACT

- 27.1 Purchaser shall have the right to cancel Order/Contract, wholly or in part, in case they are obliged to do soon account of any decline, diminution, curtailment or stoppage of their business and in that event, the Seller/Contractor compensation claim shall be settled mutually.
- 27.2 Purchaser shall have the right to cancel order/contract at the risk and cost of Seller/Contractor in case either the Seller/Contractor himself or any of his representative or agent is found to have been a previous employee of the Purchaser immediately before retirement and has within a period of two years of such retirement accepted the employment of the Seller/Contractor either as a Seller/Contractor or as an employee without having obtained prior permission of Purchaser.

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
|--|---|---|---|

27.3 In case of cancellation of main supply order/ contract, all other associated orders/ contracts like mandatory spares/ recommended spares/ E&C/ supervision of E&C would also get cancelled.

28.0 TRANSFER, SUB-LETTING/ASSIGNMENT/SUB-CONTRACTING

28.1 Seller/Contractor shall not sublet, transfer or assign order/contract or any part thereof or interest therein or benefit or advantage thereof save with the prior consent in writing of Purchaser. In the event of Seller/Contractor sub-letting, transferring or assigning order/contract or any part thereof or interest therein or benefit or advantage thereof without such permission, the Purchaser shall be entitled to cancel the Order/Contract and to purchase the stores from elsewhere at risk and costs of Seller/Contractor and the Seller/Contractor shall be liable for any loss or damage which Purchaser may sustain in consequence of or arising out of such risk purchase.


28.2 If Seller/Contractor is an individual or proprietary concern and the individual or the proprietor dies or the partnership is dissolved or substantially affected, then unless the Purchaser is satisfied that legal representative of individual seller/contractor or proprietor of proprietary concern and surviving partners of partnership firm are capable of carrying out and completing the order/contract, the Purchaser shall be entitled to cancel the order/ contract as to its incomplete portion and without being in any way liable to payment of any compensation to estate of seller/contractor and/or to surviving partners of seller's/contractor's firm on account of cancellation of the order/contract.

28.3 Decision of Purchaser that legal representatives of deceased seller/contractor or surviving partners of the seller's/contractor's firm can not carry out and complete the order/contract shall be final and binding on the parties hereto.

28.4 Terms and Conditions shall not get affected in case of merger/amalgamation/takeover/re-arrangement etc.

29.0 FORCE MAJEURE

29.1 Notwithstanding anything contained in Clause 13.0, if at any time during the continuance of the Order/Contract, the performance in whole or in part by either party of any obligations under the Order/Contract shall be prevented or delayed by reason of any war hostilities, acts of the public enemy, restrictions by Govt. of India, civil commotion, sabotage, fires, floods, explosion, epidemics, quarantine restrictions, strike, lock-outs, or acts of God (hereinafter referred to as 'event'), then, provided notice of the happening of such event is given by either party to the other within fifteen (15) days from the date of occurrence thereof, neither party shall by

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS</p> <p align="center">Issued on 28-08-2014</p> |
|--|---|---|---|

reason of such event be entitled to terminate the Order/Contract nor shall have any claim for damages against each other in respect of such non-performance and delay in performance. Performance under the Order/Contract shall be resumed immediately after such event has come to an end or ceased to exist and decision of Purchaser as to whether the deliveries have to be resumed or not shall be final, conclusive and binding on the parties hereto.

- 29.2 In the event of the parties hereto not able to agree that a force majeure event has occurred, the parties shall submit the disputes for resolution pursuant to the provisions hereunder, provided that the burden of proof as to whether a force majeure event has occurred shall be upon the party claiming such an event.
- 29.3 Notwithstanding the above provisions, Purchaser shall reserve the right to cancel the Order/Contract, wholly or partly, in order to meet the overall project schedule and make alternative arrangements for completion of delivery and other schedules.

30.0 INDEMNIFICATION


Seller/Contractor shall fully indemnify and keep indemnified the Purchaser against all claims of whatsoever nature arising during the course and out of the execution of this Order/Contract.

31.0 SETTLEMENT OF DISPUTES

- 31.1 Except as otherwise specifically provided in the Order/Contract, all disputes concerning questions of the facts arising under the Order/Contract, shall be decided by Purchaser, subject to written appeal by the Seller/Contractor to the Purchaser, whose decision shall be final.
- 31.2 Any dispute or difference shall be, to the extent possible, settled amicably between the parties hereto, failing which the disputed issues shall be settled through arbitration.
- 31.3 Seller/Contractor shall continue to perform the order/contract, pending settlement of dispute(s).

32.0 ARBITRATION

- 32.1 In the event of any dispute or difference arising out of execution of order/ contract or the respective rights and liabilities of the parties or in relation to interpretation of any provision by Seller/Contractor in any manner touching upon order/ contract, such dispute or difference shall (except as to any matters, the decision of which is

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014</p> |
|--|---|--|--|

specifically provided for therein) be referred to the arbitration of the person appointed by the competent authority of Purchaser.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act, 1996 (India) or statutory modifications or reenactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The venue of arbitration shall be at Bangalore.

32.2 In case of Order/Contract on Public Sector Enterprises (PSE) or a Govt. Deptt., the extant guidelines of Govt. of India shall be followed.

32.3 The cost of arbitration shall be borne equally by the parties.

33.0 LAWS GOVERNING THE CONTRACT

Contract, including all matters connected with contract, shall be governed by the Indian Law, both substantive and procedural, for the time being in force including modification thereto, and shall be subject to the exclusive jurisdiction of the Indian courts at Bangalore.

34.0 JURISDICTION OF COURT

Courts at Bangalore shall have exclusive jurisdiction to decide the dispute, if any, arising out of or in respect of the contract(s) to which these conditions are applicable.

35.0 ORDER OF PRECEDENCE


The order of precedence shall be NIT/ RFQ, Price format, Special Conditions of Contract (SCC), General Conditions of Contract (GCC) (if applicable).

36.0 SUPPLIER PERFORMANCE MONITORING AND RATING SYSTEM

Seller/Contractor's performance will be evaluated as per Supplier Performance Monitoring and Rating System of BHEL. Please refer BHEL website www.bhel.com for details.

37.0 DEALING WITH BANNED SUPPLIERS/ CONTRACTORS IN BHEL


Offers of the bidders who are on the banned list, as also the offers of the bidders who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website www.bhel.com.

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014</p> |
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38.0 E&C CLAUSES APPLICABLE FOR TURNKEY PACKAGES :


- 38.1 Receipt, unloading, storage of materials at site, security of the same round-the-clock & loading / unloading / transportation of materials to different erection locations is included in the scope of the bidder. Necessary manpower for all these activities will be made available at site from the date of opening of site office until closure of the project.
- 38.2 All consumables required for the erection are included in the scope of the bidder.
- 38.3 All material handling equipments like crane, fork lifter, tripods etc. are included in the scope of the bidder.
- 38.4 Providing tarpaulins & covering materials as required for protection of materials at temporary storage place is included in the scope of the bidder.
- 38.5 Bidder should have valid license to work in the state of project, if not, the same should be produced within one month of award of the contract.
- 38.6 Insurance by the bidder for his workers and tools & tackles workmen compensation insurance. Bidder shall also take third party insurance liability @ Rs. 2 lakhs per occurrence and maximum of Rs.10 lakhs.
- 38.7 Bidder should follow all the labour laws as applicable at the state/place of work including payment of minimum wages fixed by state government.
- 38.8 Round-the-clock security for the temporary stores, at temporary storage place & for the erected equipments till handing over to customer (by a reputed agency) is in the scope of the bidder.
- 38.9 Against any theft or loss of materials from the stores or from the erected equipments, coordination with local police authorities lodging the fir & obtaining the receipt for the same. Coordination with the insurance agencies also is in the scope of the bidder.
- 38.10 Any material or Service to be issued / rendered by BHEL (unless specially stipulated to be free of cost / cost recoverable basis) to the bidder on their demands, the same shall be made available along with 15% departmental charges over and above the cost. BHEL shall not be responsible for any delay due to this reason and delay shall be to the bidder's account.

38.11 RISK & COST

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014</p> |
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BHEL reserves the following rights in respect of this contract during the original contract period or its extensions if any, as per the provisions of the contract, without entitling the contractor for any compensation :-

- a) To withdraw any portion of work and/or to restrict/alter quantum of work as indicated in the contract during the progress of work and get it done through other agencies to suit BHEL's commitment to its customer or in case BHEL decides to advance the date of completion due to other emergent reasons/ BHEL's obligation to its customer.
- b) To terminate the contract or get any part of the work done through other agency or deploy BHEL's own/hired/otherwise arranged resources , at the risk and cost of the contractor after due notice of a period of two weeks by BHEL, in the event of:-
 - i) Contractor's continued poor progress
 - ii) Withdrawal from or abandonment of the work before completion of the work
 - iii) Contractor's inability to progress the work for completion as stipulated in the contract
 - iv) Poor quality of work
 - v) Corrupt act of Contractor
 - vi) Insolvency of the Contractor
 - vii) Persistent disregard to the instructions of BHEL
 - viii) Assignment, transfer, sub-letting of contract without BHEL's written permission
 - ix) Non fulfillment of any contractual obligations.
 - x) In the opinion of BHEL, the contractor is overloaded and is not in a position to execute the job as per required schedule .
- c) To meet the expenses including BHEL overheads on the differential cost at 15%, over and above the Liquidated damages/penalties arising out of "Risk & Cost" as explained above under SI. No. b BHEL shall recover the amount from any money due from Contractor, or from any money due to the Contractor including Security Deposit/ BG, or by forfeiting any T&P or material of the contractor under this contract or any other contract of BHEL or by any other means or any combination thereof

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and Turnkey projects)</p> | <p align="center">GENERAL COMMERCIAL TERMS & CONDITIONS Issued on 28-08-2014</p> |
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- d) To terminate the contract or to restrict the quantum of work and pay for the portion of work executed in case BHEL's contract with their customer are terminated for any reason, as per mutual agreement:
- e) To effect recovery from any amounts due to the contractor under this or any other contract or in any other form, the moneys BHEL is statutorily forced to pay to anybody, due to contractor's failure to fulfill any of his obligations. BHEL shall levy overheads of 15% on all such payments along with interest.
- f) While every endeavour will be made by BHEL to this end, they cannot guarantee uninterrupted work due to conditions beyond their control. The Contractor will not be entitled for any compensation /extra payment on this account unless otherwise specified elsewhere in the contract.

38.12 , Safety and Environment (HSE) requirements :


All safety rules and codes applied by the Client/BHEL at site shall be observed by the contractor without exception. The contractor shall be responsible for the safety of the equipment/material and works to be performed by him and shall maintain all light, fencing guards, slings etc. or other protection necessary for the purpose. Contractor shall also take such additional precautions as may be indicated from time to time by the Engineer with a view to prevent pilferage, accidents, fire hazards. Due precautions shall be taken against fire hazards and atmospheric conditions. Suitable number of Clerical staff, watch and ward, store keepers to take care of equipment/materials and construction tools and tackles shall be posted at site by the contractor till the completion of work under this contract.

The contractor shall arrange for such safety devices as are necessary for such type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per prescribed standards and practices.

Contractor has to ensure the implementation of Health, Safety and Environment (HSE) requirements as per HSE management system manual (Document no-IS/HSE/CSSP/01) enclosed with technical documents. The contractor has to assist in HSE audit by BHEL/Customer and submit compliance Report. The contractor has to generate and submit record/reports as per HSE plan/activities as per instruction of BHEL/Customer.

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|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects) | ANNEXURES Issued on 28-08-2014 |
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| ANNEXURE No. | DESCRIPTION |
|-----------------|--|
| I | OFFER SUBMISSION AS PER NIT |
| II | DEVIATION SHEET COST OF WITHDRAWAL) |
| III | DECLARATION |
| IV | CONTRACT PERFORMANCE BANK GUARANTEE |
| V | GUIDELINES FOR FOREIGN SUPPLIERS AND INDIAN AGENTS OF FOREIGN SUPPLIERS |
| VI | REQUEST FOR ISSUE OF FORM-C |
| VII | NEFT DETAILS |
| VIII | LOADING CRITERA |
| IX | INTEGRITY PACT |
| X | LIST OF CONSORTIUM BANKS |
| XI | REVERSE AUCTION GUIDLINES |
| XII | NO DEVIATION FORMAT |
| XIII | AUTHORISED SIGNATORY |

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|  | <p style="text-align: center;">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p style="text-align: center;">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p style="text-align: center;">Revision No. 01 (For supply and turnkey projects)</p> | <p style="text-align: center;">ANNEXURES</p> <p style="text-align: center;">Issued on 28-08-2014</p> |
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ANNEXURE-I

(To be filled up by the Bidder)

Ref. No.:

Date :

M/s Bharat Heavy Electricals Ltd.,
Industrial Systems Group
Prof. CNR Rao Circle
Malleshwaram
Bangalore - 560012

Attention : Shri

Dear Sir,

- 1 Having examined the tender documents against your tender Enquiry No _____ dated _____ and having understood the provisions of the said tender documents and having thoroughly studied the requirements of BHEL related to the work tendered for, in connection with _____ (name of work & project site), we hereby submit our offer for the proposed work in accordance with terms and conditions mentioned in the tender documents, at the prices quoted by us in your price schedule format and as per the indicated delivery schedule.
2. If the work or any part thereof is awarded to us, we undertake to submit security-cum-contract performance bank guarantee as per your requirement.
3. We have annexed to this tender the following documents:-
 - Part-I (Techno Commercial Bid)** - in a properly sealed cover.
 - a) Complete Techno-Commercial Offer (in five sets).
 - b) Unpriced copy of deviation sheet (cost of withdrawal) – Annexure-II
 - c) Un-priced copy of Price Schedule using format given by BHEL.
 - d) Any other documents (please specify).

Part-II (Price Bid along with Priced Annexure-II) - in a separate, properly sealed cover, in the format given by BHEL.

Thanking you,

Yours faithfully,

(Signature of the bidder with Name, Designation and Company's Seal)



ANNEXURE-II: DEVIATION SHEET (COST OF WITHDRAWAL)

PROJECT:-

PACKAGE:-

NAME OF VENDOR:-

| SL NO | VOULME/ SECTION | PAGE NO. | CLAUSE NO. | TECHNICAL SPECIFICATION/ TENDER DOCUMENT | COMPLETE DESCRIPTION OF DEVIATION | COST OF WITHDRAWAL OF DEVIATION | PORTION OF PRICE SCHEDULE ON WHICH COST OF WITHDRAWAL OF DEVIATION IS APPLICABLE | NATURE OF COST OF WITHDRAWAL OF DEVIATION (POSITIVE/ NEGATIVE) | REASON FOR QUOTING DEVIATION | REMARKS |
|-------|-----------------|----------|------------|--|-----------------------------------|---------------------------------|--|--|------------------------------|---------|
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TECHNICAL DEVIATIONS

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COMMERCIAL DEVIATIONS


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PARTICULARS OF BIDDERS/ AUTHORISED REPRESENTATIVE

| NAME | DESIGNATIONS | SIGN & DATE |
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NOTES:

- For self manufactured items of bidder, cost of withdrawal of deviation will be applicable on the basic price (i.e. excluding taxes, duties & freight) only.
- For directly dispatchable items, cost of withdrawal of deviation will be applicable on the basic price including taxes, duties & freight.
- All the bidders have to list out all their Technical & Commercial Deviations in detail in the above format on cost basis (if any).
- Any deviation not mentioned above and shown separately will not be taken cognizance of.
- Bidder shall submit duly filled unpriced copy of above format indicating "quoted" in "cost of withdrawal of deviation" column of the schedule above along with their Techno-commercial offer, wherever applicable.
- Bidder shall furnish price copy of above format along with price bid.
- The final decision of acceptance/ rejection of the deviations quoted by the bidder shall be at discretion of the Purchaser.
- Bidders to note that any deviation (technical/commercial) not listed in above and asked after Part-I opening shall not be considered.
- For deviations w.r.t. Payment terms, Liquidated damages, Firm prices and submission of E1/ E2 forms before claiming 10% payment, if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VIII of GCC, Rev-06 will apply. For any other deviation mentioned in un-priced copy of this format submitted with Part-I bid but not mentioned in priced copy of this format submitted with Priced bid, the cost of withdrawal of deviation shall be taken as NIL.
- Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not at all be accepted.
- All techno-commercial terms and conditions of NIT shall be deemed to have been accepted by the bidder, other than those listed in unpriced copy of this format.
- Cost of withdrawal is to be given separately for each deviation. In no event, bidder should club cost of withdrawal of more than one deviation else cost of withdrawal of each deviation which have been clubbed together shall be considered as NIL.
- In case nature of cost of withdrawal (positive/negative) is not specified, it shall be assumed as positive.
- In case of discrepancy in the nature of impact (positive/negative), positive will be considered for evaluation and negative for ordering.

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|  | <p style="text-align: center;">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p style="text-align: center;">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p style="text-align: center;">Revision No. 01 (For supply and turnkey projects)</p> | <p style="text-align: center;">ANNEXURES</p> <p style="text-align: center;">Issued on 28-08-2014</p> |
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ANNEXURE - III

DECLARATION

It is hereby declared that the original/ revised* price bids for _____
 _____ (Name of Package) for
 _____ project

is complete in all respects and contains prices for complete scope of supply, including tests etc., as per BHEL's requirement. If in the original/ revised* price bids where itemized price is not available for any part of scope of supply, including tests etc. for completion of the package, the same should be treated to have been included in our original/ revised* price bid.


It is also agreed that no further chance for seeking clarification/ confirmation to any missing point will be necessary.

Absence of itemized prices against some items does not mean that they are not included. Even though itemized prices are given for major items, those items which are not specially shown, are also included to meet the entire system as per BHEL requirements.

Signature of authorised Representative
 Name and Designation :
 Name & Address of the Bidder
 Date

Forwarded to:
 BHARAT HEAVY ELECTRICALS LTD
 Industrial Systems Group
 Prof. CNR Rao Circle
 Malleshwaram
 Bangalore - 560012

* (Please delete whichever is not applicable)

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and turnkey projects)</p> | <p align="center">ANNEXURES</p> <p align="center">Issued on 28-08-2014</p> |
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ANNEXURE - IV

PROFORMA OF PERFORMANCE BANK GUARANTEE
(FOR INDIEGNOUS PURCHASE ORDERS)

- Note: 1) To be executed in Rs 100/- Non-Judicial stamp paper.
2) To be submitted to MM Dept. directly by the Banker

PERFORMANCE GUARANTEE
(PROFORMA OF BANK GUARANTEE)

THIS DEED OF GUARANTEE made and executed on the _____ day of _____(month) _____(year), by the _____ (Bank), registered under the Companies Act 1956/Nationalised Bank constituted under the Banking Companies (acquisition and transfer of undertakings) Act/ constituted under the State Bank of India Act / Subsidiary Banks Act, having its registered / head office at _____ (Hereinafter called 'guarantor ' which term shall mean and include its successors and assigns)


IN FAVOUR OF BHARAT HEAVY ELECTRICALS LIMITED

a company registered under the companies Act, 1956 having its registered office at BHEL House at Siri Fort , New Delhi-100 049 and its Industrial Systems Group Division at Malleswaram, Bangalore-12 (hereinafter referred to as the 'Company' Which term shall include its successors and assigns):

Whereas the company has placed an order on _____ (State the name of the Seller- company / firm and its address) (hereinafter referred to as the 'Supplier' which term shall mean and include its liquidators, successors and assign) for the supply of system under Purchase Order No _____Dt _____.

AND WHEREAS the supplier has agreed to supply the materials and carryout the works as detailed and in accordance with the terms set out in the said order.

AND WHEREAS the Contract inter-alia provides that the SUPPLIER shall furnish to the Company a sum of Rs..... (Rupees.....)


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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and turnkey projects)</p> | <p align="center">ANNEXURES</p> <p align="center">Issued on 28-08-2014</p> |
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towards security deposit for due and faithful performance of the CONTRACT in the form and manner specified therein.

AND WHEREAS the SUPPLIER has approached the GUARANTOR and in consideration of the arrangement arrived at between the SUPPLIER and the GUARANTOR, the GUARANTOR has agreed to give the Guarantee as hereinafter mentioned in favour of the COMPANY.

NOW THIS DEED WITNESSES THAT in pursuance of the above said agreement, the guarantor hereby agrees and covenants with company is as follows :-

- 1) That during the period this contract of Guarantee remains effectual, the guarantor shall be liable in respect of the amount due and owing to the company in respect of the payments to the extent of Rs _____ (in words) _____ against any loss or damage caused to or suffered by the company by reasons of any breach of the terms of the said Purchase order by the supplier.
- 2) The Guarantor hereby undertakes to pay the amounts due and payable under this guarantee without any demur, merely on demand from the company intimating that the amount claimed is due by way of loss or damage caused to or suffered or would be caused or suffered by the supplier of any terms contained in the said Purchase order. Any such demand made on the guarantor shall be conclusive as regards the amount due and payable by the Guarantor irrespective of the fact whether the Supplier admits or denies.
- 3) The Guarantor further agrees that the agreement herein contained shall remain in force and effect till all the supplies to be made / Works to be performed / Services to be rendered under the said Purchase order are completed to the entire satisfaction of the company or till company certifies that the terms and conditions of the said order have been fully and properly carried out by the said supplier and accordingly discharges the Guarantee. Unless a demand or claim under this guarantee is made on the guarantor in writing on or before the expiry of claim period indicated in clause 6 below , the guarantor shall be discharged from all the liability under this guarantee thereafter.
- 4) The guarantor further agrees with the company that the company shall have the fullest liberty without the consent of the guarantor and without effecting in any manner the obligations of the guarantor hereunder to vary any of the terms of the

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said order or extend the time of performance by the said supplier from time to time or refrain from exercising the power exercisable by the company against the said supplier or to forebear or omit to enforce any of the terms and conditions relating to the said order, and the guarantor shall not be relieved of its liability in whole or in part, by reason of any act, commission or forbearance on the part of the company or by reason of any such variation, or extension being granted to the said supplier or by reason of any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving the guarantor.

- 5) The guarantor undertakes not to revoke this guarantee during the period it is in force except with the previous consent of the COMPANY in writing, and agree that any liquidation or winding up or dissolution or any change in the constitution of the SUPPLIER or the GUARANTOR shall not discharge the GUARANTOR's liability hereunder.
- 6) Notwithstanding anything herein above contained, the liability of the guarantor under these presents is restricted to Rs_____. The guarantee shall be in force till its expiry on _____. Unless a demand is made on the guarantor within THREE months from the date of expiry, all the liability of the guarantor under this guarantee shall stand fully discharged. The decision of the claimant in regard to breach of contract is final and binding on the Bank.

(Seal of the Bank to be affixed)

NOTES: (NOT TO BE TYPED)

1. A minimum of TWO Bank Official Signatories
2. Signatories to sign on all pages of the Bank Guarantee
3. Any correction to be validated by the Banker Signatories
4. One common e-mail ID of issuing branch and e-mail & contact no of at least one issuing official should be provided on PBG forwarding letter.

FOREIGN SUPPLIERS & INDIAN AGENTS OF FOREIGN SUPPLIERS

1. BHEL shall deal directly with foreign vendors, wherever required, for procurement of goods/ services. However, if the foreign Principal desires to avail the services of an Indian Agent, then the foreign Principal should ensure compliance to regulatory guidelines – which require mandatory submission of an Agency Agreement.
2. It shall be incumbent on the Indian Agent and the foreign Principal to adhere to the relevant guidelines of Government of India, issued from time to time.
3. An Indian Agent of foreign Origin Equipment Manufacturer (OEM)/ Principal is an individual, a partnership, an association of persons, a private or public company, that carries out specific obligation(s) towards processing of BHEL tender or finalization or execution of BHEL's contract on behalf of the foreign supplier.
4. The Agency Agreement should specify the precise relationship between the foreign OEM/ Principal and their Indian Agent, and their mutual interest in the business. All services to be rendered by the Agent/ Associate, whether of general nature or in relation to the particular contract, must be clearly stated by the foreign Supplier/ Indian Agent. Any payment which the Agent or Associate receives in India or abroad from the OEM/ Principal, whether as commission or as general retainer fee should be brought on record in the Agreement and be made explicit in order to ensure compliance to laws of the country.
5. Any agency commission to be paid by BHEL to the Indian Agent shall be in Indian currency only.
6. Tax deduction at source is applicable to the agency commission paid to the Indian Agent as per the prevailing rules.
7. In absence of any Agency Agreement, BHEL shall not deal with any Indian Agent (authorized representative/ associate/ consultant, or by whatever name called) and shall deal directly with the foreign OEM/ Principal only for all correspondence and business purposes.
8. In a tender, either the Indian Agent on behalf of the foreign OEM/ Principal or foreign OEM/ Principal itself can bid but both cannot bid simultaneously for the same item/ product in the same tender.
9. If an Agent submits bid on behalf of one OEM/ Principal, the same Agent shall not submit a bid on behalf of another OEM/ Principal in the same tender for the same item/ product.
10. The "Guidelines for Indian Agents of Foreign Suppliers" at Annexure–A shall apply in all such cases.
11. The supply and execution of Purchase Order/ Contract (including indigenous supplies/ services) shall be in the scope of foreign OEM/ Principal. The foreign OEM/ Principal should submit their offer inclusive of all indigenous supplies/ services and evaluation will be based on the 'Total Cost to BHEL'. In case foreign OEM/ Principal recommends placement of order(s) towards indigenous portion of supplies/ services on Indian supplier(s)/ agent on their behalf, the credentials/ capacity/ capability of the Indian supplier(s)/ agent to make the supplies/ services shall be checked by BHEL as per its extant guidelines of Supplier Evaluation, Approval & Review Procedure (SEARP) before opening of price bids. In this regard, details may be checked as per Annexure–B. It will be responsibility of the foreign

OEM/ Principal to get acquainted with the evaluation requirements of Indian supplier/ agent as per SEARP available on www.bhel.com.

The responsibility for successful execution of the contract (including indigenous supplies/ services) lies with the foreign OEM/ Principal. All bank guarantees to this effect shall be in the scope of the foreign OEM/ Principal.

Guidelines for Indian Agents of Foreign Suppliers

- 1.0 There shall be compulsory registration of agents for all Global (Open) Tenders and Limited Tenders. An agent who is not registered with BHEL shall apply for registration in the registration form in line with SEARP.
- 1.1 Registered agents will file an authenticated photocopy duly attested by a Notary Public/ Original certificate of the Principal confirming the Agency Agreement and giving the status being enjoyed by the Agent and the commission/ remuneration/ salary/ retainership being paid by the Principal to the Agent before placement of order by BHEL.
- 1.2 Wherever the Indian representatives have communicated on behalf of their Principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the party (i.e. Principal) before finalizing the order.

2.0 Disclosure of particulars of agents/ representatives in India (if any)

- 2.1 Tenderers of Foreign nationality shall furnish the following details in their offers:

- 2.1.1 The Bidder(s)/ Contractor(s) of foreign origin shall disclose the name and address of the agents/ representatives in India, if any, and the extent of authorization and authority given to commit the Principals. In case the agent/ representative be a foreign Company, it shall be confirmed whether it is existing Company and details of the same shall be furnished.
- 2.1.2 The amount of commission/ remuneration included in the quoted price(s) for such agents/ representatives in India.
- 2.1.3 Confirmation of the Tenderer that the commission/ remuneration, if any, payable to his agents/ representatives in India, may be paid by BHEL in Indian Rupees only.

- 2.2 Tenderers of Indian Nationality shall furnish the following details in their offers:

- 2.2.1 The Bidder(s)/ Contractor(s) of Indian Nationality shall furnish the name and address of the foreign Principals, if any, indicating their nationality as well as their status, i.e. whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically authorizing the agent to make an offer in India in response to tender either directly or through the agents/ representatives.
- 2.2.2 The amount of commission/ remuneration included in the price (s) quoted by the Tenderer for himself.
- 2.2.3 Confirmation of the foreign principals of the Tenderer that the commission/ remuneration, if any, reserved for the Tenderer in the quoted price(s), may be paid by BHEL in India in equivalent Indian Rupees on satisfactory completion of the Project or supplies of Stores and Spares in case of operation items.

- 2.3 In either case, in the event of contract materializing, the terms of payment will provide for payment of the commission/ remuneration, if any payable to the agents/ representatives in

India in Indian Rupees, on expiry of 90 days after the discharge of the obligations under the contract.


2.4 Failure to furnish correct and detailed information as called for in paragraph 2.0 above will render the concerned tender liable to rejection or in the event of a contract materializing, the same liable to termination by BHEL. Besides this, there would be a penalty of banning business dealings with BHEL or damage or payment of a named sum.

Annexure-B

This format is applicable only to Indian Suppliers/ Agents supplying indigenous portion of Foreign Purchases.

In all other cases, extant guidelines of SEARP, 2010 are to be followed.

| SEARP (SRF) Clause No. | Detail |
|---------------------------------------|--|
| | Name & address of the firm |
| 1.0 | Products/ Systems / Services being considered for |
| 2.0 | General Information |
| 2.2 | Name of Chief Executive |
| 2.3 | Details of authorized signatory |
| 3.0 | Ownership Information |
| 3.1 | Type of Firm |
| 3.2 | Nature of Business <i>Attach authorization letter and agency agreement from Principal (from whom capital equipment is procured)</i> <i>Attach copy of declaration from Foreign Principal for total guarantee/ warranty of indigenous supplies</i> |
| 3.3 | Year of establishment |
| 3.4 | Year of commencement of business |
| 4.0 | Registration particulars |
| 4.1 | Permanent Account No. |
| 4.2 / 4.3 | Sales Tax / TIN No. |
| 4.6 | Service Tax No. (in case of Erection & Commissioning) |
| 5.0 | Organisational strength |
| 6.0 | Other particulars |
| 6.1 | If the company is already registered with other BHEL Units |
| 6.2 | Directors/ Partners, if related to any BHEL employee |
| 6.9 | If any Ex-BHEL personnel employed by the Company |
| 6.12 | Details of pending legal issues with BHEL |
| 6.13 | Bank Account information |
| 9.0 | Financial information |
| 9.6 | Sales/ Turnover details of last 3 years (or from the date of incorporation, whichever is less) |

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|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects) | ANNEXURES Issued on 28-08-2014 |
|---|---|---|--|

ANNEXURE-VII


NEFT Application Form

| | |
|---------------------------|--|
| Vendors Name | |
| Vendor Address | |
| BANK NAME | |
| BANK BRANCH | |
| BANK ADDRESS | |
| BANK BRANCH CODE | |
| BANK 9 DIGIT MICR CODE | |
| BANK NEFT CODE(IFC) | |
| BANK SWIFT CODE | |
| BANK PHONE | |
| ACCOUNT NAME | |
| ACCOUNT TYPE | |
| ACCOUNT NO. | |
| PAN NO. | |
| SERVICE TAX NO. | |
| TIN NO. | |
| E-MAIL ID | |

Authorised Signatory Seal

Above details are to be submitted on company's letterhead. The details may either be attested by vendor's bankers or accompanied by a cancelled cheque leaf with IFSC code & A/c no. Printed on it.

Undertaking to report immediately any changes in the above to be submitted in company's letterhead.

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|  | <p style="text-align: center;">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p style="text-align: center;">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p style="text-align: center;">Revision No. 01 (For supply and turnkey projects)</p> | <p style="text-align: center;">ANNEXURES</p> <p style="text-align: center;">Issued on 28-08-2014</p> |
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ANNEXURE-VIII

LOADING CRITERIA

No deviations in GCC terms and conditions are generally acceptable, and bids with deviations are liable to be rejected. However, in exceptional circumstances, BHEL may accept deviations with Loading as given below:

A) PAYMENT TERMS

Payment will be released within 45 days after receipt of complete documents as per order/ contract.

Loading will be done for vendors seeking earlier payment w.r.t. above, for the value and the period of deviation, as per Clause 17.0 of 'Instructions to Bidders'.

Time periods assumed by BHEL/ ISG for a few activities are as follows:

| | |
|------------------------------------|--|
| Payment through Bank | - 30 days from receipt of invoice + documents. |
| Received LR | - 30 days from despatch. |
| Material Receipt Certificate (MRC) | - 120 days from despatch. |

B) BANK GUARANTEE `

Non submission of Bank Guarantee - No deviation is permitted.

C) LIQUIDATED DAMAGES

If maximum limit asked for is 10% or 5% of Undelivered Portion - 10% value of the total quoted price including taxes, duties & freight.

If maximum limit asked is less than 10 % of contract value loading shall be to the extent to which not agreed by bidder (at offered value) .

D) PRICE VARIATION CLAUSE (PVC)

PVC Instead of Firm Price - Maximum ceiling of PVC as demanded by vendor.

E) DEVIATION TO SUBMISSION OF FORM-E1/ E2 BEFORE CLAIMING 10% PAYMENT

10% of Ex-Works supply value.

F) NO DEVIATION IS ALLOWED IN RISK PURCHASE/RISK & COST CLAUSE.

INTEGRITY PACT

Between

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

and

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

Preamble

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

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

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

Section 1 – Commitments of the Principal

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

Section 2 – Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved

in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/ PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

2.1.4 The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

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

Section 4 – Compensation for Damages

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

Section 5 – Previous Transgression

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

Section 6 – Equal treatment of all Bidders/ Contractors/ Sub-contractors

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

Section 7 – Criminal Charges against violating Bidders/ Contractors /Sub-contractors

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

Section 8 –Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

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

Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.10 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

9.1 This Pact begins and shall be binding on and from the submission of bid(s) by bidder(s). It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

9.2 If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 – Other Provisions

10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

10.5 Only those bidders/ contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal

For & On behalf of the Bidder/ Contractor

(Office Seal)

(Office Seal)

Place-----


Date-----

Witness: _____

Witness: _____


(Name & Address) _____

(Name & Address) _____

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|  | <p style="text-align: center;">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p style="text-align: center;">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p style="text-align: center;">Revision No. 01 (For supply and turnkey projects)</p> | <p style="text-align: center;">ANNEXURES</p> <p style="text-align: center;">Issued on 28-08-2014</p> |
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ANNEXURE-X

| List of Consortium Banks | | | |
|---------------------------------|---------------------------|---------------------------|---------------------------------|
| Nationalised Banks | | Public Sector Bank | |
| 1 | Allahabad bank | 20 | IDBI |
| 2 | Andhra bank | | |
| 3 | Bank of Baroda | Foreign banks | |
| 4 | Canara Bank | 21 | CITI Bank N.A |
| 5 | Corporation bank | 22 | Deutsche Bank AG |
| 6 | Central bank | 23 | HSBC |
| 7 | Indian Bank | 24 | Standard Chartered Bank |
| 8 | Indian Oversea Bank | 25 | The Royal Bank of Scotland N.V. |
| 9 | Oriental bank of Commerce | 26 | J P Morgan |
| 10 | Punjab National Bank | | |
| 11 | Punjab & Sindh Bank | Private banks | |
| 12 | State Bank of India | 27 | Axis Bank |
| 13 | State Bank of Hyderabad | 28 | The Federal Bank Limited |
| 14 | Syndicate Bank | 29 | HDFC |
| 15 | State Bank of Travancore | 30 | Kotak Mahindra Bank |
| 16 | UCO Bank | 31 | ICICI |
| 17 | Union Bank of India | 32 | Indusind Bank |
| 18 | United Bank of India | 33 | Yes Bank |
| 19 | Vijaya Bank | | |


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ANNEXURE-XI

Terms & Conditions of Reverse Auction


Against this enquiry for the subject item/ system with detailed scope of supply as per enquiry specifications, BHEL may resort to “REVERSE AUCTION PROCEDURE” i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

- 1 For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- 2 Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit „online sealed bid” in the Reverse Auction. Non-submission of „online sealed bid” by the bidder for any of the eligible items for which techno-commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
- 3 BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
- 4 In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
- 5 Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
- 6 Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
- 7 In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at “Total Cost to BHEL” like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
- 8 Reverse auction will be conducted on scheduled date & time.
- 9 At the end of Reverse Auction event, the lowest bidder value will be known on

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|  | <p align="center">INDUSTRIAL SYSTEMS GROUP (BG-1A)</p> | <p align="center">GENERAL CONDITIONS OF CONTRACT (GCC)</p> <p align="center">Revision No. 01 (For supply and turnkey projects)</p> | <p align="center">ANNEXURES</p> <p align="center">Issued on 28-08-2014</p> |
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auction portal.

- 10 The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure VII) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL"s standard practice.
12. Bidders shall be required to read the "Terms and Conditions" section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the „Business Rules of Reverse Auction“, which will be communicated before the Reverse Auction.
13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action *as per extant BHEL guidelines*, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
15. In case BHEL decides to go for reverse auction, the H1 bidder(s) (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.

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ANNEXURE-XII

FORMAT FOR NO DEVIATION CERTIFICATE

(To be submitted in the bidder's letter head)

TO
BHARAT HEAVY ELECTRICALS LIMITED,
Industrial Systems Group, Prof. CNR Rao Circle,
Malleshwaram Bangalore - 560012

| | |
|-------|-------------------------------------|
| Sub : | No deviation certificate |
| Job : | ---- |
| Ref : | Your enquiry No - |
| | All the pertinent issues till date. |

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.


In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

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

| | | | |
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|  | INDUSTRIAL SYSTEMS GROUP (BG-1A) | GENERAL CONDITIONS OF CONTRACT (GCC) Revision No. 01 (For supply and turnkey projects) | ANNEXURES Issued on 28-08-2014 |
|---|---|---|--|

ANNEXURE-XIII

DECLARATION BY AUTHORISED SIGNATORY OF BIDDER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : Declaration by Authorised Signatory

Ref : 1) NIT/Tender Specification No:

2) All other pertinent issues till date

I /We, hereby certify that all the information and data furnished by me with regard to the above Tender Specification are true and complete to the best of my knowledge. I have gone through the specifications, conditions, stipulations and all other pertinent issues till date, and agree to comply with the requirements and Intent of the specification.

I further certify that I am authorised to represent on behalf of my Company/Firm for the above mentioned tender and a valid Power of Attorney to this effect is also enclosed.

Yours faithfully,

(Signature, Date & Seal of Authorized
Signatory of the Bidder)

Date:

Enclosed : Power of Attorney



Consolidated Site Safety Plan **(Includes all Safety Plan documents of ISG)**



Bharat Heavy Electricals Limited
Industrial Systems Group
Prof. C.N.R.Rao Circle, Malleswaram,
BANGALORE 560 012
Phone: 080 - 23365096, Fax: 080 - 23562713

Regd. Office: "BHEL House" Siri Fort, New Delhi - 110 049.

Note: All documents issued from 2003 to 2006 are consolidated in this volume.



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| DOCUMENT NO. | DESCRIPTION |
|---|--|
| IS/HSE/SSP/01 | 1. Details of Project |
| | 2. Health, Safety and Environment Policy |
| | 3. Roles of Site Personnel |
| | 4. Safety Awareness & Training: |
| | 5. Site Safety Inspection: |
| | 6. Emergency Preparedness and Response Plan: |
| | 7. Electrical Safety Inspection: |
| | 8. Transportation and Material Handling Equipment: |
| | 9. Erection of equipment: |
| | 10. Commissioning of equipment: |
| | 11. Use of Personal Protective Equipment (PPE): |
| | 12. Housekeeping: |
| | 13. Accident Investigation and Reporting: |
| | 14. Protection against Fire |
| | 15. Protection against Noise |
| | 16. Welding Sets |
| | 17. Civil / Structural Work |
| | 18. FIRE FIGHTING PLAN |
| | 19. NOISE STANDARDS |
| | 20. List of Applicable Statutory / Regulatory requirements |
| Checklist / Formats / Guidelines | |
| IS-QII-4-409/010 | SAFETY DECLARATION BY SUB-CONTRACTOR |
| IS:HSE:CL01 | CHECK LIST FOR WORKING AT HEIGHT |
| IS:HSE:CL02 | CHECK LIST FOR HOUSE KEEPING |
| IS:HSE:CL03 | CHECK LIST FOR SCAFFOLDING |
| IS:HSE:CL04 | CHECK LIST FOR GENERAL SAFETY INSPECTION |
| IS:HSE:CL05 | CHECK LIST FOR HEAVY MATERIAL HANDLING EQUIPMENT INSPN. |
| IS:HSE:CL06 | CHECK LIST FOR ARC WELDING TRANSFORMER |
| IS:HSE:CL07 | CHECK LIST FOR DC ARC WELDING GENERATOR |
| IS:HSE:CL08 | CHECKLIST FOR STAGING |
| IS/HSE/SSP/02 | Hazards Risk & Preventive Measures at Construction Sites. |
| Dtd. 30.06.06 | Guide lines for Resident Managers on Contract Labour, Safety & Accident Reporting System |
| Dtd. 30.06.06 | List of Relevant Legislations applicable to Various Sites |
| IS:HSE:AIR:001 | Accident (Personal injury / property damage) Report |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| Annexures | |
|---------------------------------------|--|
| IS-CW-01, Rev.01 | Work instructions for Civil Work at Site |
| IS 3043-1987 | Extracts from IS for Code of Practice for earthing |
| Copy No 18 07.12.06 | Safety Manual – Health and Safety Plan for BHEL Power Sector |
| PSER : HSEOM: 004:02 Datd 25.11.02 | Emergency Preparedness and Response Plan of PS ER |
| HSE / PPE Dtd 25.08.2006 | Corporate Personal Protective Equipment (PPE) Safety Manual |

Note:

1. This Site Safety Plan is to be used at all Sites. Project Specific Details and Site Organization Chart are to be added in Section –1.
2. The Checklists provided are to be used and maintained as records.
3. These documents and records are verifiable for compliance under Quality & HSE systems.



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

1. Details of Project

| | | |
|-----|--|---|
| 1. | Name of the Project & Site | |
| 2. | Job Number | |
| 3. | Customer | |
| 4. | Overall Scope of work: Design / Supply / Installation | Civil Structural Mechanical Electrical & Instrumentation Others |
| 5. | Project Schedule | Starting Date: Completion Date: |
| 6. | Erection & Commissioning Machinery / Tools / Instruments Required: | |
| 7. | Sub-Contractor Details | Name of the Sub-contractor Job order No.: Duration of Completion: |
| 8. | Name of BHEL Residence Manager | Attach Site Organization Chart of BHEL |
| 9. | Designated Safety Officer of BHEL | |
| 10. | Name of Sub-contractor person in-charge | Attach Site Organization Chart of Sub-contractor |
| 10. | Designated Safety Officer of Sub-contractor | |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

2. HEALTH, SAFETY & ENVIRONMENTAL POLICY

The Management is committed to be an environmentally sound company in its activities, products, services and to provide safe and healthy working environment to all employees as an integral part of business performance and strive towards zero accident through:

- Compliance with applicable Legislation and Regulations.
- Promoting the objective to minimize waste generation and to conserve/reduce/reuse resources such as raw materials, water and power.
- Enhancement of Environmental, Safety and Occupational Health awareness amongst employees, customers and suppliers by proactive communication and training.
- Continual improvement through periodical review of EMS and OHSAS to ensure its suitability, adequacy and effectiveness.
- Regular evaluation and proactive measures for prevention of accidents/ occupational diseases.
- Communication of HSE Policy to all employees and interested parties.
- Coordination with concerned agencies/regulatory bodies engaged in Occupational Health, Safety & Environmental activities.

3. Roles of Site Personnel:

Resident Manager:

- Ensuring that HSEMS requirements are implemented and maintained at sites. He shall have commensurate authority and organisational freedom in that regard.
- He shall report on the performance of the HSEMS to the MR for review.
- Identification and evaluation of Environmental Aspects & Impacts, Occupational Health & Safety Hazards and assess Risks at Site.

Duties & Responsibilities of the Designated Safety Officer at Site:

- To advise on safety aspects to all personnel at site including sub-contractors.
- To carry out Site safety inspection in order to observe the physical conditions of work and the work practices and procedures followed by Sub-contractors and to render advise on measures to be adopted for removing the unsafe physical conditions and preventing unsafe actions by sub-contractor's personnel.
- To organize / verify the availability of personal protective equipment
- To investigate select accidents
- Co-ordinate hazard and risk management
- Obtain Safety Declaration from Sub-Contractor.
- Impart Safety Training to sub-contractors and BHEL Personnel working at Site.

4. Safety Awareness & Training:

Safety Awareness and consciousness among workers, supervisors and executives is imparted by the Designated Safety Officer of BHEL / Sub-contractor. This is done by way of following.

- Talk on Safety issues as per Site Safety Plan



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

- Posters and Notices at prominent places
- Display of warning boards
- Creating awareness and response for emergencies like Fire, Shock, accidents, dangerous occurrences and on First-aid, Emergency assistance agencies and their contact telephone numbers etc.
- Use of Personnel Protective Equipment

5. Site Safety Inspection:

Designated Safety Officer will inspect the site on Daily basis

- To identify unsafe conditions and unsafe actions by the labourers and bring to the notice of sub-contractor. The main objective of the Daily Inspection is to rectify the potentially dangerous situations and avoid occurrence of any incident.
- To suggest suitable remedial action to correct the unsafe conditions / acts.
- To use appropriate checklists IS:HSE:CL01 to CL08 to verify and record the safety observations.
- To follow the *Copy of Safety Manual – Health and Safety Plan for BHEL Power Sector (07.12.06 copy no. 18) issued on 26.12.06* and available at site.

6. Emergency Preparedness and Response Plan:

- Use the *Emergency Preparedness and Response Plan IS/HSE/EPR/01* available at site together with PS & Customer.
- First aid kits are to be kept in the site office or the locations in the vicinity of work place. The kit is to be maintained. Records of FIRST AID treatment given to be maintained in a register.
- Whoever first notices the accident occurrence shall immediately notify the same to Designated Safety Officer / Other BHEL executives.
- Determine the area of accident and organize for evacuation of the personnel.
- Organize for sending the injured person to nearby First-aid / Health Center / Hospitals depending on the emergency.
- In the event of fire organize for extinguishing the fire using the apparatus available and for major fire notifies the local / nearby Fire Station.

7. Electrical Safety Inspection:

- All the electrical distribution system, sub system, relevant protection unit at electrically powered machines and tools are inspected periodically including earthing at two points, to avoid electrical shocks.
- Checklist for House keeping -IS:HSE:CL02 and General safety inspection -IS:HSE:CL04, is used for periodical inspection.
- For safe operation all the Electrical portable tools and devices are connected with Earth Leakage Circuit Breaker (ELCB) protection at Distribution Board and continuity of earth connection is to be ensured.
- The ELCBs are tested periodically and records of such tests are maintained.



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

- After each inspection the filled up check list date wise is to be retained by Resident Manager.

8. Transportation and Material Handling Equipment:

- Checklist of Inspection of Material Handling Equipment - IS:HSE:CL05 shall be used and records are to be maintained.

9. Erection of equipment:

- The instructions given in Erection Manual IS: EM-1 to IS:EM-5 in FIVE Volumes are to be followed during erection of equipment. SAFETY MANAGEMENT AT ERECTION SITES is elaborated in Document No. IS; EM-4/1 (Erection Manual Issued on 24.01.1995).
- Wherever Checklists are provided, the same shall be used and records are to be maintained.

10. Commissioning of equipment:

- The instructions given in Commissioning Manual IS-QCM in SIX Volumes are to be followed during Commissioning of Standard equipment.
- Wherever Checklists are provided, the same shall be used and records are to be maintained.

11. Use of Personal Protective Equipment (PPE):

- The PPE in use shall conform to IS or other relevant standard and the same shall be discarded in case it is damaged or worn out.
- Wherever Checklists are provided, the same shall be used and records are to be maintained.
- *Soft copy of Corporate Personal Protective Equipment (PPE) Safety Manual Document No. HSE / PPE Dtd 25.08.2006 available at site to be followed.*

12. Housekeeping:

- The Housekeeping Checklist IS:HSE:CL02 available in this document shall be followed and records are to be maintained.

13. Accident Investigation and Reporting:

- *Guide lines for Resident Managers on Contract Labour, Safety & Accident Reporting System issued on 30.06.06 needs to be referred.*
- The Investigation findings shall be reported to Designated Safety Officer, Concerned Project Manager and MR at Head quarters for taking proper preventive action to avoid such accidents in future.
- The Accident / Incident Reporting format IS:HSE:AIR:001 to be followed



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

14. Protection against Fire

- This is elaborated in Document No. IS; EM-4/1 (Erection Manual Issued on 24.01.1995) SAFETY MANAGEMENT AT ERECTION SITES.
- The GENERAL SAFETY INSPECTION Checklist - IS:HSE:CL04 available in this document shall be followed and records are to be maintained.
- **FIRE FIGHTING PLAN** Extract from: Chapter 4 – Internal Appliances of Fire Protection Manual Issued by Tariff Advisory Committee Bombay as elaborated below is to be followed for finalizing the requirement of fire extinguishers at site.

15. Protection against Noise

- The Equipment used at Construction site must follow the acceptable ambient noise level as detailed below in **NOISE STANDARDS**.

16. Welding Sets

- Whenever Welding sets are brought by the contractor to site, the healthiness of the equipment is to be checked and inspected and the record is to be maintained as per the checklist IS:HSE:CL06 and CL07.

17. Civil / Structural Work

Wherever Civil work is involved the following work instructions / checklist are to be referred and followed.

- **Work Instructions for Civil Work at Site** – IS:CW:01, Rev:01, Dated 04.09.1996.
- Checklist for Scaffolding IS:HSE:CL03
- Checklist for Working at Height IS:HSE:CL01
- *Checklist for Staging IS: HSE: CL 08*
- Formats for Field Quality Plan IS:CW:01, Rev.02, Dated 15.05.1997.

18. FIRE FIGHTING PLAN

Extract from: Chapter 4 – Internal Appliances of Fire Protection Manual Issued by Tariff Advisory Committee Bombay.

| Class of Fire | Suitable type of appliances |
|--|--|
| A. Fire in ordinary combustible (wood, vegetable, fiber, paper etc.) | Chemical extinguishers of soda acid, gas / expelled water and anti-freeze types and water buckets. |
| B. Fires in flammable liquids, paints, grease, solvents etc. | Chemical extinguishers of Foam, Carbon Dioxide and Dry powder type and sand buckets. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| | |
|--|---|
| C. Fire in gaseous substances under pressure | Chemical Extinguishers of Carbon Dioxide and Dry Powder Type. |
| D. Fire in reactive Chemicals, active metals | Special type of Dry Powder extinguishers and sand buckets. |
| E. Fire in electrical equipments. | Chemical Extinguishers of Carbon Dioxide and Dry Powder Type and sand buckets. |
| Clause 4.1.3.2 | One 9 litre Water / Sand Bucket for every 100 sq.metre area |
| Clause 4.1.3.5.1 | One no. of Not less than 2 kg, Dry Powder CO ₂ extinguisher within 15 metres of apparatus for rooms containing electrical transformers & switchgear. |
| Clause 4.1.3.5.2 | One no. 5 kg, Dry Powder CO ₂ extinguisher within 15 metres of Motors / other Electrical equipment. |

The following example will illustrate the method of determining the number of fire extinguishers required to give adequate protection for a given property:

Light engineering workshop (light hazards).

Area: 315m X 112m = 35300 sq.m

Type of fire:

1. Class A Fire due to normal combustibles
2. Class B Fire due to existence of spray painting process and storage of flammable liquids
3. Class E Fire due to two electrical DB and motors

Number of appliances

Basic protection

353 buckets and
59 water type extinguishers
OR

90 Water type extinguishers if buckets are dispensed with.

For Class B fires 2 Water type extinguishers are replaced by 2 Foam Extinguishers.

For Class E fires 6 Dry Powder Extinguishers are provided. Thus the total no. of fire extinguishers are

Water type: 88

Foam type: 2

Dry powder type: 6

TOTAL 96

Reference Standards for Fire Extinguishers:

| Sl.No. | Standard / Year | Description |
|--------|-----------------|---|
| 1. | IS940 : 1989 | Specifications of Portable fire extinguisher, water type (gas cartridge) |
| 2. | IS2171 : 1999 | Specifications of Portable fire extinguisher, Dry powder (Cartridge type) |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| | | |
|----|-----------------|--|
| 3. | IS2878 : 1986 | Specifications for Fire extinguisher, Carbon Di-oxide Type (Portable & trolley mounted) |
| 4. | IS10204 : 2001 | Specifications of Portable fire extinguisher, mechanical foam type |
| 5. | IS10658 : 1999 | Specifications for Higher capacity Dry powder Fire extinguisher (Trolley mounted) |
| 6. | IS13385 : 1992 | Specifications for Fire extinguisher, 50 capacity wheel mounted water type (Gas Cartridge) |
| 7. | IS13386 : 1992 | Specifications for Fire extinguisher, 50 l capacity, mechanical foam type |
| 8. | FPM / June 1995 | Fire Protection Manual (Part-I) By Tariff Advisory Committee |

19. NOISE STANDARDS

NOISE : (Ambient standard)

| Area Code | Category of Area | Limit in dB (A) Leq | |
|-----------|------------------|-------------------------|---------------------------|
| | | Day time (6 AM to 9 PM) | Night time (9 PM to 6 AM) |
| A | Industrial area | 75 | 70 |
| B | Commercial area | 65 | 55 |
| C | Residential area | 55 | 45 |
| D | Silence Zone | 50 | 40 |

Silence Zone is defined as area upto 100 metres around such premises as hospitals, educational institutions and courts.

Source: EPA Notification [G.S.R. 1063(E), DT. 26th Dec.1989

Domestic appliances & Construction equipment acceptable noise level:

| Sl.No. | Type of Appliances | Standard dB(A) |
|--------|---|----------------|
| 1. | Window Air-conditioner to 1 Ton to 1.5 Tons | 68 |
| 2. | Air Coolers | 60 |
| 3. | Refrigerators | 46 |
| 4. | Diesel Generators for Domestic Purpose | 85-90 |
| 5. | Compactors (Rollers) Front Loaders, Mixers, Crane movable, Vibrators and Saws | 75 |

Source: EPA Notification [G.S.R. 742(E), DT. 30th Aug.1990



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

20. List of Applicable Statutory / Regulatory Requirements:

| Sl.No. | Standard | Applicable or Not |
|--------|--|-------------------|
| 1. | Indian Electricity Rules, 1956 | Yes/ No |
| 2. | The Motor Vehicle Act, 1988 | Yes/ No |
| 3. | The Central Motor Vehicle Rules, 1989 | Yes/ No |
| 4. | The Gas Cylinder Rules, 1981 | Yes/ No |
| 5. | The Environment (Protection) Act, 1986 | Yes/ No |
| 6. | The Noise Pollution (Regulation & Control) Rules, 2000 | Yes/ No |
| 7. | Battery (Management and Handling) Rules, 2000 | Yes/ No |
| 8. | Ozone Depleting Substances (Regulation and Control) Rules, 2000 | Yes/ No |
| 9. | The National Environment Tribunal Act, 1995 | Yes/ No |
| 10. | Pollution Control Act, Rules and Notifications, September 2001 | Yes/ No |
| 11. | Pollution Control Law – Environmental Standard for Ambient Air, Automobiles, Fuels, Industries and Noise – July 2000 | Yes/ No |
| 12. | CBIP Guidelines | Yes/ No |
| 13. | Indian Standards as applicable | |
| 14. | <i>List of Relevant Legislations Applicable to Various Sites ISG document issued on 30.06.06</i> | Yes / No |
| 15. | International Standards as applicable | |
| 16. | Project Specific Standards as applicable | |
| | | |
| | | |
| | | |
| | | |
| | | |

Note: Refer to register of regulations in the HSE system document IS/HSE/ROR/E1.1 to E1.6, IS/HSE/WZS/W1, W2, W3 & IS/HSE/SCH/S1



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

SAFETY DECLARATION BY SUB-CONTRACTOR

1. Name of Sub-contractor
2. Work Order No.
3. Nature of work
4. Project
5. Number of workers deployed
Category:
 1. - Nos.
 2. - Nos.
 3. - Nos.
 4. - Nos.
6. Number of workers attended safety induction training.
7. Safety appliances issued to workmen
Name of the appliances:
 2. Safety Helmet
 3. Safety Boots
 4. Hand gloves
 5. Safety belts
 6. Safety goggles
 7. Dust masks
8. First Aid box provided at site
9. Safety clearance taken from concerned authority for starting the job.
10. Sand and water provided at the welding station
11. Fire extinguishers provided at site

Date:

Signature of sub-contractor with seal



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR WORKING AT HEIGHT

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Date

| Sl. No. | Check Points | Observation | Measures |
|---------|---|-------------|-----------------------|
| 1. | Safety Plan is available from Sub-contractor | Yes / No | Document No. Dtd. |
| 2. | All the workers have been explained safe work procedure | Yes / No | Verify with few |
| 3. | Effective communication system have been established and explained to the workers. | Yes / No | Type of communication |
| 4. | Adequate illumination is ensured | Yes / No | Good / fair / poor |
| 5. | Work area inspected prior to starting of the job. Joint protocol signed for site clearance. | Yes / No | Verify document |
| 6. | Area below the work place is cordoned. | Yes / No | Verify compliance |
| 7. | Arrangement made for fastening hand tools. | Yes / No | Check |
| 8. | Workmen provided with bag / box to carry nut, bolts and hand tools. | Yes / No | Check |
| 9. | All work plate forms are of adequate strength and ergonomically suitable | Yes / No | Verify |
| 10. | Work at more than one elevation at the same segment is restricted. | Yes / No | Check |
| 11. | Availability of supervision staff at work place. | Yes / No | Check |
| 12. | Availability of controlled copy of drawing and document at work place. | Yes / No | Verify |

ACCESS / EGRESS

| | | | |
|----|--|----------|--------|
| 1. | Walkways provided with handrails, mid rail & toe guard. | Yes / No | |
| 2. | All chequered plates, gratings properly welded and bolted. | Yes / No | Verify |
| 3. | Are ladders inspected and maintained in good condition. | Yes / No | Verify |
| 4. | Are ladders spliced | Yes / No | Verify |
| 5. | Are ladders properly secured to prevent slipping, sliding or falling | Yes / No | Verify |
| 6. | Do side rails extended 36" above top of landing | Yes / No | Verify |
| 7. | Are buildup ladders constructed of sound materials. | Yes / No | Verify |
| 8. | Rungs and cleats not over 12" on center. | Yes / No | Verify |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| Sl. No. | Check Points | Observation | Measures |
|--|---|-------------|----------|
| 9. | Metal ladders not used around electrical hazards. | Yes / No | Check |
| 10. | Proper maintenance, storage. | Yes / No | Check |
| 11. | Ladder placed at right slope | Yes / No | Check |
| 12. | Ladders, stair cases are welded / bolted properly | Yes / No | Check |
| 13. | Any obstruction in the stairs | Yes / No | Check |
| 14. | Are landings provided with handrails, knee rails, toe boards etc. | Yes / No | Check |
| 15. | Whether ramp is provided with proper slope | Yes / No | Check |
| 16. | Proper hand rails / guards provided in ramps. | Yes / No | Check |
| HOUSEKEEPING | | | |
| 1. | Walkways, aisles & all overhead work places cleared of loose materials. | Yes / No | Check |
| 2. | Flammable material, if any, is cleared. | Yes / No | Check |
| 3. | All shuttering materials are removed after de-shuttering is done. | Yes / No | Check |
| 4. | Platforms and walkways free of oil / grease or other slippery spillage. | Yes / No | Check |
| 5. | Collected scraps are brought down or lowered and not dropped from height. | Yes / No | Ensure |
| Personnel Protection Equipment & Safety Devices | | | |
| 1. | Use of Safety Belts and Safety Helmets are ensured for all workers as per IS / applicable standard. | Yes / No | Verify |
| 2. | Anchoring point provided at all places of work | Yes / No | Verify |
| 3. | Common life-line provided wherever linear movement at height is required. | Yes / No | Verify |
| 4. | Safety nets are in use wherever required. | Yes / No | Verify |
| 5. | Proper fall arrest system is deployed at critical work place. | Yes / No | Verify |
| 6. | Crawler boards / safety system for work on fragile roof are used. | Yes / No | Verify |

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor

Format IS-HSE-CL01

Page 2 of 2

Rev.0

Date of Issue: 14.02.2003



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR HOUSE KEEPING

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Date

| Sl. No. | Check Points | Observation | Measures |
|---|--|-------------|----------|
| 1. | Walkways, passages kept clear of material | Yes / No | Verify |
| 2. | Area and roads kept clear for maneuvering of cranes and material handling equipment. | Yes / No | Verify |
| 3. | Scrap, cut-pieces, welding electrodes stubs, hand tools kept tidy in workarea and disposed suitably. | Yes / No | Verify |
| 4. | Scrap bin available at site. | Yes / No | Verify |
| 5. | Welding cables, power cables routed properly to avoid run over by vehicle or tripping hazards and obstruction to personnel movement. | Yes / No | Verify |
| 6. | Compressed gas hoses routed properly in the site. | Yes / No | Verify |
| 7. | Compressed gas cylinders and hoses kept away from hot work and grinding work. | Yes / No | Verify |
| 8. | Floor is kept clear of water, oil spillage / accumulation | Yes / No | Verify |
| CIVIL WORK AREA | | | |
| 1. | All approach, aisle, ingress / egress to / from site, excavated pits, ramps, walkways kept clear of material debris tools etc. | Yes / No | Verify |
| 2. | Scaffolding material (H-beam, H-D tower frames, bracings, clamps), shuttering boards, across pans etc. are stacked properly at site. | Yes / No | Verify |
| 3. | Stacking of bricks, hollow blocks are done in safe manner. | Yes / No | Verify |
| 4. | Nails removed from wooden planks / timbers and not protruding out. | Yes / No | Verify |
| 5. | Saw dust, wood chips and scraps wood cleared from carpentry shop and disposed suitably. | Yes / No | Verify |
| 6. | Debris from demolition and excavated earth cleared from site and accesses. | Yes / No | Verify |
| ELECTRICAL INSTALLATION & BOOTHS | | | |
| 1. | Approach to DB, panels, Switches kept clear | Yes / No | Verify |
| 2. | Fire extinguishers installed at an easy accessible location. | Yes / No | Verify |
| 3. | Shock treatment chart is placed nearby place. | Yes / No | Verify |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| Sl. No. | Check Points | Observation | Measures |
|----------------|--|-------------|----------|
| 4. | Welding cable and power cables are routed separately to avoid obstruction and tripping hazards. | Yes / No | Verify |
| 5. | Welding cable and power cables are not damaged one. | Yes / No | Verify |
| 6. | Floor of electrical booths kept dry. | Yes / No | Verify |
| 7. | Proper grade Rubber mats are placed in front of Electrical panels | Yes / No | Verify |
| STORES | | | |
| 1. | Walkways, entry and exits are kept clear | Yes / No | Verify |
| 2. | Materials placed on racks are safely accessible. | Yes / No | Verify |
| 3. | Compressed gas cylinders are segregated as full or empty and types of gas. | Yes / No | Verify |
| 4. | Vertically stored cylinders are secured chained to avoid toppling and horizontal once guarded against rolling down. | Yes / No | Verify |
| 5. | Flammable storage areas are isolated from store, office and work areas. | Yes / No | Verify |
| 6. | Cement bags are stacked in proper gradient safely. | Yes / No | Verify |
| 7. | Corrosive material (eg. Acids, alkalis) are stored away from other material and kept on collection trays to safe guard against accidental leakage. | Yes / No | Verify |
| 8. | Storing area for lifting tools & tackles, ropes, wire ropes & Personnel Protection Equipment is dry, clean & free of corrosive material. | Yes / No | Verify |
| 9. | Easy accessibility to installed fire extinguishers ensured in store. | Yes / No | Verify |
| GENERAL | | | |
| 1. | Separate scrap yard is allocated for the site. | Yes / No | Verify |
| 2. | Approaches to workstations, offices, stores are well laid and demarcated. | Yes / No | Verify |
| 3. | Site roads are kept clear of stacked material for free & safe vehicular movement. | Yes / No | Verify |
| 4. | Heavy materials stacking are taken care of to prevent slips, collapse and rolling. | Yes / No | Verify |
| 5. | For house keeping at elevated work places refer to Checklist for Working at height - IS:HSE:CL01 | Yes / No | Verify |

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor

Format IS-HSE-CL02

Page 2 of 2

Rev.0

Date of Issue: 14.02.2003



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR SCAFFOLDING

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Date

| Sl. No. | Check Points | Observation | Measures |
|---------|---|-------------|----------|
| 1. | Is site having a practice of providing suitable and sufficient scaffolds so that the work could safely be done at a height. Refer Scaffolding Standard IS-3696. | Yes / No | Check |
| 2. | Is site engaging suitable / properly trained / experienced workmen for constructing / dismantling / shifting scaffolding works. | Yes / No | |
| 3. | Are scaffold platforms designed / constructed with a safety factor of minimum FOUR. | Yes / No | |
| 4. | Is there a safe means of access to the working platform? | Yes / No | |
| 5. | Are scaffolding structure having a solid base avoiding pavements & manhole covers. | Yes / No | |
| 6. | Is the scaffolding structure free from excavation pit / proper distance is maintained. | Yes / No | |
| 7. | Is verticality of the structure properly maintained? | Yes / No | |
| 8. | Are ties for scaffolding structure properly maintained (vertical as well as horizontal position) | Yes / No | |
| 9. | Is there a provision of toe board / guardrails and are they secured. | Yes / No | |
| 10. | Plank used for working platforms are wooden or metallic. | Yes / No | |
| 11. | If wooden plank, whether thickness is maintained as per standard or not, viz. ; <ul style="list-style-type: none">• For 1.5 M span - 1.5" thick.• For 2.6 M span - 2" thick. | Yes / No | |
| 12. | Is there a system of inspecting the scaffolds by a competent person atleast once a week and also after every prolonged interruption in the work / bad weather / heavy wind condition? | Yes / No | |
| 13. | Is there a system of inspecting materials of scaffolds on each occasion before erection. | Yes / No | |
| 14. | Is overhanging of the working platform restricted to less than 50mm / four times the thickness of the | Yes / No | |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| Sl. No. | Check Points | Observation | Measures |
|---------|---|-------------|----------|
| | board. | | |
| 15. | Is awareness of workmen on the importance of load distribution on a given working platform palpable? | Yes / No | |
| 16. | Is there a check for the condition and correct usage of fittings for scaffolds? | Yes / No | |
| 17. | Is the width of a working platform properly maintained according to usage, viz. <ul style="list-style-type: none">• Minimum 600mm for footing only and not for deposit of material.• Minimum 800mm for footing and deposit of material.• Minimum 1050mm when used for heavier loads or to support higher platforms. | Yes / No | |
| 18. | Are all the materials stored on the platforms properly secured or not. | Yes / No | |
| 19. | Are openings in working platform kept safely covered / fenced | Yes / No | |
| 20. | Whether planks are tied using proper binding wires. | Yes / No | |
| 21. | Are mobile scaffolds used on a firm and level surface? | Yes / No | |
| 22. | Does the height of mobile scaffold exceed four times the smaller base dimension? | Yes / No | |
| 23. | Are all materials stacked on the platform properly secured while in motion? | Yes / No | |
| 24. | Is the safety rule “ not to ride on a scaffold while in motion violated” | Yes / No | |
| 25. | Is there a system of checking for obstructions before the tower is moved? | Yes / No | |
| 26. | Are suitable / correct lifting tackle (wire ropes, chains, shackles) selected for suspension & use. | Yes / No | |
| 27. | Is there a system for using manila rope / coir rope for suspension at any place where such rope would be liable to damage by heat / flames/ sharp edges etc. | Yes / No | |
| 28. | Are all precautionary measures taken to prevent contact between arc welding apparatus and suspension ropes. | Yes / No | |
| 29. | Is hanging platform secured? | Yes / No | |
| 30. | Is there a provision of anchoring safety belts- lanyards to be tied to guy ropes? | Yes / No | |

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor

Format IS-HSE-CL03

Page 2 of 2

Rev.0

Date of Issue: 14.02.2003



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR GENERAL SAFETY INSPECTION

Name of Sub-contractor
Work Order No.
Nature of work
Name of the Project site
Job. No.
Date

| Sl. No. | Check Points | Observation | Measures |
|--------------------|---|----------------|----------|
| PILING WORK | | | |
| 1. | Condition of tripod and its stability | OK / Not OK | |
| 2. | Condition of wire ropes, D shackles, bulldog grips etc. | OK / Not OK | |
| 3. | Removal of loose earth, slush etc. | OK / Not OK | |
| 4. | Entry in register, details of periodical checking & maintenance. | OK / Not OK | |
| 5. | Guards for rotating parts of machines. | OK / Not OK | |
| EXCAVATION | | | |
| 1. | Verification of underground electrical cable | Yes / No | |
| 2. | Condition of storing material | OK / Not OK | |
| 3. | Cutting earth from top & ensuring no undercutting. | OK / Not OK | |
| 4. | Storing of material from the edge of excavated pit 5' or half of the depth whichever is more. | OK / Not OK | |
| 5. | Barricade / fencing / Displaying of danger sign, warning sign by way of red flag / tape/ light etc. | OK / Not OK | |
| 6. | Provision of dewatering facilities. | OK / Not OK | |
| 7. | Provision of ladders for deep trench | OK / Not OK | |
| 8. | Stability of nearby structure | OK / Not OK | |
| 9. | Avoid traffic movement, piling work in the vicinity. | OK / Not OK | |
| DEMOLITION | | | |
| 1. | Cordoning of surrounding area | OK / Not OK | |
| 2. | Displaying of warning sign Red Flag / Tape / Light | OK / | |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| Sl. No. | Check Points | Observation | Measures |
|------------------------|--|----------------|----------|
| | etc. | Not OK | |
| 3. | Demolition from top in a planned manner | OK / Not OK | |
| 4. | Disconnection of electrical cable connection / water / steam / gas line etc. | OK / Not OK | |
| 5. | Removal of debris immediately at a safe place | OK / Not OK | |
| 6. | Emergency Transport | OK / Not OK | |
| 7. | Fire extinguishers kept nearby for emergency. | OK / Not OK | |
| BLASTING | | | |
| 1. | Blasting record incorporating number of holes made / type of explosive used / firing pattern & sequence with date and time of blast. | OK / Not OK | |
| 2. | Handling of explosives by licensed blaster. | OK / Not OK | |
| 3. | Intensity of the charge calculated before use. | OK / Not OK | |
| 4. | Before drilling presence of unfired explosives checked. | Yes / No | |
| 5. | Blasting is carried out only during lean period (lunch / night hours) | Yes / No | |
| 6. | Standard warning signal / all clear signal is ensured before and after firing. | Yes / No | |
| 7. | Competent persons equipped with red flags are posted at possible approaches to stop traffic and by passers. | Yes / No | |
| GROUND SURFACES | | | |
| 1. | Ground level, no soft spot | OK / Not OK | |
| 2. | Footing timber level adequately supported | Yes / No | |
| 3. | No unauthorized entry. | Yes / No | |
| SCAFFOLDS | | | |
| 1. | Base plate level | OK / Not OK | |
| 2. | Spindle jack vertical | OK / Not OK | |
| 3. | Standard plumb (vertical tubes), no damage. | OK / Not OK | |
| 4. | Ledgers level (horizontal tubes) no damage | OK / Not OK | |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| Sl. No. | Check Points | Observation | Measures |
|---------------------------------------|---|----------------|----------|
| 5. | Diagonal bracing, check secure and non-missing. | OK / Not OK | |
| 6. | Lock pin in place and secure. | OK / Not OK | |
| 7. | Support from permanent structure. | OK / Not OK | |
| LADDERS | | | |
| 1. | Check ladder is placed on level ground | OK / Not OK | |
| 2. | Position at an angle of 1:4 | OK / Not OK | |
| 3. | Adequately secured | Yes / No | |
| 4. | No damage, check welds | OK / Not OK | |
| 5. | Extent 4 rungs above stepping off point | OK / Not OK | |
| 6. | Uniform and proper spacing of rung and no missing rung. | OK / Not OK | |
| WORKING PLATFORM | | | |
| 1. | Should not be less than 600mm wide | OK / Not OK | |
| 2. | Guard rails adequate check <ul style="list-style-type: none">• Top rails at least 910mm height• No gap greater than 470mm | OK / Not OK | |
| 3. | Boards free of defects <ul style="list-style-type: none">• No gaps• Adequate support• No risk of trips• Properly secured / tied. | OK / Not OK | |
| PERSONNEL PROTECTIVE EQUIPMENT | | | |
| 1. | Helmet & Footwear worn | Yes / No | |
| 2. | Safety harnesses as required and secured above shoulder level | Yes / No | |
| 3. | USE of safety belt while working at height. | Yes / No | |
| 4. | Safety goggles during welding / gas cutting / grinding etc. | Yes / No | |
| 5. | Condition / Maintenance of safety appliances | Yes / No | |
| 6. | Use of body guards, gloves etc. | | |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| Sl. No. | Check Points | Observation | Measures |
|--|---|----------------|----------|
| STRUCTURAL FABRICATION & ERECTION | | | |
| 1. | All electrically operated equipment has proper earthing and connected through ELCB. | Yes / No | |
| 2. | Safety guards for drilling & grinding machine are in position. | Yes / No | |
| 3. | Use of Scotch block / wedge on wheels of trailers during unloading of material. | Yes / No | |
| 4. | End stoppers fixed and maintained for rail mounted gantry cranes and limit switches are in operating condition. | Yes / No | |
| 5. | Checking lifting tool & tackles before use. | OK / Not OK | |
| 6. | Precaution during slinging on sharp edges. | Yes / No | |
| 7. | Signaling to crane operators by one person at a time. | Yes / No | |
| 8. | Withdrawal of persons beneath suspended loads. | Yes / No | |
| 9. | Cordoning on all sides displaying Red flags, tapes / light and warning signs. | Yes / No | |
| 10. | Ascertain center of gravity for the load to be lifted. | Yes / No | |
| 11. | Easy access for cranes to move with suspended loads. | OK / Not OK | |
| 12. | Proper tag line is used for guiding lifting loads. | Yes / No | |
| 13. | Proper sequence of erection is followed. | Yes / No | |
| 14. | Guy ropes are used and secured during and after erection if heavy lift. | Yes / No | |
| 15. | Wire ropes are maintained and its safe working load inscribed. | Yes / No | |
| 16. | Adequate illumination provided. | Yes / No | |
| GAS CUTTING AND WELDING | | | |
| 1. | Storing of gas cylinders in proper manner | OK / Not OK | |
| 2. | Proper handling of gas cylinder | OK / Not OK | |
| 3. | Condition of regulator, hose, torch etc. | OK / Not OK | |
| 4. | Welding generators / transformers condition and its proper earthing. | OK / Not OK | |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| Sl. No. | Check Points | Observation | Measures |
|-------------------------|--|----------------|----------|
| 5. | Condition of welding cables and joints | OK / Not OK | |
| 6. | Electrode holder | OK / Not OK | |
| 7. | Area free from combustible material | Yes / No | |
| 8. | Cordoning when welding / gas cutting is in progress at height. | Yes / No | |
| 9. | Provision of fire extinguisher. | Yes / No | |
| 10. | Stacking of cylinders not near live wires, battery charging rooms / oil rooms. | OK / Not OK | |
| MEANS OF ACCESS | | | |
| 1. | Platform, toe board and railing | OK / Not OK | |
| 2. | Scaffolding and its condition and maintenance | OK / Not OK | |
| 3. | Stair case and railing | OK / Not OK | |
| 4. | Ladder & fixing | OK / Not OK | |
| 5. | Safe access to and from | OK / Not OK | |
| ELECTRICAL WORKS | | | |
| 1. | Earthing of electrically operated equipment. | OK / Not OK | |
| 2. | Provision of Shed / Canopy / Cover of Distribution Board and sub-distribution board. | Yes / No | |
| 3. | Insulation of Cables and Joints | OK / Not OK | |
| 4. | Cable laying above 7 feet from ground level | Yes / No | |
| 5. | Fire extinguishers and Main Distribution Board Room. | OK / Not OK | |
| 6. | Periodical checking of portable tools. | Yes / No | |
| 7. | Use of ELCBs | Yes / No | |
| 8. | “MEN WORKING DON'T SWITCH ON” board and other related Warning boards and Tags. | OK / Not OK | |
| 9. | Insertion of loose wires and sockets | OK / Not OK | |
| 10. | Use of proper plug and sockets. | Yes / No | |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| Sl. No. | Check Points | Observation | Measures |
|-------------------------------------|--|----------------|----------|
| 11. | Job safety analysis for shut-down jobs and its proper action. | OK / Not OK | |
| 12. | Permit to work. | Yes / No | |
| HOUSEKEEPING | | | |
| 1. | Material stacking and storing | OK / Not OK | |
| 2. | Working / Moving area clean | OK / Not OK | |
| 3. | Access / Main Approach / Passages free from obstacles. | OK / Not OK | |
| 4. | Cordoning / covering of pit, vat, machine foundation etc. | OK / Not OK | |
| 5. | Displaying of Red Flags / Tape / Light. | Yes / No | |
| 6. | Removal of unwanted materials like excavated earth debris etc. | Yes / No | |
| FIRE PREVENTION / PROTECTION | | | |
| 1. | Combustible material away from source of heat / fire. | OK / Not OK | |
| 2. | Provision of fire extinguishers and its maintenance. | OK / Not OK | |
| 3. | “No Smoking” Board / “Caution” Board displayed. | OK / Not OK | |
| 4. | Stacking / Storing of different type of combustible materials. | OK / Not OK | |
| ROAD SAFETY | | | |
| 1. | Driving by unauthorized person. | Yes / No | |
| 2. | Loading of material on truck, dumper securely. | Yes / No | |
| 3. | Material falling from vehicle while transporting. | Yes / No | |
| 4. | Speed Limit. | Yes / No | |
| 5. | Transportation of persons by dumper. | Yes / No | |
| 6. | Going up and coming down from moving vehicle. | Yes / No | |
| 7. | Indulging in Horse Play on job. | Yes / No | |
| 8. | Reverse Horn. | Yes / No | |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| Sl. No. | Check Points | Observation | Measures |
|----------------------|---|----------------|----------|
| 9. | Location of Overhead Lines identified and pre-cautions taken. | Yes / No | |
| MISCELLANEOUS | | | |
| 1. | First Aid Box with proper medicine and its maintenance. | OK / Not OK | |
| 2. | Validity Date of medicine. | OK / Not OK | |
| 3. | Illumination. | OK / Not OK | |
| 4. | Safety board and safety promotional materials i) Posters. ii) Stickers. | Yes / No | |
| 5. | Accident Report form. | Yes / No | |
| 6. | Reporting System with Head Quarters. | Yes / No | |
| 7. | Arrangement of drinking water and sanitation. | OK / Not OK | |
| 8. | Provision of emergency vehicle. | Yes / No | |
| 9. | Telephone Nos. of nearby hospitals displayed at prominent place • For Burns • For Fractures • For Head Injuries • General | Yes / No | |
| 10. | Telephone Nos. of nearby Fire Stations / Police Stations / Other establishments nearby for emergency help, displayed at prominent place | Yes / No | |

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR HEAVY MATERIAL HANDLING EQUIPMENT INSPECTION

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Material Handling Equipment Type

Identification Number

Date

| Sl. No. | Check Points | Observation | Measures |
|---------|--|----------------|----------|
| 1. | Marking of Maximum Safe Working Load | OK / Not OK | |
| 2. | Crane Hook and Latch for the Hook | OK / Not OK | |
| 3. | Availability of Trained operator with Licence | Yes / No | |
| 4. | Training of persons involved in proper signaling | Yes / No | |
| 5. | Checking of various safety limit switches | OK / Not OK | |
| 6. | Condition of Boom | OK / Not OK | |
| 7. | Condition of Rope | OK / Not OK | |
| 8. | Condition of Battery and Lamps | OK / Not OK | |
| 9. | Safety Guards for operator and other personnel | OK / Not OK | |
| 10. | Fire Extinguisher availability | Yes / No | |
| 11. | Warning and Danger boards where required | Yes / No | |
| 12. | Use of Pilot vehicle / warning by personnel during transport of heavy / oversized material | Yes / No | |
| 13. | Vehicle condition of tyres, brake, clutch, lamps and horn. | OK / Not OK | |

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR ARC WELDING TRANSFORMER

(Reference Standard IS-1851 – 1975 Specification for Single operated type Arc Welding Transformer)

Test to be done before first use at site and repeated periodically once in 6 months

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Welding Set make, model and

Capacity

Serial Number

Date of Testing

| Sl. No. | Check Points | Measured Value / Observations | Observation | |
|---------|---|-------------------------------|--|---------|
| 1. | General Condition of the Set | | OK / Not OK | |
| 2. | Earthing of Welding Set at Two Places | | Yes / No | |
| 3. | Open Circuit Voltage in Volts (Measure Output voltage with rated input voltage without loading the set) | | OK / Not OK | |
| 4. | Physical Inspection, Check Cable, termination, Insulation, cleanliness, Guard against live parts, fuse rating and healthiness | | OK / Not OK | |
| 5. | Insulation Test (IR value in Megohms) <ul style="list-style-type: none">• Primary Terminal• Secondary Terminal• Continuity of Coil - Primary• Continuity of Coil - Secondary• Use appropriate Meggar | | OK / Not OK | |
| 6. | Load Test $U = 20 + 0.04 I$ Where U is the Load Voltage in Volts I is the Load Current in Amps. Check the results as per the above formula. | | Results Accepted / Rejected | |
| Sl.No. | Welding Current | Voltage | Electrode Size | Remarks |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor

Format IS-HSE-CL06

Page 1 of 1

Rev.0

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HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR DC ARC WELDING GENERATOR

(Reference Standard IS-2635 – 1975 Specification for DC Electric Welding Generator)

Test to be done before first use at site and repeated periodically once in 6 months

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Welding Set make, model and

Capacity

Serial Number

Date of Testing

| Sl. No. | Check Points | Measured Value / Observations | Observation | |
|---------|--|-------------------------------|--------------------------------|---------|
| 1. | General Condition of the Set | | OK / Not OK | |
| 2. | Earthing of Welding Set at Two Places | | Yes / No | |
| 3. | Open Circuit Voltage in Volts Speed of Machine in RPM (Measure Output voltage with DC Voltmeter without loading the set) Check value measured with Nameplate rating. | | OK / Not OK | |
| 4. | Physical Inspection, Check Cable, termination, Insulation , cleanliness, Guard against live parts, fuse rating and healthiness | | OK / Not OK | |
| 5. | Insulation Test (IR value in Megohms) <ul style="list-style-type: none"> • Earth to Coil A • Earth to Coil B • Earth to Coil C • Continuity of Coil A • Continuity of Coil B • Continuity of Coil C (Use appropriate Meggar) | | OK / Not OK | |
| 6. | Load Test (Check the results as per the formula) $U = 20 + 0.04 I$ - Where U is the Load Voltage in Volts I is the Load Current in Amps. | | Accepted / Rejected | |
| Sl.No. | Welding Current | Voltage | Electrode Size | Remarks |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR STAGING

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Date

| Sl. No. | Check Point | Details action | Observation OK / Not OK |
|---------|-------------------|--|----------------------------|
| 1 | Staging material | All load bearing vertical pipe/tubes shall be minimum medium thickness as per BIS 1161(Light gauge thickness pipe shall not be used without approval of engineer in charge). | |
| | | No warped, cracked, bend and damaged material shall be used. Staging pipe shall be checked for adequacy of thickness due to rusting. | |
| 2 | Vertical supports | Size and intervals shall be as shown in staging drg. | |
| | | Shall be erected to true vertical and shall not be placed in slope. | |
| | | Verticals shall not be placed over the earth / ground directly. | |
| | | Either wooden planks of good quality or steel plate shall be placed between vertical supports and earth base. | |
| 3 | Ties & Bracings | Size and intervals shall be as shown in staging drg. | |
| | | Shall be erected to true line and shall not be placed in slope. | |
| 4 | Clamps | Clamps shall be properly cleaned in suitable oil before put into use so that to ensure the tightness of bolt and nut to the required level. | |
| | | Damaged clamps shall not be used. All clamps & wedges shall be periodically checked for tightness till clearance issued by engineer in charge for de-centering. | |
| 5 | Base | Base shall be strong enough to receive the load. In case of earth base it shall be well compacted to desired level and no loose pockets shall be found. | |
| 6 | Wedges | Wedges if any to be provided between staging and form work shall be of good quality of wood and shall be fixed with the form work properly by nailing etc. | |
| 7 | Joints | All joints between vertical supports and Ties / bracings shall be properly clamped to the required tightness. | |
| | | Care shall be taken to ensure that no joints are left unclamped. | |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

| | | | |
|----|--------------------------------------|---|--|
| 8 | Rigidity | Rigidity of staging as whole shall be verified thoroughly before allowing for concrete by a team of engineers concerned and a joint protocol shall be made. | |
| 9 | Removal of form work / staging | No form work or staging shall be removed before completion of allowed curing and setting time for concrete and without prior permission from the Engineer in writing. | |
| 10 | Construction Loads | Construction loads over temporary staging shall be well with in DEAD LOAD + LIVE LOAD as per approved staging design assumptions. | |
| 11 | Impact Loads | Impact load over staging shall not be allowed due to movement of construction vehicles, concrete conveying equipment etc. Ready made concrete delivered from batching plant through chocked pipes shall not be tied to staging without approval of engineer in charge. Engineer in charge to verify of condition free flow of pumped concrete through the pipe without excessive pumping pressure to avoid any accidental loads over staging pipes etc. | |
| 12 | Illumination | Sufficient illumination below the centering shall ensured for verification of above check points during night hours & wherever clear visibility is absent for checking. | |
| 13 | Curing | Excessive ponding of water beyond 25 mm over cast RCC slab during rains or curing shall not be allowed to avoid overloading of staging pipes. | |
| 14 | Workforce/skilled labours | Separate required skilled work force with fitters & carpenters etc. shall be kept to attend to above points during concreting. | |
| 15 | Approach to workplace | Proper safety ladder or approach stool shall be provided for access to inspection of staging. | |
| 16 | Fire hazards | Ensure prevention of fire hazards due to welding & electrical short circuit etc. in the total staging area. | |
| 17 | Flooding of water at base of staging | Ensure required dry conditions are maintained at the base level of the staging to avoid slippages of wedges with required pumps & other facilities. | |
| 18 | Camber | Ensure that for beams above 6 m span required camber as per approved drawings are maintained by adjustment of the staging props. | |

| | |
|--|------------------------------|
| Signature of Sub-contractor Supervisor | Signature of BHEL Supervisor |
|--|------------------------------|



HSE Management System Manual

IS/HSE/CSSP/01

CONSOLIDATED SITE SAFETY PLAN

Hazards Risk & Preventive Measures at Construction Sites.

(SITE SAFETY PLAN – 2)

INDEX

| Sl. NO. | TITLE OF ACTIVITY | Page no. |
|---------|--|---------------|
| 1. | SURVEY / RECEIPT OF MATERIAL AT STORES & STORAGE | 2 / 26 |
| 2. | MARCHING & PILING | 3,4,5 / 26 |
| 3. | EXCAVATION | 6,7 / 26 |
| 4. | BACK FILLING & SAND COMPACTION | 7 / 26 |
| 5. | CONCRETING / SHUTTERING. | 8,9,10 / 26 |
| 6. | HANDLING OF REINFORCEMENT | 11 / 26 |
| 7. | PRECASTING | 12 / 26 |
| 8. | FABRICATION | 13 / 26 |
| 9. | ERECTION | 14,15,16 / 26 |
| 10. | ROAD MAKING | 17 / 26 |
| 11. | ROOFWORK | 18 / 26 |
| 12. | WORKING WITH PORTABLE TOOLS | 19 / 26 |
| 13. | HANDLING OF DIESEL | 20, 21 / 26 |
| 14. | SITE TRANSPORTATION | 22 / 26 |
| 15. | WORKING AT HEIGHT | 23 / 26 |
| 16. | WELDING & GAS CUTTING | 24, 25 / 26 |
| 17. | GRINDING | 25 / 26 |
| 18. | FIRE PREVENTION | 26 / 26 |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

1. SURVEY / RECEIPT OF MATERIAL AT STORES & STORAGE

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---|---|
| 1 | Snakes / Insects bite, inclement weather, water borne diseases etc. | <ul style="list-style-type: none">• Provide gumboots, water bag, train personnel in first Aid treatment, provide First Aid Box |
| 2 | Injuries due to fall of material on workmen during stripping of packing & unloading | <ul style="list-style-type: none">• Proper instruction to workmen about work at work and Carry out work under effective supervision by skilled personnel.• Manufacturers instructions if any, to be followed during these activities.• Use of proper ramps and stoppers while unloading the material and also to ensure that the ramp used will have sufficient load bearing capacity.• Ensure that the equipment is stored on leveled firm floor / ground to prevent tilting / toppling. |
| 3 | Injuries due to fall of material on workmen due to improper stacking and tying | <ul style="list-style-type: none">• Proper tying, stacking of material and necessary support to the equipment in storage area.• Regular check up of storage area / work shop for removal of material / unwanted scrap.• Display of necessary safety precaution boards and Do's & Don't's charts at workplaces and storage areas.• Oxygen and Acetylene cylinders are to be stacked separately and label mentioning full or empty to be displayed for easy identification.• Chains, slings, cables etc. are to be stacked under the tarpaulin or asbestos / GI shed with tarpaulin covered over shed to avoid seepage of water during raining season.• Proper sequence / labeling of material stacking be followed for quick retrieval. |
| 4 | Fire | <ul style="list-style-type: none">• Ensuring that the materials stacked are classified as combustible, inflammable, explosive and stored separately.• Ensure right type & quantity of extinguishers are available and personnel trained for using the extinguishers. |
| 5 | Handling chemicals, paints etc | <ul style="list-style-type: none">• Ensure availability of Material Safety Data Sheets (MSDS).• Ensure strict adherence to the requirement of MSDS. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

2. MARCHING & PILING

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|--|---|
| 1 | Fall of material / slings cut off / fall of person from same level | <ul style="list-style-type: none">• Use of proper slings and checking adequacy before use.• Selection of proper hitch while shifting sleepers.• Path should be free from interruption.• Carrying out work by Skilled operator / Signal man under supervision of knowledgeable supervisor.• Use of PPE's like Safety shoe, helmet, hand gloves. |
| 2 | Hand injury, head injury, fall from same level, struck by, struck against etc. | <ul style="list-style-type: none">• Distance must be maintained while inserting the wooden plank.• No one shall be entertained under the rig to insert plank, pouring water, grease etc. while marching.• Marching must be done in the presence of skilled supervisor.• While shifting the sleepers by the winch following needs to be ensured:<ul style="list-style-type: none">➤ The correct hitch must be selected➤ Path should be cleared from barriers➤ No one should have direct touch with sleepers➤ Guy rope should be tied to control the swings of sleepers➤ Safety helmet, shoe, gloves and belt will be tied by the lifeline on workers shoulder level➤ Operator should not use loose shirt |
| 3 | Toppling of rig | <ul style="list-style-type: none">• Sleepers should be provided equally on both the sides and under the eye• Exact counter weight should be placed at rear end• Dumps would be compensated by placing the wooden pieces over the sleepers / filling with sand to make the surface level• Care must be taken while rolling the wire rope on Ballard for marching straight and returning to a required angle. |
| 4 | Fall of person from height | <ul style="list-style-type: none">• Safety belt must be used and lifeline be tied at shoulder level while putting the channel under the helmet for resting the hammer. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

2 MARCHING & PILING --Contd

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---|---|
| 5 | Greasing and maintenance of rigs | <ul style="list-style-type: none">• Greasing should be done while the machine is in rest• Gloves should not be used for doing any repair in case of running machine• Greasing gun must be used• Structural frame should be cleaned from grease to avoid slippery surface.• All nuts & bolts should be tightened before it get broken off by shear.• Wire rope should be checked visually and be changed if needs. |
| 6 | Injuries while operating / piling | <ul style="list-style-type: none">• Wearing gloves is necessary before handling the wire ropes / handling bitumen• Wearing shoes• Operation must takes place under the supervision of piling in charge / front line supervisor• All workers are clearly told about their responsibility & they must understand clearly.• Do not allow any body to sit near by the rig while in operation.• Wearing of helmet with chin strap• Fly wheel and gear pulleys are properly guarded• While pouring the concrete, worker will ensure that the belts are used properly. |
| 7 | Fire | <ul style="list-style-type: none">• Fire extinguisher of Halon type be placed with each rig.• All workers are to be trained to operate the extinguishers• Water buckets be placed near by piling area to control the class A fires. |
| 8 | Slipping of tripod legs for piling / Injury | <ul style="list-style-type: none">• Tripod legs should be properly spiked in the ground. This will prevent the accident due to slip of the tripod legs when rested on a paved ground or sleepers. The shear legs and bases become fatigued with usage. Those should be replaced frequently. |
| 9 | Failure of pulley | <ul style="list-style-type: none">• The failure of a pulley due to shearing of pin is quite common. Therefore frequent check up of pulley is essential. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

2 MARCHING & PILING --Contd

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|-----------------------------|--|
| 10 | Failure of wire rope | <ul style="list-style-type: none">• The wire rope linked between main piling tools should be checked frequently. |
| 11 | General | <ul style="list-style-type: none">• All workers must wear tight fitting clothes. Use helmets, hand gloves, protective foot-gears, earmuff and eye goggles.• Electrical connections must be handled with a great deal of care. Direct tapping of power should be prohibited. Each unit should have its own switchboard. All cables should be properly insulated. Earthing is to be ensured.• All movable part of the winch should be suitably guarded.• Engine must be stopped before replacing belts. |
| 12 | Damage of near by structure | <ul style="list-style-type: none">• Piling work causes vibration, that may damage near by structure, particularly old ones. It is thus essential to keep watch on the old structure while piling is in process. Condition of the structure around the piling area should be examined before starting of work. |
| 13 | Pile breaking | <ul style="list-style-type: none">• For pile breaking operation piles projected more than 2 m may be considered for groove chipping and gas cutting at a level of 5 m height above the cutoff level avoiding tilting or collapsing of the upper part. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

3. EXCAVATION

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|--|---|
| 1 | Under ground cables / HT lines / Electrocutation | <ul style="list-style-type: none">• Site clearance and information on location of specific area be obtained from concerned customer's department. |
| 2 | Improper shoring / collapse of trench | <ul style="list-style-type: none">• Excavate as per the angle of repose of the particular soil.• Provide shoring wherever required• The excavated soil shall be kept at a distance of more than 5 feet or half of the depth of the trench, whichever is more from edge. Proper slope must be given.• Vehicle movement should not be allowed near by the edge of the trench. Necessary protection should be taken care.• Cutting should be done from top to bottom. Under cutting should not be allowed.• While providing steps for access / egress, slippery surface must be avoided. Proper ramp must be provided.• Work must be done under the control of skilled supervisor. |
| 3 | Ground water seepage & accumulation | <ul style="list-style-type: none">• Dewatering to be done before allowing workmen in or around the pit• Suitable pump must be used if heavy seepage exists. |
| 4 | Personnel falling into excavated pit | <ul style="list-style-type: none">• Provide proper sign / warning board• Use proper means of access. Ladders to be provided which should be projected (extended) more than 3 feet from the ground level.• 3 feet height Barricade be provided near the excavated area.• Proper illumination be provided.• In deep excavation (more than 4 feet), persons working at slope or bench of the pit should wear safety belt.• One ladder should be placed at the pit site all the times. One ladder for each 100 m length. |
| 5. | Material falling into excavated pit | <ul style="list-style-type: none">• Store material away from the edge of the pit (away from the barricade)• Edge preparation be ensured• Vehicle movement permitted away from the pit barricade. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

3. EXCAVATION Contd.

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---------------------------|--|
| 6 | Occupation health hazards | <ul style="list-style-type: none">• Water spraying be ensured over the fly ash or fines for suppression of dust• Nose / dust mask must be used• Safety shoe with ankle must be used• Ensure eye protection using goggles. |

4. BACK FILLING & SAND COMPACTION

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---|--|
| 1 | Reversing of vehicle / personnel injury / toppling of vehicle | <ul style="list-style-type: none">• Reversing horn (back gear horn) of each vehicle should be working• Driving near to the edge of the excavation be avoided.• Back view mirror must be fitted and intact in proper position on each vehicle• Proper approach to be made to pit, which required to be backfilled as well as to the source of backfilling material.• Proper signaling be ensured while reversing the vehicle.• Activities are to be performed under the control of skilled supervisor. |
| 2 | Compactors | <ul style="list-style-type: none">• All the drivers should possess a valid license.• For mini hand operated compactors, all rotating parts should be guarded.• Near by persons should be alerted while reversing the compactors• Hand gloves should be used in case of mini hand operated compactors• Care must be taken while starting the hand operated compactors. |
| 3 | Excavation area / toppling of rollers & compactors | <ul style="list-style-type: none">• Area under excavation should be barricaded.• Warning sign should be displayed.• Drivers / operators should be advised suitably• Constant supervision must be provided.• Repair and maintenance of compactors or rollers should be done out of compactor area• Proper illumination be provided.• JCBs need not go nearer to edge of excavated area.• JCB operators must use helmet. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

5. CONCRETING / SHUTTERING.

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---|--|
| 1 | Person working at height / fall from height | <ul style="list-style-type: none">• Make proper platform with handrail• Use safety belt at height• Use safety net if necessary• Use personal protective gears as required |
| 2 | Placing of loose material at top / fall of material | <ul style="list-style-type: none">• Provide toe boards throughout periphery of the platform• Avoid gap between platform planks• Do not place loose materials over or near by the edge of the platform• Keep the hand tools in a particular box and the box should be tied / fixed with the platform.• Use hand tools by tying with rope to a fixed structure, so that it does not fall off due to inadvertent slippage etc.• Use safety net having smaller mesh size.• Avoid standing just below the working area. |
| 3 | Improper approach way / fall of person from height | <ul style="list-style-type: none">• Use proper ladder with handrail placed on firm ground and lashed / fixed both ends of the ladder• Make proper landing place |
| 4 | Lifting of materials like shutters, concrete etc. | <ul style="list-style-type: none">• Check wire ropes & brakes of the machines daily• Check lifting tools and tackles daily• Proper slinging• Check the locking system of concrete bucket regularly |
| 5 | Noise pollution while operating vibrator, compressors, improper handling of material, electrocution, electrical fire etc. | <ul style="list-style-type: none">• Use of ear plug or ear muff• Use of hand gloves• Electrical connection to be taken through ELCB• Checking of electrical grounding system periodically• Overhead work to be coordinated properly to avoid injury to people working underneath.• Proper instruction to be given to the workmen by supervisor while working• Constant supervision must be provided• Greasing need not be done on running mixer machine• Carbon dioxide type extinguisher should be placed nearby DB / SDB |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

5. CONCRETING / SHUTTERING. Contd.

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|--|--|
| 6 | Protruding of nails / injuries, scratch | <ul style="list-style-type: none"> Protruding nails from the shuttering planks should be removed before put into the use. Nails should not be thrown or spread at site. Nails must be kept in proper box. |
| 7 | Pouring of concrete using transit mixer | <ul style="list-style-type: none"> Reversing horn (back gear horn) of each vehicle should be working Helper should be provided to operate the lever to unload the concrete and guide the vehicle while reversing. Concrete should not be collected by bond carrying on hand for making cubes Before making move, the helper should check that nothing is lying / nobody is sleeping under the tyres On daily basis maintenance work shall be carried out. Maintenance work shall be taken place after shutdown of engine fully and informing driver. No one should be permitted to sit over the tyre shield. Speed limit permitted at work site must be followed. Hand break and wedge should be placed under the tyre while parking at site for unloading the concrete. Each and every rotating part of transit mixer should be guarded properly Tyre pressure needs to be checked at regular interval. Mixer fitness test validity to be ensured Break efficiency, head lights, reverse horn coordination should be checked periodically. Concreting activity must be done under the control of skilled supervisor. |
| 8 | Defects in wire rope and its clamping in mixer chain | <ul style="list-style-type: none"> Proper examination by a competent person before taking in use. Lubricant should be applied as per norms. |
| 9 | Inhaling of exhaust gases / health injury | <ul style="list-style-type: none"> Inhaling of exhaust gases coming out of Diesel mixer may cause diseases so it should be directed away from the operator. |
| | | <ul style="list-style-type: none"> |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

5. CONCRETING / SHUTTERING. Contd.

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|--|--|
| 10 | Cleaning of mixer drum / health injury | <ul style="list-style-type: none">• Accident normally occurs during cleaning mixer drum , so care should be taken to display the notice “ UNDER REPAIR” while cleaning the Drum. |
| 11 | Contact of body parts with power transmission belt / health injury | <ul style="list-style-type: none">• Each and every rotating part of transit mixer should be guarded properly using protective guard. |
| 12 | Electric Shock | <ul style="list-style-type: none">• All part of electrical installations should be so equipped so as to prevent danger of electrical shock.• Personal protective equipment such as rubber boots should be considered as providing adequate protection against risk of electric shock. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

6. HANDLING OF REINFORCEMENT

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---|---|
| 1 | Sharp edge / scratch / injury | <ul style="list-style-type: none">• Persons handling reinforcement rod should wear hand gloves and safety shoes.• While shifting the lengthy rods, the group of persons involved in shifting should be of nominal heights.• While shifting the rods, the passage clearance must be ensured. |
| 2 | Rod cutting machine / cutting injury / caught in rotating parts | <ul style="list-style-type: none">• While bending the rod the nearby persons should be alerted.• The rotating part of the machine should be guarded• Avoid using loose shirts.• Ensure proper earthing of machine and connection taken through ELCB. |
| 3 | Persons falling from height / Injury. | <ul style="list-style-type: none">• Safety belts must be used while handling the reinforcement at a height of more than 2 meters.• Safety net to be tied.• People working underneath area should be alerted. |
| 4 | Tying of reinforcement bars / hand puncturing | <ul style="list-style-type: none">• Hand gloves should be used.• Only one person should do this job in one place. |
| 5 | Fall of reinforcement rod | <ul style="list-style-type: none">• Proper stacking of rods to be done if required to store at some elevated level• Required quantity of rod should be shifted to elevated work spot. |
| 6 | Projected edge / Eye injury | <ul style="list-style-type: none">• The projected edge of the stacked rods should be covered. |
| 7 | Bending / breaking of rod | <ul style="list-style-type: none">• Carbon content in reinforcement to be checked. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

7. PRECASTING

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---|--|
| 1 | Reinforcement bar / personnel injury, scratches | <ul style="list-style-type: none">• Gloves should be used• Reinforcement bars should be stacked properly• Care should be taken while tying bars with steel wire• Good house keeping should be maintained. |
| 2 | Mixer machine | <ul style="list-style-type: none">• Rotating parts should be guarded• Greasing of gears / other maintenance should be done in switch off mode.• Ear plug should be provided if necessary• Person should carry only 50 Kg• Connection should be given through ELCB. |
| 3 | Pouring of concrete / fall of person / injury | <ul style="list-style-type: none">• Neat and strong walk way should be provided over the network of reinforcement bar• Safety shoe should be used• Load carrying helmet should be used• Hand gloves should be used. |
| 4 | Vibrator / noise, electrocution, | <ul style="list-style-type: none">• Gloves should be used• Use of ear plugs• Proper earthing of equipment and supply provision through ELCB• Keeping the vibrator unit at one side to avoid hindrance to movement |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

8. FABRICATION

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|----------------|--|
| 1 | General | <ul style="list-style-type: none">• Space should be earmarked for fabrication yard at least 40 – 50 feet away from a rail track, road and overhead transmission lines.• All equipment electrically operated must have proper earthing and guards in position.• Electrical supply should be taken through ELCB.• The use of rubber gloves or leather gloves in dry condition is an absolute must, while operating hand held electric tools.• Drilling machine , grinding machine should have safety guard in position.• While unloading structural steel from trailers or wagons by cranes adequate protection should be taken to make the trailers or wagons stationary by putting scotch blocks or wedge on the wheels.• No persons should stand under hanging or swinging load area.• While fabricating heavy structures, adequate props to be given to avoid toppling of the component under fabrication.• Material should not be dumped haphazardly. It should be stacked properly in order.• All the confined space such as tanks, control equipments etc should be ventilated properly. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

9. ERECTION

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---|---|
| 1 | Location of cranes / unlevelled surface of earth / toppling of crane / Overloading of cranes / Setting of cranes / Collapse of boom Physical injury of men and damage of equipment material etc. | <ul style="list-style-type: none"> • Ground surface should be leveled. • Stability of earth should be checked. Mobile crane should be parked on hard soil. • Crane should not be placed near the edges of pit or excavations. • 1'' thick metallic plate or wooden sleeper to be placed on the ground to increase the stability of the crane to be positioned and distribute the load equally. • Suitable approach shall be made for crane marching. Wooden sleepers shall be used wherever necessary. • Proper boom angle and radius shall be ascertained before going to lift a load. • Boom over hoisting limit/ cut off switch should be checked before use. • Check tires condition / pressure. • Overloading shall never be allowed at site. • Tag line should be used while hoisting heavy and bulky materials. • Limit switches of cranes should be tested frequently for ensuring its proper functioning. • Operator should be able to see the hook and load throughout the hoisting period. |
| 2 | Poor signaling / operation | <ul style="list-style-type: none"> • Employ experienced signalman only • Crane operator should be familiar with those signal • Operator should possessed with valid license • Hindrance to operators cabin should be avoided. |
| 3 | Overconfidence / negligence / inexperience on the part of workmen | <ul style="list-style-type: none"> • Check for people movement underneath the lifted load. • Continuous PEP talk to create awareness • Provide constant supervision |
| 4 | Reversing the crane | <ul style="list-style-type: none"> • Healthy ness of reverse horn to be ensured. • Use of reverse horn before movement • Instruct the helper to guide crane operator while reversing • Stop people movement behind the crane area |
| 5 | Failure of lifting tackle, sling, chain pulley / fall of material | <ul style="list-style-type: none"> • Before lifting any load its actual weight should be ascertained. Center of gravity should be identified and mode of load transfer at sling point to be considered. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

9. ERECTION Contd.

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|--|--|
| | | <ul style="list-style-type: none"> • Exact determination of sling capacity, sling angle, factor of safety • Factor of Safety should be at least 2.5 • Radius of swing should be identified • A visual check must be done regarding fitness of all lifting tackles, ropes, slings etc. before every use. • The common tendency of checking gear meshing, lubrication, coupling, hole matching etc. by feeling with a finger must be strictly curbed. • Selection of bars, rollers, skid etc. should be made depending the type of equipment to be handled. • No slings should be overloaded. • Proper quality of pulley block should be used. In no case pulley block suitable for fiber rope should be used for steel wire ropes. • No person shall walk, stand or work beneath suspended load. • During erection only one signaler shall give signals. However STOP signal should be obeyed whoever gives. |
| 6 | Lifting of structure / improper hitch / fall of material | <ul style="list-style-type: none"> • Correct hitch to be selected respective to the structure to be lifted • Sudden jerk should be avoided. • The structural members should be kept in orderly manner on the ground so that those items do not roll down while being handled. • Clear passages should be left for easy handling and transportation of structures. • All persons shall stand clear when a crane is sorting or shifting steel girders or other structural materials. • While using spanners, reverting hammer etc. at height should be tied with rope fixed to nearby structure so that it will not drop in case of slip. • Care should be taken while lifting loads. Proper tag line must be used for guiding while lifting loads. • While positioning a beam of fabricated structure etc. it shall be so held that the workers hand does not get jammed against other objects. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

9. ERECTION - Contd

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---------------------------------------|---|
| | | <ul style="list-style-type: none">• Loose bolt, nuts, and tools must be kept in a box and not on structures. Box must have proper anchorage.• Care should be taken to fasten the erected members properly and secure by guys etc. wherever necessary.• Providing packing over sharp edges should protect ropes and slings.• Slinging should be carefully done so as to prevent the load from slipping.• Proper sequence of erection should be followed.• All electrically operated equipments like grinding machine, drilling machine, welding machines etc. must be properly earthed.• The structural member should be able to taken out as per sequence of erection without disturbing the stack. At the same time light structure should not be stacked below heavy structural member to avoid damage.• Safety appliances like safety Helmets, gloves, belts must be used suitably at erection sites. |
| 7 | Barricade of working area / Fatal hit | <ul style="list-style-type: none">• Area should be barricaded• Appoint experienced signalman. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

10. ROAD MAKING

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|-----------------------------------|--|
| 1 | Hot mix plant / Burns | <ul style="list-style-type: none">• Ascertain the direction of wind and then locate.• Provide fire fighting equipment• Avoid open fire near fuel tank• Helmets, Gumboots, Goggles and Hand gloves should be provided for operators, mechanics and helpers• Avoid using loose clothes• Ensure that the guards on moving parts are firmly fixed and properly• The platform for operation should be strong and spacious and provided with side railing. Ladder should be provided for access.• Avoid direct contact with dryer drum / its aggregate.• Avoid leaning over the chamber mixer.• Avoid back fire |
| 2 | Heating Bitumen / Handling | <ul style="list-style-type: none">• Container should be leak proof & kept closed.• Temperature should be maintained• Avoid back fire• Ensure the buckets for carrying bitumen are intact• Hand gloves shall be used |
| 3 | Stones, crushed stones / Injuries | <ul style="list-style-type: none">• Stones should be kept at side.• Reverse horn of the truck must be healthy |
| 4 | Road rollers / injury | <ul style="list-style-type: none">• Operator should have valid license• Repair / Maintenance work should not be done while in motion / engine "ON" condition.• Roller operating area should be indicated by planting red flag on both sides. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

11. ROOF WORK

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---|---|
| 1 | Standing on and moving above roof under construction / Falling and injury | <ul style="list-style-type: none">• Fabricate temporary structure / surface of adequate strength and supported at a number of points to distribute load.• If site is dusty, then dust control measure must be provided to avoid dust deposition on the roof.• Suitable platform should be furnished with width of more than 600 mm for moving along horizontally.• Cat boards, flat ladder, crawling boards should be used for moving along vertically.• A safety net or catch platform should be installed under the roof if it is necessary.• Evacuate all workers under the roof where work is in progress.• Suitable precaution board should be displayed on working spot.• Guard rails be installed around the roof edge and roof openings along with toe guard and middle rail.• Proper egress and access to be provided to reach the work spot.• All roof materials should be stored at ground level and shifted as per requirements and do not be stored at elevated work spot. At most care must be taken while transporting the fragile material from store to work spot.• Proper PPEs like suitable clothing, footwear, with non-slip soles safety belts, fall arresting system (made preferably from rope). |
| 2 | Electrocution / Injury | <ul style="list-style-type: none">• The electricity supply to adjacent overhead wires should be interrupted or the wire should be rendered harmless by some other means.• Proper illumination arrangement must be made. |
| 3 | Health | <ul style="list-style-type: none">• Medical examination would be done to detect any defects of equilibrium before being engaged at work.• Emergency vehicle should be parked at site for round the clock.• First aid hospital shall be identified and phone number would be displayed at all visible locality. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

12. WORKING WITH PORTABLE TOOLS

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---|---|
| 1 | Electric shock, Burns, Electrocutation / Injury | <ul style="list-style-type: none">• Earthing of all electrical equipment must be ensured.• Supply through ELCB should be provided.• Regular checking of ELCB operation is to be done. Register should be maintained .• Double earthing should be followed.• Electrical cable should be neatly traced along the platform and handrail. Avoid placing them on the platform or routing in haphazard way.• 3 pin plug should be used for power tapping.• Proper shed should be provided to DBs to protect the same from extreme weather condition.• Avoid number of intermediate cable joints. One joint per 25 meter is allowed with necessary insulated taping.• Appropriate PPE should be used.• “DANGER BOARD”, “ MEN ON THE JOB” “DO NOT SWITCH ON” boards shall be put up as required.• Insertion of loose wires in the socket shall not be allowed.• Dry chemical type fire extinguisher shall be kept in the DB / FDB location. Use of these must be known to workers & supervisors. |
| 2 | Caught in rotating parts, slip from hand / injury | <ul style="list-style-type: none">• Ensure that the guards are firmly and correctly fixed.• Avoid doing repair / maintenance work during in motion.• Avoid stagnation of water in and around.• Avoid wearing loose shirts• Retain hold of hand tools until moving parts have stopped.• Avoid leaving the equipment as it is without “ switch off”.• Use hand gloves free from oil & grease.• Never carry the machine by its power cord. |
| 3 | Occupational health hazards / Noise | <ul style="list-style-type: none">• Use ear plug if necessary.• Change portable tools if noise level is not controllable. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

13. HANDLING OF DIESEL

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---|---|
| 1 | Flammable and toxic vapors on exposure to atmosphere. Being heavier than air become difficult for it to disperse. | <ul style="list-style-type: none"> • Care should be taken to prevent accidental ignition and explosion of the vapors. • Electrical cables should be properly insulated to prevent spark and fire. • Incandescent lamps (if used) , shall have glass cover and protective cage. • To take out flammable liquids from 200 L drum to small containers, manually operated hand pump with funnel shall be used. Lid of containers shall be immediately replaced. • Match box or gas ignited lighters use must be avoided. • NO SMOKING / NO NAKED LIGHTS board must be displayed. • Container should be stored in upright position in an open air compound and securely fenced and surrounded by a bund sufficient to hold the content of the largest drum stored plus 10%. • In case drums are stored horizontally wedges must be used. • “ Highly Inflammable Liquid” caution board should be displayed at the entrance of the storage area. • Care must be taken to avoid spillage & leaks by maintaining screw caps and the use of funnels, spouts or a symphonic device. • Spillage can be soaked with dry sand, which could then be placed at least 4 M away from any possible vapour source or combustible stock of materials. |
| 2 | Cleanliness and disposal of rubbish / Fire | <ul style="list-style-type: none"> • It is vital that all waste of highly flammable liquids or materials contaminated by them is disposed off immediately and workplace kept clean all times to remove hazards. • Within workplace, metal bins with lids are required to receive rags and waste. • All bins should be removed to store overnight. Rubbish is to be incinerated in small quantities in the open at least 8 m from any building. <p>Cleaning should be done with nonflammable solvent in well-ventilated places. Detergent, degreaser, cleanser are often satisfactory.</p> |



HSE Management System Manual

IS/HSE/CSSP/01

CONSOLIDATED SITE SAFETY PLAN

13. HANDLING OF DIESEL - Contd.

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|----------------|---|
| | | <ul style="list-style-type: none">• Wooden, plastic or non-sparking alloy implements should be used to clean residues from floor or other surfaces.• Heat should never be applied to normally empty vessels as they still contain explosive mixture.• Empty containers with cap removed should be crushed and disposed off as rubbish, but not incinerated.• The cleaning or repairing of drums on site is not recommended. They should be returned to the supplier if they are not to be removed. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

14. SITE TRANSPORTATION

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|--|--|
| 1 | Site access or routing at site / accidents | <ul style="list-style-type: none">• Site entrance should be located in such a way so as to cause minimum inconveniences to the public or other road users.• Suitable warning notice should be displayed at the convenient locations (adjacent to overhead lines or near storage areas or excavated pits etc.)• Provision of one way system and the avoidance of vehicle reversal recommended upto a satisfactory level.• Protective embankment should be provided at the all excavated sites particularly at the areas where lorries or dumpers trip into excavations. |
| 2 | Vehicles & drivers / Accidents | <ul style="list-style-type: none">• Fitness of vehicle needs to be checked.• Driver must possess valid license.• Tiers condition / Battery condition be checked. |
| 3 | Violation of driving rules / accidents | <ul style="list-style-type: none">• Drivers must follow the traffic rules and signals.• Speed limit and sharp bends must be avoided.• Stop and proceed carefully at unmanned junction points. |
| 4 | Over loading / Accidents | <ul style="list-style-type: none">• Over loading causes more wear & tear of tires, road surfaces and decreasing efficiency of the moving components of the vehicle.• It also causes less control on steering, inadequacy of break power, overturning while negotiating sharp bends. |
| 5 | Stacked material / Accidents | <ul style="list-style-type: none">• Transport vehicle usually should go to the stacked material site for loading either manually or by machine.• In case of loading by a ladder strong canopy or cap should be provided for the safety of the driver.• The engine of the vehicle should not be kept running during the period of stacking.• In case of loading or transporting of material such as built up columns or MS rods which are projected beyond the vehicle should be provided with precautionary signs suitable (Flag or Signal man), to avoid injuries to the people.• Human being should not be transported in Truck / Dumpers / Cranes etc.• Filled Oxygen and Acetylene cylinders should not be thrown from vehicle. It must be shifted through bottom rim. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

15. WORKING AT HEIGHT

ACTION BY : Concerned Site Engineer / Supervisor / Site Safety Engineer

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---------------------------|---|
| 1 | Fall of a person / injury | <ul style="list-style-type: none">• Fabricate temporary structure / surface of adequate strength and supported at a number of points to distribute load.• Suitable stable platform should be furnished with width of more than 600 mm for moving along horizontally.• Proper access / egress should be provided.• Good house keeping should be maintained at elevated work place.• PPE like safety belts, fall arresting system should be incorporated / anchored of lifeline with permanent structure at a height of person shoulder level.• Guy ropes shall be used for anchoring lifeline of safety belt to facilitate safe horizontal movement at height.• In special circumstances fall arrestor should be used where usage of safety belt is non-practical. |
| 2 | Fall of material / Injury | <ul style="list-style-type: none">• Platform should be spacious to allow placement of material and space for working person.• Barrication / handrails, toe boards should be provided if necessary.• Guard / Safety net is provided suitably for preventing falling of material from height..• Overloading on temporary platform is avoided.• Protect structures against external impact.• Build and dismantle the structures in accordance with design. |
| 3 | Improper scaffolding | <ul style="list-style-type: none">• Erected on firm and level ground• Proper approach should be provided by ladders, Ramps etc.• Gangway jalties, which are used to form platform at top, should be tied firmly.• Slippery / wet condition over the working platform should be avoided.• Safety belt & safety helmet are must for the people who are working on scaffolding platform. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

16. WELDING & GAS CUTTING

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|--|--|
| 1 | Fire, explosion, backfire / Injury | <ul style="list-style-type: none">• DA and Oxygen cylinders should be kept in upward position and tied firmly.• Cylinders should be shifted by wheel trolley.• DA cylinders should be covered by wet cloths or gunny bags.• Flash back arrester should be fitted in all DA cylinders.• Nozzle of cutting torch should be properly tightened and kept clean from dirt, dust, metal depositions etc.• No joints and extension of hoses are allowed for DA.• If any crack is found on the hose pipe it shall be thoroughly checked and replaced.• Provide right type of fire extinguishers near by the work spot.• Gas cylinder should be stored properly in a shed. Empty and full cylinders should be kept separately and labeled.• Oil or Paint drums (empty or with content) shall not be allowed to be kept near the vicinity of weld area. |
| 2 | Bare wire or improper insulation / Electrocutation | <ul style="list-style-type: none">• Earthing of all electrical equipment must be ensured.• Supply through ELCB should be provided.• Double earthing should be followed.• Electrical cable should be neatly traced along the platform and handrail. Avoid placing them on the platform or routing in haphazard way.• 3 pin plug should be used for power tapping.• DBs must be protected from rains.• Avoid number of intermediate cable joints. One joint per 25 meter is allowed with necessary insulated taping.• Appropriate PPE should be used.• Electrode holder shall be of good quality with proper insulation. The welder should never be allowed to weld when he is wet.• Install power generators of suitable capacity.• Provide emergency light / torches in the job site.• Provide emergency ladder for elevated work spot. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

16. WELDING & GAS CUTTING - Contd.

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|---------------------------------------|---|
| | | <ul style="list-style-type: none">• In case of confined area, forced ventilation shall be provided. |
| 3 | Exposure to spark hot metal and fumes | <ul style="list-style-type: none">• The welder shall use apron and Helmet with weld screen.• Provide adequate ventilation in the working area. |
| 4 | Continuous working / Heat Stress | <ul style="list-style-type: none">• Provide adequate ventilation.• Continuous working should be avoided. Adequate interval should be provided.• In case of confined area, forced ventilation shall be provided. |
| 5 | | <ul style="list-style-type: none">• |

17. Grinding

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | HAZARDS / RISK | PREVENTIVE MEASURE |
|--------|--|--|
| 1 | Contact with grinding wheel / electric shock | <ul style="list-style-type: none">• Wheel guard should be placed in proper position.• Machine should be earthed properly.• Frequent checking of power cord and use of plugs & sockets.• Proper use of PPEs such as grinders goggles, face shields, safety shoes, hand gloves etc.• Wheel should be mounted properly on the suitable grinding machine.• Grinding machine RPM and wheel RPM should match.• Use of safety belt during grinding at height more than 2 m. |
| 2 | Damage of wheel | <ul style="list-style-type: none">• Check the expiry date. |
| 3 | Cable / cord | <ul style="list-style-type: none">• Double insulated power cable should be used in grinding machine.• Joints in cable should be avoided or protected properly. |



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

18. FIRE PREVENTION

ACTION BY : Concerned Site Engineer / Supervisor

| Sl.No. | Causes of fire | PREVENTIVE MEASURE |
|--------|--|--|
| 1 | Malicious ignition, careless gas cutting, welding, smoking, throwing of lighting match sticks, uncontrolled rubbish burning Incorrect storage and careless use of flammable liquids and compressed gases. | <ul style="list-style-type: none">• Portable extinguishers containing Foam, DCP or BCF should be used on fire involving flammable liquids. Such fire extinguishers shall be conspicuously located.• Nobody shall be allowed to misuse or horseplay with this emergency equipment.• Demonstration on the usage of fire extinguishers shall be arranged.• Employees shall be instructed to report all fires immediately and notify their supervisor about the discharge of the fire extinguisher and its need of servicing.• The extinguisher should be readily available for use and note more than 15 m away from the area of use.• Employees, especially those involved in actually using these liquid must be adequately trained in the proper use of fire extinguishers. These employees in case of emergency and for other measures can use extinguisher in the event of fire.• Fencing of loading area like flammable liquid stores, paint oil storage and material stores (especially timber stacks) should have prominent displaying of “ NO SMOKING”. |



HSE Management System Manual

IS/HSE/CSSP/01

CONSOLIDATED SITE SAFETY PLAN

GUIDELINES FOR RESIDENT MANAGERS ON CONTRACT LABOUR, SAFETY & ACCIDENT REPORTING SYSTEM

CONTRACT LABOUR

- 1) Form V under Contract Labour (Regulation and Abolition Act) may be arranged from the customer, who is the principal employer, in the name of sub-contractor directly and ensure that the sub-contractor shall obtain licence under Contract Labour (Regulation and Abolition Act) 1970.
- 2) Ensure PF coverage in respect of all the contract labour deployed by our sub-contractors.
- 3) Ensure ESI coverage, wherever applicable, in respect of all the contract labour deployed by our sub-contractors.
- 4) Ensure gate pass issued by the customer to all the contract labour deployed by our sub-contractors.
- 5) Ensure Insurance coverage in lieu of Workmen's Compensation in respect of all the contract labour deployed by our sub-contractors.
- 6) Ensure payment of minimum wages, bonus, gratuity and other statutory payments to the contract labour
- 7) Please keep the labour law books containing the labour legislations applicable to each site. For example Factories Act Rules of the state where in the site situated, etc.

SAFETY

- 8) Ensure compliance of all safety measures/aspects by sub-contractors.
- 9) Ensure usage of PPEs as per the safety norms for each work / site by BHEL employees and persons engaged by the sub-contractors.
- 10) Ensure compliance of safety aspects envisaged in HSE Management System Manual.

ACCIDENT REPORTING SYSTEM

- 11) In case of major accidents resulting in serious bodily injury or death, report the same to Business Manager, Head(HR), etc. at HQ immediately.



HSE Management System Manual

IS/HSE/CSSP/01

CONSOLIDATED SITE SAFETY PLAN

- 12) If the accident happened to any contract labour, please obtain a letter from the contractor regarding the accident and forward the same to the customer after obtaining concurrence from HQ.
- 13) In case of Fatal Accident to contract labour, local Police shall be informed by the contractor under intimation to you. A copy of the FIR may be forwarded to HQ.
- 14) In case of Fatal Accident to BHEL employee, local Police shall be informed by the Resident Manager under intimation to HQ.
- 15) Obtain the concurrence and approval of Business Manager & Head(HR) before signing any Accident Notice Forms under the Factories Act or Form EE under Workmen's Compensation Act, etc. or any other documents related to the accident.
- 16) In case of Fatal Accident to contract labour, ensure contractor shall arrange for postmortem and other formalities and hand over the body to the relatives.
- 17) In case of major accidents resulting in serious bodily injury or death to contract labour, Resident Manager shall forward the prescribed Form (Notice of Accidents or Dangerous Occurrences Resulting in Death or Bodily Injury under the Factories Act Rules of the state in which site is situated) filled and submitted by the sub-contractor to the Customer for onward transmission to the Assistant Labour Commissioner and other concerned Authorities within the prescribed time limit. For example Form 22 under Chatisgarh Factories Act Rules is applicable to Korba East site and Form 18 under Punjab Factories Act Rules is applicable to Lehramohabat site.
- 18) In case of major accidents resulting in serious bodily injury or death to BHEL employee, Resident Manager shall fill and submit the prescribed Form (Notice of Accidents or Dangerous Occurrences Resulting in Death or Bodily Injury under the Factories Act Rules of the state in which site is situated) to the Customer for onward transmission to the Assistant Labour Commissioner and other concerned Authorities within the prescribed time limit. For example Form 22 under Chatisgarh Factories Act Rules is applicable to Korba East site and Form 18 under Punjab Factories Act Rules is applicable to Lehramohabat site.
- 19) Contact Resident Manager / HR executive of Power Sector Site at the same location, if available, and take their assistance, in case if they had already handled a similar accident case at the same location.
- 20) Ensure providing of details like age (date of birth), wages of the person met with an accident and injured or expired to the concerned authorities.



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

- 21) Ensure depositing of Workmen's Compensation amount decided by the authority under the Workmen's Compensation Act with the Commissioner of Workmen's Compensation by the contractor or their Insurance Company.
- 22) Inform HQ regarding the payment of Workmen's Compensation through the authorities to the dependents of the person expired.
- 23) Ensure payment of other statutory payments also, if any.

HSE ACCIDENT / INCIDENT REPORTING

- 24) Strictly comply with section 17.0 of HSE Management System Manual in respect of Accident / Incident reporting system
- 25) Submit the Accident / Incident Report format to HQ immediately after occurrence of accident.
- 26) Submit the Accident / Incident Investigation Report format to HQ after completion of the investigation



HSE Management System Manual

IS/HSE/CSSP/O1

CONSOLIDATED SITE SAFETY PLAN

LIST OF RELEVANT LEGISLATIONS APPLICABLE TO VARIOUS SITES

1. Contract Labour (Regulation and Abolition) Act, 1970
2. Factories Act, 1948 with relevant state rules
3. The Buildings And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act, 1996
4. The Inter-state Migrant Workmen (Regulation Of Employment And Conditions of Service) Act, 1979
5. The Child Labour (Prohibition and Regulation) Act, 1986
6. Minimum Wages Act, 1948 with relevant state amendments
7. Payments of Wages Act, 1936
8. Payment of Bonus Act, 1965
9. Payment of Gratuity Act, 1972
10. Employees' State Insurance Act, 1948
11. The Employees' Provident Funds And Miscellaneous Provisions Act, 1952
12. Fatal Accidents Act, 1855
13. The Personal Injuries (Compensation Insurance) Act, 1963
14. Workmen's Compensation Act, 1923
15. The Industrial Disputes Act, 1947
16. The Electricity Act, 2003
17. The Indian Electricity Act, 1910
18. The Indian Electricity Rules 1956
19. Environmental Standards for TPP
20. The Indian Boilers Act, 1923
21. Tariff Advisory Committee - Insurance
22. Hazardous goods TAC
23. The Motor vehicle Act 1988
24. The national Environment Tribunal Act 1995
25. The Environment (Protection) Act, 1986
26. The Gas Cylinder Rules 2004

All the above legislations are made available in ISG web under HSE (<http://isgweb/hse.html>) Business Managers / Project Managers / Resident Managers are requested to go through the above legislations and ensure strict compliance of the relevant legislations and its specific clauses applicable to their respective sites. Resident Managers are also requested to enquire with the customer regarding applicability of any local legislation.



HSE Management System Manual

IS:HSE:AIR:001

ACCIDENT (PERSONAL INJURY / PROPERTY DAMAGE) REPORT

| | | | | | |
|-----------------------|--|----------------------|--|------------------|--|
| 1. | NAME OF SITE: | | | | |
| 2. | SCOPE OF WORK: | | | | |
| 3. | ACTIVITY OF AREA: | | | | |
| 4. | NAME OF CONTRACTOR: | | | | |
| 5. | NAME & DESIGNATION OF BHEL ACTIVITY INCHARGE: | | | | |
| 6. | DATE & TIME OF ACCIDENT: | | | | |
| 7. | DATE RESUMED: | | | | |
| 8. | NO. OF WORKING DAYS LOST BY VICTIM (if duty not resumed give estimated figure): | | | | |
| 9. | NO. OF MAN HOURS LOST BY OTHERS: | | | | |
| 10. | PERSONAL DETAILS OF INJURED AND/OR DETAILS OF MATERIALS / EQUIPMENT / PROPERTY DAMAGED: | | | | |
| NAME: | | | NAME OF MATERIAL/ EQUIPMENT/ PROPERTY: | | |
| PERIOD OF EMPLOYMENT: | | | | | |
| AGE: | SEX: | MARRIED / SINGLE: | ESTIMATED COST | ACTUAL COST | |
| OCCUPATION: | | PART OF BODY INJURED | | NATURE OF DAMAGE | |
| NATURE OF INJURY | | | | | |
| 11. | AGENCY (OBJECT / EQUIP / SUBSTANCE) MOST RESPONSIBLE FOR CAUSING ACCIDENT / INJURY / DAMAGE: | | | | |



HSE Management System Manual

IS:HSE:AIR:001

ACCIDENT (PERSONAL INJURY / PROPERTY DAMAGE) REPORT

| | | |
|------------------|--|----------------------------------|
| 12. | PERSON (NAME & DESIGNATION) WITH MOST CONTROL OVER AGENCY (OBJECT / EQUIP/ SUBSTANCE) CAUSING ACCIDENT / INJURY / DAMAGE: | |
| 13. | DESCRIBE CLEARLY HOW THE ACCIDENT OCCURRED (IF SPACE INSUFFICIENT USE SEPARATE SHEET & ATTACH): | |
| ANALYSIS: | | |
| 14. | WHAT ACTS AND/OR CONDITIONS CONTRIBUTED MOST DIRECTLY TO THIS ACCIDENT? | |
| 15. | WHAT ARE THE BASIC REASONS FOR THE EXISTENCE OF THESE ACTS AND / OR CONDITIONS? | |
| 16. | WHAT CORRECTIVE ACTIONS HAVE BEEN TAKEN TO PREVENT ACCIDENT RECURRENCE? | |
| DATE : | | SIGNATURE OF CONCERNED ENGINEER: |
| 17. | COMMENTS OF SITE IN-CHARGE OF BHEL: | |
| DATE : | | SIGNATURE OF SITE INCHARGE |

Note:

- 1) The Report shall be prepared by the Concerned engineer and to be submitted to Head quarters through Resident Manager.

PRE-QUALIFICATION REQUIREMENT FOR DUST EXTRACTION PACKAGE – 2X660MW

SURATGARH CHP, RRVUNL

Ref No : IS-1-13-2000 / CHP / DE / RRVUNL/CHPPKG-E / 001

Tender Ref No: 77/15/6289/SK

TECHNICAL CRITERIA

1. Bidder should have completed Design, Engineering, Supply and E&C of Dust extraction system consisting of minimum one (01) no. of centrifugal fan of capacity of 50,000 CMH minimum, which should have been successfully in operation for at least one year in power plant or other industries e.g. steel/ process etc. Purchase Order/ Work Order date for this system shall be within preceding ten (10) years, as on date of technical bid opening.
2. Final acceptance of bidder is subject to RRVUNL approval.

NOTES

- a) Bidder shall submit requisite documents, to comply with above criteria, properly indexed, along with the offer.
- b) Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder to perform the contract, as per BHEL evaluation procedure, should the circumstances warrant such assessment in the overall interest of BHEL.

FINANCIAL CRITERIA

1. Bidder should have an average turnover of Rs. Twelve (12) Crores during last three financial years ending 31st March 2015, for which bidder shall submit audited financial statements along with his offer, to prove the financial criteria.


Note:

1. The bidder has to submit financial accounts (audited, if applicable), for last three years (or from the date of incorporation whichever is less) as on tender due date to review the above data.
2. Financial pre-qualification of the foreign bidder (other than Indian Bidders) may also be evaluated on the basis of the report from a reputed third party business rating agency like Dun & Bradstreet, Credit reform etc. The foreign bidder is to submit the report from reputed third party.
3. For evaluation of foreign bidder, exchange rate (TT selling rate of SBI) as on scheduled date of tender opening (Part-I bid in case of two part bid) shall be considered.



| BHEL ENQUIRY NO: | | Price Format | | | | | | REV. 0 DATE : 26-02-2016 | | |
|------------------------------|--|---|----------|-------------------------|------------------------------|---------|---------|--------------------------|---------------------|---------------------|
| PROJECT: | | 77/5/6289/SK | | | | | | | | |
| CUSTOMER : | | CHP FOR 2 X660MW, SURATGARH THERMAL POWER PLANT | | | | | | | | |
| ITEM: | | RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD | | | | | | | | |
| | | DUST EXTRACTION PACKAGE | | | | | | | | |
| | | All figures in Rupees | | | | | | | | |
| SL. NO. | Description | Unit | Qty. (1) | Unit Ex-works Price (2) | Total Ex-works price (3=1*2) | CST (4) | VAT (5) | Swachh Bharat Cess (6) | Freight charges (7) | Total (8=3+4+5+6+7) |
| A | Design and Supply | | | | | | | | | |
| | Design, Engineering, document submission, manufacturing, arranging the inspection as per standards at shop, packing , supply to site , including expences for the Customer / 3 rd party inspector at project site as per the scope mentioned in technical enquiry specification of following | | | | | | | | | |
| 1 | Primary Crusher houses (PCH-1, PCH-21) along with accessories like suction hoods, manual and motorized dampers, ducting & duct support, Centrifugal fan, bag filter system with sequential controller,Cyclone separator, Rotary air lock, slide gates, supporting structures, bellows, Piping, Fittings, Gauges, Switches, other instrumentations, Valves etc. and all accessories, Including all associated Electrics such as motors, local panels, instruments etc. and spares required for the system (DE system shall be mounted outside the crusher house) - 2 Working | Sets | 2 | | | | | N/A | | |
| 2 | Secondary Crusher houses (SCH-1, SCH-21) alongwith accessories like suction hoods, manual and motorized dampers, ducting & duct support, Centrifugal fan, bag filter system with sequential controller, Cyclone separator, Rotary air lock, slide gates, supporting structures, bellows, Piping, Fittings, Gauges, Switches, other instrumentations, Valves etc. and all accessories Including all associated Electrics such as motors, local panels, instruments etc. and spares required for the system (DE system shall be mounted outside the crusher house) - 2 Working + 2 standby | Sets | 2 | | | | | N/A | | |
| 3 | Bunker Ventilation System (BVS-11,BVS-12, BVS-21, BVS-22) along with accessories like suction hoods, manual and motorized dampers, ducting & duct support, Centrifugal fan, bag filter system with sequential controller, Cyclone separator, Rotary air lock, slide gates, supporting structures, bellows, Piping, Fittings, Gauges, Switches, other instrumentations, Valves etc. and all accessories Including all associated Electrics such as motors, local panels, instruments etc. and spares required for the system - 4 Working | Sets | 4 | | | | | N/A | | |
| 4 | Compressor, Drier, Receivers along with accessories, Including all associated Electrics such as motors, local panels, instruments etc. near SCH (DSS pump house) | Sets | 2 | | | | | N/A | | |
| 5 | Hoist required for maintenance of DE system which are in bidders scope along with electrics | LOT | 1 | | | | | N/A | | |
| 6 | Compressor, Drier, Receivers along with accessories, Including all associated Electrics such as motors, local panels, instruments etc. (below JNT-21B) | Sets | 2 | | | | | N/A | | |
| | | TOTAL (A) | | | | | | | | |
| B | ESSENTIAL SPARES | | | | | | | | | |
| B.1.1 | MECHANICAL SPARES(as per Annexure-1/Mechanical spares Annexure-12) | LOT | 1 | | | | | N/A | | |
| B.1.2 | ELECTRICAL SPARES (as per Annexure-1/Electrical spares Annexure-1B) | LOT | 1 | | | | | N/A | | |
| | | TOTAL (B) SPARES (B.1.1+ B.1.2) | | | | | | | | |
| C | Installation Services (including insurance other than inland transit insurance) like receipt at site, unloading, storage (Open & Covered), security, transportation to erection site, Erection, Testing, commissioning, PG test and handing over etc. of all equipment & systems with associated electricals and its accessories covered in technical enquiry specification including items which are free issue to bidder. | LOT | 1 | | | | N/A | | N/A | |
| | | GRAND TOTAL (A+B+C) = | | | | | | | | |
| TOTAL PRICE IN WORDS: RUPEES | | | | | | | | | | |

Note:

1. Service tax for E&C (SI No-'C') is payable extra at actuals. Present rate considered: _____
2. Please indicate the amount of CIF content included in the above price: _____



|  | | Price Format | | | | REV. 0 DATE : 26-02-2016 | | | | |
|---|-------------|---|----------|-------------------------|------------------------------|--------------------------|---------|------------------------|---------------------|---------------------|
| BHEL ENQUIRY NO: | | 77/5/6289/SK | | | | | | | | |
| PROJECT: | | CHP FOR 2 X660MW, SURATGARH THERMAL POWER PLANT | | | | | | | | |
| CUSTOMER : | | RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD | | | | | | | | |
| ITEM: | | DUST EXTRACTION PACKAGE | | | | | | | | |
| | | All figures in Rupees | | | | | | | | |
| SL. NO. | Description | Unit | Qty. (1) | Unit Ex-works Price (2) | Total Ex-works price (3=1*2) | CST (4) | VAT (5) | Swachh Bharat Cess (6) | Freight charges (7) | Total (8=3+4+5+6+7) |

| | |
|---------------|--|
| Notes: | |
| 1 | The E&C charges(C) including service tax and cess should be at least 15% of the total contract price (excluding mandatory spares but including all taxes and freight i.e A+C), failing which the break-up of prices shall be adjusted accordingly for ordering |
| 2 | The description of various items is only indicative and shall be supplied according to approved drgs/ Data sheets. |
| 3 | Unless stated otherwise a 'set' means items or sub-items required for each type/size range of the assembly/sub-assembly, required for complete replacement in one Main Equipment. It is further, intended that the assembly/sub-assembly which have different orientation (like left hand or right hand, top or bottom), different direction of rotation or mirror image positioning or any other reasons which result in maintaining two different sets of the spares to be used for the subject assembly/sub-assembly, these shall be considered as different types of assembly/sub-assembly |
| 4 | Also, wherever set is mentioned, one set of the spares/supply of that item shall be for complete replacement of that particular item for one equipment |
| 5 | Bidder to furnish recommended spares list along with unit price . The price furnished by the bidder will not be considered for evaluation. |
| 6 | Any equipment/works not covered above (A and B but required for successful commissioning of the system shall be in the scope of the bidder and within the contract price. |

| | | | |
|---|---|---|---|
|   | Industrial Systems Group (Projects Purchase/Works-1) | Special Conditions of Contract (SCC) Revision no. 00 | 2 X 660 MW Suratgarh Super Critical Thermal Power Station Stage-V, Units 7 & 8 Dust Extraction System 27.02.2016 |
|---|---|---|---|

These Conditions shall be read in conjunction with General Condition of Contract (GCC Rev 01) enclosed along with the tender enquiry. In case of any conflict or inconsistency, the requirement of SCC shall prevail over the GCC.

| Sl.No | Project Name | 2 X 660 MW Suratgarh Super Critical Thermal Power Station Stage-5, Units 7 & 8. |
|-------|-----------------------------------|--|
| 1. | Type of Contract | Turnkey Package |
| 2. | Consignee address | RESIDENT MANAGER/BHEL-ISG BHEL-ISG SITE OFFICE 2x660 MW SURATGARH SCTPS, UNIT 7&8, SURATGARH, DIST - SRI GANGANAGAR ,RAJASTHAN PIN - 335804 Notes : 1) Consignee address in LR should be strictly as per above. 2) Vendor to note that to effect "Sale in Transit", BHEL shall issue "Delivery Note" to the Transporter for transferring the ownership from BHEL to the customer (RRVUNL). 3) Delivery Note shall be carried by transporter along with other dispatch documents. |
| 3. | Customer Name | M/S Rajasthan Rajya Vidyut Utpadan Nigam Limited, Rajasthan. |
| 4. | Customer Consultant | Tata Consulting Engineers Ltd (TCE) 73/1 St. Marks Road, Bangalore-560001 |
| 5. | Customer Order Ref No | RVUN/SE/(TD-I)XEN(TD-II)/D.380, Dated-23.05.2013 |
| 6. | Customer/Owner's TIN No. | 08332105465 |
| 7. | Customer/Owner's PAN No. | AABCR7436B |
| 8. | Buyer and Paying Authority | A) For Inter-state sales (where CST is applicable): BHEL-ISG, Bangalore B) For Intra-state sales (where VAT is applicable): Paying Authority shall be same as referred above. However, Buyer will be BHEL-PSNR, Noida. Detail requirements are enclosed as Annexure-I to SCC which are to be followed strictly. |
| 9. | BHEL-ISG TIN | 29630078284 |
| 10. | BHEL-ISG Pan No | AAACB4146P |
| 11. | BHEL-ISG CST No. | 70160429 dated. 19.09.02 |
| 12. | Mode of Dispatch | By Rail/Road/Sea. Note : It is Vendor's responsibility to ensure availability of trucks well in advance for dispatch of material to meet contractual delivery requirement |
| 13. | Road Permit Requirement | Required. To be provided by RRVUNL. |
| 14. | Transit Insurance | In BHEL Scope. A) Policy number - <ul style="list-style-type: none"> • SCE-500300/44/14/04/40000007, Policy period- 22/07/2014 to 21/05/2017 |

| | | | |
|---|---|---|--|
|   | Industrial Systems Group (Projects Purchase/Works-1) | Special Conditions of Contract (SCC) Revision no. 00 | 2 X 660 MW Suratgarh Super Critical Thermal Power Station Stage-V, Units 7 & 8 Dust Extraction System 27.02.2016 |
|---|---|---|--|

| | | |
|-----|--|--|
| | | <ul style="list-style-type: none"> • MARINE-500300/21/14/02/00000055, Policy period- 22/07/2014 to 21/05/2017 <p>B) Contact details :- Anju Kochhar Assistant Manager UIIC-LCB Delhi 9650052495 (Mobile) E-mail: anjukochhar@uiic.co.in</p> <p>Prior Dispatch intimation shall be issued to Insurance agency about the value of consignment, dispatch details, along with one set of documents consisting of LR / RR copy, Packing List, Challan indicating the items dispatched (with their weights). A copy of above should be sent to the following :</p> <p>a) BHEL. Site office (Address same as Consignee address) b) BHEL-ISG, Prof CNR Rao Circle, IISc Post, Malleswaram, Bangalore-560 012.</p> |
| 15. | Unloading at Site | In the scope of vendor. |
| 16. | Storage at Site | In the scope of vendor including construction of stores. |
| 17. | Movement of Material Within Site | In the scope of vendor. |
| 18. | Provision of Facilities at Site : (Applicable for Turnkey Packages) | <p>a) Electricity: - Construction Power at 415 V (3 phase) level shall be provided at one point in the project "Site" free of cost. All temporary wiring must comply with local regulations and will be subject to RRVUNL inspection and approval before connection of supply. The free supply of power will not be provided for the use in labour and staff colony.</p> <p>b) Construction Water: - Construction water shall be provided free of cost at one point.</p> |
| 19. | Delivery Schedule | <p>Delivery Schedule for this package shall be –</p> <p>a. Completion of Supply (Main Supply, Mandatory & Commissioning Spares): Within 8 (Eight) months from the date of LOI.</p> <p>b. Completion of Erection & Commissioning: 03 (Three) months from the date of availability of respective fronts.</p> <p>Completion of all facilities pertaining to DE system, including trial operation of complete system shall be within 3 months from the date of availability of last front.</p> <p>NOTE : Vendor shall strictly adhere to ‘L2’ schedule : In case of non compliance to agreed schedules / milestones, then it</p> |



| | | |
|-----|---------------------------|--|
| | | would be presumed that vendor / contractor is not fulfilling contractual obligations. BHEL reserves the right to take suitable action like operating "Risk & cost clause". |
| 20. | Project management | <p>To meet the need of project management, contractor shall provide the following services within quoted/ accepted prices :</p> <p>PLANNING & MONITORING</p> <ul style="list-style-type: none">• The contractor shall prepare L1 schedule/ network of engineering, manufacturing, testing, and procurement of sub-vendor items, as per delivery schedule given in this document. This network must conform to the overall project schedule.• Based on L1 network the contractor will prepare L2 network which will indicate exhaustive list of activities of engineering, procurement of raw materials, manufacturing, testing, procurement of sub-vendor items, and dispatch as per delivery schedule given in this document. This network must include all milestones and key activities for each subsystems/ components in the areas of engineering (wherever applicable), procurement, manufacture (wherever applicable), dispatch, erection/ commissioning etc.• Above schedules are to be preferably made in MICROSOFT PROJECT so that the same is compatible with BHEL's project management software.• Above schedules/ networks would be submitted to BHEL sequentially by the contractor within 15 days from date of LOI and finalized within a month.• PROGRESS REPORTING• The contractor shall prepare and submit to BHEL monthly progress report indicating progress on key activities, management summary for critical activities, list of actions requiring attention of BHEL in CD (compatible to BHEL software) and also in requisite number of hard copies. The input & output data for all such schedule shall be furnished to BHEL in a manner compatible with BHEL software available at site. A copy of the progress report must be submitted to Project Manager/ Suratgarh latest by 7th of every month covering the detailed progress achieved in the previous |



Industrial Systems
Group (Projects
Purchase/Works-1)

Special Conditions of
Contract (SCC)
Revision no. 00

2 X 660 MW Suratgarh Super
Critical Thermal Power Station
Stage-V, Units 7 & 8

Dust Extraction System
27.02.2016

| | | |
|-----|----------------------|--|
| | | <p>month.</p> <ul style="list-style-type: none"> The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which the contractor intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and the slippage's do not accumulate and effect the overall program. Weekly progress review meetings will be held at site during which actual progress during the week vis-à-vis scheduled program shall be discussed or actions to be taken for achieving targets. The program of subsequent week shall also be presented by contractor for discussions. The contractor shall constantly update/revise his work program to meet the overall requirement. Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of bidder will be held once in a month at Bangalore/site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings. Successful bidder has to provide electronic/ computerized storing and re-production/ printing/ plotting of various data, log sheets, protocols, measurements etc. These may be stored in virus free CD & handed over to BHEL as per requirement. Other provisions of GCC of this tender would be applicable. |
| 21. | Payment terms | <p>As per GCC.</p> <p>The clause 9.3.1 (i) of general commercial terms & conditions of GCC, rev-01 shall be read as :</p> <p>Five percent (5%) pro rata payment of total basic price (excluding taxes, duties & freight) as per approved billing schedule against approval of design documents and drawings certified by Engineering and submission of Bank Guarantee of equivalent value valid till completion of supply (Valid initially up to contractual completion date of supply). Design document and drawings shall be as defined for</p> |





Industrial Systems
Group (Projects
Purchase/Works-1)

Special Conditions of
Contract (SCC)
Revision no. 00



2 X 660 MW Suratgarh Super
Critical Thermal Power Station
Stage-V, Units 7 & 8

Dust Extraction System
27.02.2016



| | | |
|-----|-------------------------|---|
| | | <p>approval in the technical specification.</p> <p>The clause 9.3.2 of general commercial terms & conditions of GCC, rev-01 shall be read as :</p> <p>Five percent (5%) of basic price of materials supplied along with freight, if applicable, will be released on pro-rata basis after storing at proper space and submission of Material Receipt Certificate (MRC) from project site engineer of Owner/ Purchaser.</p> <p>Collection of Material Receipt Certificate from Site/ Owner and its submission for claiming the payment shall be the responsibility of the Seller/Contractor.</p> <p>The clause 9.12 of general commercial terms & conditions of GCC, rev-01 shall be read as :</p> <p>In case of Turnkey packages (refer clause 9.3.3 & 9.4.3) , if the PG test is not conducted up to 24 months from the date of last dispatch for reasons not attributable to vendor, the last 10% payment will be released against Bank Guarantee of an equivalent amount, valid initially for 12 months and extendable till completion of PG test. This BG will be in addition to contract Performance Bank Guarantee for 10% of the contract value (Ex-Works / F.O.B.).</p> <p>(Copy of site certification / RAB (RAB format as per Annexure-III) for having completed the work shall be submitted by bidder at the time of claiming erection & commissioning payments along with other documents as mentioned in clause 9.7.5 of GCC)</p> <p>Vendor to ensure submission of billing schedule well in time to the Purchase department for approval.</p> |
| 22. | Guarantee period | 12 months from the date of final acceptance certificate (Completion of facilities and PG test). |
| 23. | Price basis | <p>For Supply: Firm till completion of the Project. Ex-works inclusive of packing & forwarding charges. Taxes, duties and freight to be paid in line with GCC.</p> <p>For E&C : Firm till completion of the Project. Service tax along with cess to be indicated separately and will be reimbursed at actuals. TDS shall be made for IT as per Income Tax act.</p> <p>(The E&C charges including service tax and cess should be at least 15% of the total contract price (excluding mandatory spares but including all taxes and freight), failing which the break-up of prices shall be adjusted accordingly for ordering.)</p> |

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|   | Industrial Systems Group (Projects Purchase/Works-1) | Special Conditions of Contract (SCC) Revision no. 00 | 2 X 660 MW Suratgarh Super Critical Thermal Power Station Stage-V, Units 7 & 8 Dust Extraction System 27.02.2016 |
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| 24. | Submission of Performance Bank Guarantee (PBG) | <p>PBG, in line with clause no 11 of general commercial terms & conditions of GCC, rev-01, is to be submitted within 10 days from the date of Letter of Intent (LOI).</p> <p>Clause no- 11.4 of general commercial terms and conditions of GCC, REV 01 shall be read as:</p> <p>Validity of the Bank Guarantee shall be for the entire Guarantee period + 3 months claim period. Initially, it should be at least 24 months + 03 months claim period, later extended to cover the guarantee period, two months before its expiry.</p> <p>Note: The Bank Guarantee to be provided in the hard and not in the SFMS format". Our bank details is as follows:</p> <p>Name of Site/division: BHEL ISG Name of Bank: ICICI BANK LIMITED Branch Address: ICICI BANK TOWER, # 1, COMMISSARIAT ROAD, BANGALORE – 560025 Phone No. of the Bank: 022-28308110 Branch Code: 0002 Branch IFSC Code: ICIC0000002 Account No: 000205003783 Nature of account: COLL A/C</p> |
| 25. | Taxes & Duties | <p>a) All Bidders to note that this is a Mega ICB (International Competitive Bidding) Project. Accordingly the benefits applicable to Mega project would be granted for this project (Project with deemed export benefits). In this regard applicable documents such as Project Authority Certificate (PAC) will be issued by RRVUNL (customer). Under this Project Authority certificate Zero % Custom Duty shall be applicable on the Import Contents of the supplier.</p> <p>b) RRVUNL shall issue PAC to BHEL as main vendor for availing zero custom duty for the imported supply applicable for this project ordered by BHEL and based on the above PAC, BHEL shall issue PAC to each vendor. The Bidder to indicate the Import contents i.e. list of the item, Currency of Import and Country of Import including CIF value in their offers. BHEL shall inform, the availability of CIF value for a particular package including ceiling limit, if any, during evaluation of offer. Bidder has to pass on the benefit of availing Zero % custom duty in price offered to BHEL.</p> <p>c) All bidders to note being a Mega Project, Excise Duty shall not be included in their prices to BHEL as per the nature of the project. However, BHEL shall issue PAC to main vendor for their self manufactured item only.</p> <p>Concessional CST presently 2 % against Form 'C' & E1/E2 is to be considered in their prices. Concessional CST/ VAT shall be considered for evaluation of offers to arrive at the L1 bidder.</p> |

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|   | Industrial Systems Group (Projects Purchase/Works-1) | Special Conditions of Contract (SCC) Revision no. 00 | 2 X 660 MW Suratgarh Super Critical Thermal Power Station Stage-V, Units 7 & 8 Dust Extraction System 27.02.2016 |
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| | | <p>The benefit of Nil Excise duty and concessional CST must be passed on to BHEL in their offer.</p> <p>VAT on your intra-state dispatch shall be paid subject to conditions specified in Annexure-I & II. VAT returns shall be submitted by the vendor as and when required by BHEL.</p> <p>Entry tax: If any, shall be payable by ultimate customer (RRVUNL) directly to sales tax authority. Hence the same should not be considered in the offer.</p> |
| 26. | Submission of E1/E2 forms | Submission of E1/E2 forms shall be ensured by Vendor within the time specified in sales tax act. |
| 27. | Inspection Agency | <p>Inspection of packages shall be carried out by agency as per below Inspection category of packages :</p> <p>For domestic suppliers : Vendor shall give inspection call in line with approved QAP/Customer/Owner Hold Points to BHEL-ISG / Third Party Inspection Agency (as informed by ISG) for arranging Customer/Owner/ Third Party participation (Where ever applicable), with an advance notice of 15 working days for participation in inspection/ Joint inspection on the proposed date. The MDCC shall be issued by Customer/Owner based on the BHEL-ISG report OR Joint inspection report of BHEL ISG & Customer/Owner (Wherever applicable).</p> <p>For foreign vendors : In case of Imported Supplies advance notice of 30 working days for participation in inspection (if applicable, in line with approved QAP/Customer/Owner Hold Points) to be given.</p> <p>The Test Certificates & Inspection reports duly accepted by the Foreign Vendor Inspection agency in line with approved QAP / Customer/Owner Hold Points shall be submitted to BHEL-ISG. The above Inspection reports & Test certificates shall be reviewed by ISG-Engineering in line with the Technical Specifications & Approved Data sheets and then sent to Customer/Owner for their clearance. The Customer/Owner dispatch clearance (MDCC) will be given to the Foreign Vendor or their representative in India through BHEL-ISG after acceptance/clearance of above test certificates by Customer/Owner.</p> <p>No item / equipments shall be dispatched without obtaining Material Dispatch clearance certificate from from BHEL-ISG Material Management Department irrespective of inspection categories.</p> |
| 28. | Inspection | <p>a) At manufacturer's works, prior to dispatch by BHEL / Customer / Consultant. Inspection call with internal TC's to be given 15 working days in advance by indigenous supplier and 30 working days in advance by foreign supplier. Inspection call should be furnished in the enclosed format only.</p> <p>b) Penalty for items not ready after inspection call / failure during</p> |

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|   | Industrial Systems Group (Projects Purchase/Works-1) | Special Conditions of Contract (SCC) Revision no. 00 | 2 X 660 MW Suratgarh Super Critical Thermal Power Station Stage-V, Units 7 & 8 Dust Extraction System 27.02.2016 |
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| | | <p>inspection: The expenses incurred by Customer / BHEL for travel, stay etc. shall be recovered from the vendor's bills.</p> <p>c) Cost towards the inspection of indigenous/Offshore equipments by Customer/Customer's consultant will be to bidder's account, which includes to & fro Airfare/Railway/Road fare charges, Boarding and Lodging, local transportation and other related expenses. The cost shall be included in the price.</p> <p>d) <u>Inspection calls shall be addressed to BHEL-ISG Purchase Department irrespective of inspection categories.</u></p> <p>No item / equipments shall be dispatched without obtaining Material Dispatch clearance certificate from BHEL-ISG Purchase Department irrespective of inspection categories.</p> |
| 29. | Dispatch Documents Required (to be furnished by Vendor) | <p>A) For customer billing by ISG, the supplier shall provide the following documents to BHEL-ISG in 4 sets :</p> <ol style="list-style-type: none"> 1) Copy of Vendor Invoice (Original Invoice in case of VAT) 2) Copy of Packing List indicating Quantity/ Gross weight/ Net weight and BHEL approved BBU item no. wherever applicable against each item dispatched. 3) Copy of Excise Duty Gate Pass 4) Original LR / RR 5) Receipted LR / delivery challan acknowledgement by RRVUNL / BHEL site engineer <p>B) For Vendor payments following documents are required in 4 sets: As per GCC</p> <p>In addition to the above, vendor may furnish mfg clearance/drg/docs approval date for the purpose of determining contractual delivery for expeditious processing of Invoices</p> |
| 30. | Dispatch Markings | <p>Each package/Drum delivered under the Contract shall be marked by Supplier as per details listed below and such marking must be distinct and in English language.</p> <ol style="list-style-type: none"> 1) Name and address of the consignee : Refer SI No-02 2) Dispatched by: (Vendor name) : A/c BHEL ISG, Bangalore 3} LR No 3) Package No / Total Package No eg: 1 of N, 2 of N; where N=Total no of packages in a particular consignment. 4) Type of Supply: "Main equipment supply, Essential Spares, Commissioning Spares" as the case may be. <p>Besides above necessary, packing shall bear a special marking "TOP", "BOTTOM", "DO NOT TURN OVER", "KEEP DRY", "HANDLE WITH CARE", etc.</p> |
| 31. | Packing Instructions | <p>For Commissioning Spares :</p> <p>The commissioning spares shall be properly packed in separate box and each spare shall be properly tagged (Tag description matching</p> |



Industrial Systems
Group (Projects
Purchase/Works-1)

Special Conditions of
Contract (SCC)
Revision no. 00



2 X 660 MW Suratgarh Super
Critical Thermal Power Station
Stage-V, Units 7 & 8

Dust Extraction System
27.02.2016

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| | | <p>with packing list) to facilitate their proper identification. One copy of Packing list must be put inside the Box.</p> <p>For Mandatory Spares/Essential Spares : The Essential spares shall be properly packed separately in separate box with separate consignment no. Boxes shall be painted with red colour bands, indicating Essential Spares in bold letters and each spare shall be properly tagged giving details i.e item number of the equipment in line with the customer approved BBU for Essential spares & Number per item (to match the description given in the packing slip) to facilitate their proper identification by ultimate customer RRVUNL Ltd. One copy of Packing list must be put inside the Box along with Manufacturing drawing no. reference, Catalogue reference etc.</p> <p>IMPORTANT:- One copy of packing list in each packet and one set of approved standard manufacturer's erection instruction/operation manual shall be sent along with Consignment for immediate reference by BHEL site.</p> |
| 32. | Drawing submission and approval | Drawing submission as per L2 network (to be furnished by the vendor and approved by BHEL). Obtaining drawing approval from the customer/consultant (i.e. RRVUNL / Owner's consultant-TCE) is the responsibility of vendor. However, BHEL shall assist the vendor in getting the approvals. |
| 33. | Final Drawings / Documents submission | 6 hardcopies sets Final Drawing / Documents along with O&M Manual or any other docs as applicable to be submitted along with 6 CD containing above docs shall be submitted by Vendor. |
| 34. | Approval of Sub-vendors | The supplier shall supply the materials from BHEL/ RRVUNL approved vendors only as specified as per technical specification no. RRVUNL/CHP PKG-E/001, rev no. 00, dtd. 26.02.16. |
| 35. | Arbitration | All questions and disputes/difference relating to the meaning of the specifications, design, drawings and instructions and or interpretation of the contract or its clauses and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawing, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the sole arbitration appointed by the Chairman & Managing Director/Executive Director (Incharge of the Unit) / General Manager (Incharge of the Unit) / concerned Additional General Manager of the Unit of BHEL. The cases referred to arbitration shall be other than those for which the decision of the Dy. General Manager / Sr. Manager /Project Manager/Manager/Sr. |



| | | |
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| | | <p>Engineer/Engineer, is expressed in the contract to be final and conclusive. The arbitrator to whom the matter is originally referred being unable to act for any reason, Chairman & Managing Director/Executive Director (Incharge of the Unit) / General Manager (Incharge of the Unit) / concerned Additional General Manager of the Unit of BHEL, shall appoint another person to act as sole arbitrator and such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.</p> <p>Subject as aforesaid the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings.</p> <p>It is a term of the contract that the party invoking arbitration shall specify the dispute or disputes including specifying the quantum of financial claim, if any, to be referred to arbitration under this clause together with the amount or amounts claimed in respect of each such dispute.</p> <p>The arbitrator (s) shall complete the entire arbitration and publish an award within a period of twelve months from the date the Tribunal enters upon the reference.</p> <p>The parties to this arbitration agreement may before or at the time of invoking the Arbitration clause, may indicate in writing for FAST TRACK PROCEDURE wherein the Arbitrator shall pass an award within six months from the date the Tribunal enters upon the reference and to that effect, the Tribunal may dispense with any technical formalities and conduct the proceedings without oral hearing, subject to acceptance of such Fast Track procedure by other party.</p> <p>The work under the Contract shall continue during the arbitration proceeding and no payment due to the Contractor shall be withheld on account of such proceedings.</p> <p>The Arbitrator shall be deemed to have entered on the reference on the date one party issues notice to other party invoking arbitration clause under this. The Venue of arbitration shall be Bangalore and the language will be English only. The award of the arbitrator shall be final, conclusive and binding all parties to this contract. “</p> |
| 36. | Ethics In Business Dealings | <p>In order to protect its commercial interests, BHEL may take action against suppliers/ contractors by way of suspension of business dealings with them, who either fail to perform or are in default without any reasonable cause, cause loss of business/ money/</p> |

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|   | Industrial Systems Group (Projects Purchase/Works-1) | Special Conditions of Contract (SCC) Revision no. 00 | 2 X 660 MW Suratgarh Super Critical Thermal Power Station Stage-V, Units 7 & 8 Dust Extraction System 27.02.2016 |
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| | | reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price as per the guidelines for Suspension of Business Dealings with Suppliers / Contractors available at www.bhel.com under "supplier registration page". |
| 37. | Fraud prevention policy | The Bidder along with its associate/collaborators/sub-contractors/sub vendors/ Consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice." |

**BHEL-ISG-BANGALORE
BUSINESS GROUP -1A**



Annexure -I to SCC

Special conditions of Contract for 2x660 MW CHP & AHP Package for Suratgarh Super Critical Thermal Power Project, Sri Ganganagar Dist., Rajasthan

In order to avail the benefits of input tax credit available to BHEL in case of VAT leviable on intra-state transaction between BHEL and Vendor and to fulfill the compliances as per requirements of applicable state's VAT law, the following modality shall be applicable. BHEL has identified a nodal agency in each state to take care of VAT compliances in the state in which project is located. For the subject project, nodal agency shall be:

BHEL-PSNR (Tin No: 08232903345)

The Address is as under:

BHEL-PSNR, Noida

HRDI&PSNR Complex

Plot No-25, Sector-16A

Noida-201301 (U.P)

Nodal agency is defined as buyer and BHEL-ISG shall be paying agency in such cases, where VAT is applicable. Vendors original tax invoice of intra-state transactions is one of the important documents for availing input tax credit. In this regard, the following may be noted by all vendors for strict compliance.

- ⇒ As a general rule, a tax invoice must be original, must contain vendors TIN no. with full address, invoice no. & date, product description with unit rate, quantity, value, VAT rate, VAT amount, gross value of bill, buyer i.e. BHEL's address with TIN. no. (as given as above) special marking like "Original" and/or "valid for input credit" / "buyer can take credit against this" etc as per applicable state VAT law.
- ⇒ Please note that BHEL's address and TIN to be mentioned in vendors tax invoice shall be principal place of business & applicable TIN no. of Nodal agency of BHEL as given above. In no case the vendor's invoices shall be addressed to BHEL-ISG nor shall they contain our TIN. However for payment purposes, the invoice may mention BHEL-ISG as paying authority.
- ⇒ As original tax invoice of vendors are to be furnished to nodal unit for assessment/VAT audit purposes. Extra copy of original invoice is required to be submitted by vendors for retaining with ISG bank payment voucher.
- ⇒ Original tax invoice along with extra copy of original tax invoice in line with respective state VAT law shall be essential document to be submitted by vendor for claiming payment.
- ⇒ Vendor shall also furnish a certificate / statement / document as prescribed under applicable State VAT law. Please note that some of the states requires additional certificate / documents e.g. Haryana requires certificate in form C-4 in addition to original tax invoice.
- ⇒ Please note that reimbursement payment of VAT shall be subject to furnishing of VAT compliant tax invoice and other certificate / document as per applicable state VAT law.
- ⇒ Tax invoice must show VAT rate & VAT amount separately and in no case all inclusive prices is to be shown in the tax invoice since input credit is not admissible in case VAT is not indicated separately.
- ⇒ In case vendor is unable to furnish VAT compliant tax invoice & other certificate / document, VAT shall not be reimbursed by BHEL.
- ⇒ Where the supplies are made from within the state where the project is located, the vendor has to provide VAT invoice for such supplies even if the price quoted is all inclusive.

NOTIFICATION No.F.12(101)FD/Tax/2011-59 Dated 13th August, 2013

In exercise of the powers conferred by sub-section (3) of section 8 of the Rajasthan Value Added Tax Act, 2003 (Act No. 4 of 2003), and in supersession of this Department's notification No.F.12(63)FD/Tax/2005-80 dated 11.08.2006, as amended from time to time, the State Government being of the opinion that it is expedient in the public interest so to do, hereby, with effect from 01.10.2013, exempts from payment of tax the registered dealers engaged in execution of works contract, leviable on the transfer of property in goods (whether as goods or in some other form) involved in the execution of works contract(s) subject to the following conditions, namely:-

(1) That such dealer may opt for payment of exemption fee in lieu of tax payable on the transfer of property in goods (whether as goods or in some other form) involved in the execution of works contract and for this purpose he shall submit the application in Form WT-1 appended to this notification, electronically through the Official Website of the Department duly digitally signed by the dealer within sixty days from the date of the award of the works contract, along with the self attested and legible scanned copy of Work Order and G-Schedule, to the Assessing Authority or the Officer authorized by the Commissioner in this behalf. In case the works contract is of the nature that the cost of material does not exceed five percent of the total contract amount, a self attested and legible scanned copy of Certificate from the Awarder to this effect shall also be submitted along with the application. Where the application in Form WT-1 is not digitally signed, the dealer shall furnish the acknowledgement generated through the Official Website of the Department duly verified by himself or his business manager by affixing his signature on it within ten days from the date of submission of application and failure to do so shall be deemed to be a case of non-submission of application in Form WT-1.

(2) Where the dealer fails to furnish the scanned copy of Work Order and / or G Schedule and / or certificate of the awarder, as the case may be, along with the application, the dealer shall furnish the acknowledgement generated through the Official Website of the Department duly verified by himself or his business manager by affixing his signature on it along with the hard copies of Work Order and / or G-Schedule and / or certificate of the awarder, as the case may be. within ten days from the date of submission of application under clause (1) to his Assessing Authority or the Officer authorized by the Commissioner in this behalf, and failure to do so shall be deemed to be a case of non-submission of application.

(3) The assessing authority or any officer not below the rank of an Assistant Commercial Taxes Officer authorized by the Commissioner in this behalf shall reject the application for exemption certificate, where,-

(a) the applicant dealer has failed to comply with an order demanding initial or additional security under section 15 of the Rajasthan Value Added Tax Act. 2003 and/ or sub-section (2A) of section 7 and / or under sub-section (3A) of section 7 of the Central Sales tax Act, 1956; or

(b) the applicant dealer has failed to furnish any return or returns in accordance with the provisions of the Rajasthan Value Added Tax Act, 2003 and the Central Sales Tax Act, 1956 for the immediately preceding two years.

On rejection of the application the dealer may apply afresh for the same, within the time specified in clause 1 above, on fulfillment of the above requirements.

(4) Subject to the provisions of clause (3) above, the Assessing Authority or the Officer authorized by the Commissioner in this behalf, on being satisfied that the application is complete in all respect, shall issue exemption Certificate in form WT-2 appended to this notification in the manner as provided in the official Website of the Department within twenty one days of submission of the application.

(5) The dealer shall submit separate application in Form WT-I. for payment of exemption fee in lieu of tax payable on the transfer of property in goods (whether as goods or in some other form) involved in the execution of works contract, for each work order separately.

(6) Where any excess payment is made to such dealer by the awardee for any additional work or value of the contract is enhanced in relation to the works contract for which exemption certificate has already been issued, the exemption certificate shall be revised accordingly on submission of an application in form WT-4 along with documentary evidence in this regard issued by the awardee, within sixty days of such communication from the awardee, and a revised Exemption Certificate shall be issued to the dealer through the Official Website of the Department.

(7) Where the dealer fails to submit the application within the time provided in clause (1) or in clause (6), he may be allowed to submit the same, on payment of late fee mentioned below, along with an application in form WT-3 appended to this notification to condone the delay mentioning therein the details of payment of late fee.

| Period of Delay | Amount of late fee |
|---|----------------------|
| Up to one year from the date of award of works contract | Rupees one thousand |
| More than one year but up to two years from the date of award of works contract | Rupees five thousand |

(8) No application under this notification shall be entertained after expiry of two years from the date of award.

(9) That such dealer shall pay exemption fee at such rate as may be notified by the

State Government from time to time in Column Number 3 of the List given below clause 14 of this notification in the following manner:-

(i) Where an awarder is a Department of any Government, a Corporation, a Public Undertaking, a Co-operative Society, a local Body, a Statutory Body, an Autonomous Body, a Trust or a Private or Public Limited Company, an amount calculated at the rate as specified in Column Number 3 of the list given below clause 14 of this notification shall be deducted by such awarder from each bill of payment to be made in any manner to such dealer and all the provisions of payment of tax provided in the Act or the rules made thereunder for such dealer shall mutatis mutandis apply. In case such dealer has already received some payment for execution of works contract from the awarder before filing application, he shall enclose proof of payment / deduction of notified exemption fee on such payments, along with interest, if any, up to the date of filing of application, under this notification.

(ii) Where the awarder is not covered under sub-clause (i) above, such dealer shall be required to make payment of exemption fee in equal monthly installments in a period not exceeding the period of contract from the date of filing of application. In case such dealer has already received some payment for execution of works contract from the awarder, he shall enclose proof of payment of notified exemption fee on such payments, along with interest up to the date of filing of application, under this notification.

(iii) The amount already deducted by the awarder in lieu of tax from bill of payments to the dealer before the issuance of this notification shall be adjusted against the exemption fee.

(10) That such dealer shall not be entitled to claim input tax credit in respect of the goods used in execution of the works contract for which exemption certificate has been issued.

(11) That the certificate of exemption shall be liable to be cancelled by the assessing authority retrospectively.-

(i) if it is found that the same has been issued in contravention of the provisions of the Act, rules or notification; or

(ii) the dealer has concealed any facts regarding the works contract awarded to him.

(12) That the tax collected or charged, if any, by such dealer shall be deposited to the State Government and tax so deposited shall not be refunded or adjusted against the exemption fee.

(13) The exemption certificates issued under notification No.F.12 (63) FD / Tax / 2005-80 dated 11.08.2006. as amended from time to time, shall be deemed to have been issued under this notification.

(14) In case the rate of exemption fee is changed under this notification, the rate of exemption fee shall be the rate as mentioned in Column Number 3 of List given below, as is applicable on the date of submission of application.-

(i) for grant of exemption certificate; or

(ii) under clause 6 of this notification.

LIST

(See clause 9)

| Item No. | Description of work contract | Rate of exemption fee (% of the total value of the contract) |
|----------|--|--|
| 1 | 2 | 3 |
| 1 | Works contract where the cost of material does not exceed live percent of the total contract amount | 0.25 |
| 2 | Works contract relating to EPC Turnkey power projects awarded by Rajasthan Rajya Vidyut Utpadan Nigam Limited. | 1.00 |
| 3 | Works contract relating to Construction and Repair of roads. | 1.00 |
| 4 | Works contract relating to Construction and Repair of runways. | 1.00 |
| 5 | Works contract relating to Construction and Repair of bridges. | 1.00 |
| 6 | Works contract relating to Construction and Repair of dams. | 1.00 |
| 7 | Works contract relating to Construction and Repair of drains excluding sewerage system. | 1.00 |
| 8 | Works contract relating to Construction and repair of tunnels. | 1.00 |
| 9 | Works contract relating to Construction and Repair of canals /channels. | 1.00 |
| 10 | Works contract relating to Construction and Repair of barrages. | 1.00 |
| 11 | Works contract relating to Construction and Repair of diversion. | 1.00 |

| | | |
|----|--|------|
| 12 | Works contract relating to Construction and Repair of railway tracks. | 1.00 |
| 13 | Works contract relating to Construction and Repair of causeways. | 1.00 |
| 14 | Works contract relating to Construction and Repair of sub-ways. | 1.00 |
| 15 | Works contract relating to Construction and Repair of spillways. | 1.00 |
| 16 | Works contract relating to Construction and Repair of boundary walls. | 1.00 |
| 17 | Works contract relating to Construction and Repair of water harvesting structures. | 1.00 |
| 18 | Any other kind of works contract not covered by item Nos. 1 to 17 above. | 3.00 |

FORM WT 1

Application for grant of Exemption Certificate under notification No. F.12 (101) FI / Tax / 2011-59 Dated 13-08-2013

To

The Assistant Commissioner/

The Commercial Taxes Officer,

Circle _____

1. Name of the Applicant.
2. Name and address under which the applicant carries on business.
3. Registration Certificate No. (TIN).....
4. e-mail address:.....
5. Mobile No:.....
6. Status of the applicant such as Proprietor / Partner / Director / Karta of H.U.F. / Manager / Secretary.

7. Period during which works contract be executed: from.....to.....

8. Particulars of works contract (s):

| Sl. No | Name and address and the Awarder along with e-mail Address | Description of the dealer | Date of award of the contract |
|--------|--|---------------------------|-------------------------------|
| 1 | 2 | 3 | 4 |

| Description of Works contract | Stipulated period of completion of the contract | Total value of the contract | Place of execution of work | Rate of exemption fee (as per List given in Notification No. F.12 (101) FD /Tax / 2011-59 Dated 13- 08- 2013 | Exemption fee (Rs.) |
|-------------------------------|---|-----------------------------|----------------------------|--|---------------------|
| 5 | 6 | 7 | 8 | 9 | 10 |

I/we hereby undertake that if I/we fail to abide by any of the terms and conditions of the Notification No. F.12 (101) FD /Tax / 2011-59 Dated 13- 08-2013 or any provisions of the Act or Rules, I/we shall pay tax on the sale or purchase of such goods in accordance with the provisions of the Act. I/We also undertake to pay the revised exemption fee in case Exemption Certificate is revised.

I/we declare that the information given above is true and correct to the best of my/our knowledge and belief and nothing material has been concealed.

Signature of the applicant and

Attachments:

1. Scanned copy of work order.
2. Scanned copy of G-Schedule.
3. Scanned copy of certificate of awarder, if applicable.
4. Proof of payment of late fee. if applicable.

ACKNOWLEDGEMENT

ID No.

Date

Received from M/s _____ Registration No. (TIN) _____
 _____ Form No. WT-1 for the works contract (description of the
 contract _____ awarded by M/s. _____ for Rs.
 _____ for the period from _____ to _____ with following
 enclosures -

- 1.
- 2.

Original / Revised

FORM WT 2

(See clause 4 & 6)

Exemption Certificate under notification No F.12 (101) FD/Tax / 2011-59 Dated 13-08-2013

1. ID No..... dated.....
2. Name of Applicant with status.
3. Name and address of business.
4. Registration Certificate No. (TIN)
5. Details of the works contract and exemption

| SI. No | Description of the works Contract & Place of | Name and Address of | Total value of the | Rate of |
|--------|--|---------------------|--------------------|---------|
|--------|--|---------------------|--------------------|---------|

| | | | | |
|---|------------------|--------------------|-----------------|----------------------|
| | Execution | the Awarder | contract | exemption fee |
| 1 | 2 | 3 | 4 | 5 |

6. This certificate shall remain in force (till the completion of works contract unless cancelled or revoked earlier.

Place.....

Signature.....

Date.....

Designation.....

Exemption Certificate issued vide ID No..... dated..... has been revised on the application of dealer datedunder clause 6 of the notification No F.12 (101) FD/Tax / 2011-59 Dated 13-08-2013.

Place.....

Signature.....

Date.....

Designation.....

Form WT-3

(Sec clause 7)

Application to condone the delay under notification No F.12 (101) FD/Tax/ 2011-59 Dated 13-08-2013

To

The Assistant Commissioner /

The Commercial Taxes Officer,

Circle.....

1. Name of the dealer

2. TIN.....

3. Principal place of business.....

4. Date of award of works contract.....

5. Dale of submission of application.....

6. Period of delay.....

7. Reasons for delay.....

8. Details of deposit of late fee.....

| Challan No. | Date of deposit | |
|-------------|-----------------|--|
| | | |
| | | |
| | | |

Place.....

Signature.....

Date.....

Name.....

Status.....

Form WT-4

(See clause 6)

Application in case excess payment is made by the awarder

To

The Assistant Commissioner/

The Commercial Taxes Officer,

Circle.....

1. Name of the applicant
2. Name and address under which the applicant carries on business.
3. Registration Certificate No. (TIN).....
4. e-mail address:.....
5. Mobile No:.....
6. Status of the applicant such as Proprietor / Partner / Director Karta of H.U.F. / Manager Secretary.
7. Details of Form WT-2 received earlier.

| S. No | ID No. of WT- 2 | Date of issue | Description of works contract and place of execution of works as per WT-1 | Name of awarder | Total value the contrac shown in V |
|-------|-----------------|---------------|---|-----------------|------------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | | |
| | | | | | |

8. Particulars of excess payment made in the existing works contract (s):

| S. No | Name and address of the Awarder along with e- | Date of award of the contract | Amount of works contract as per | Amount of excess payment made by the awarder in | Total value of the contra ct (4 | Rate of exemption fee (as per List given in notification No F. 12 (101) FD / |
|-------|---|-------------------------------|---------------------------------|---|---------------------------------|---|
| | | | | | | |

| | | | | | | | |
|---|--------------|---|------|--|-----|---------------------------------|--|
| | mail Address | | WT-1 | continuation of works contract mentioned in column No. 4 | +5) | Tax / 2011- 59 Dated 13-08-2013 | t i c n f e e (F s .) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | | | | |
| | | | | | | | |

I / we declare that the information given above is true and correct to the best of my / our knowledge and belief and nothing material has been concealed and undertake to pay the revised exemption fee in accordance with notification No F. 12 (101) FD / Tax / 2011-59 Dated 13-08-2013

Signature of the applicant and his status.

Attachments:

1. Scanned copy of work order.
2. Scanned copy of G-Schedule.
3. Scanned copy of certificate of awarder, if applicable.
4. Proof of payment of late fee. if applicable.

Acknowledgement

ID No.

Date

M/s..... Registration No. (TIN)..... have submitted form No.WT-4 for the works contract (description of the contract)awarded by

M/s..... for Rs..... for the period from
to..... along with following enclosures:-

1.

2.

By order of the Governor,

(Aditya Pareek)

Joint Secretary to the Government

II. MEMORANDUM OF PAYMENTS

| | Rs. P. | I | II | Rs. P. |
|---|--|-----|----|--------|
| 1 | Total value of work actually measured as per Account No. 1, Column 10 | (A) | | |
| 2 | Total upto date 'on account' payment for work covered by approximate or plan measurements as per Account 1, Column 3 | (B) | | |
| 3 | Total upto date secured advances on security of materials as per column 8 of the enclosed Account (Form WAM 10) | (C) | | |
| 4 | Total upto date payments[(A)+(B)+(C)] | (D) | | |
| 5 | Total amount of Payments already made as per entry (D) of last Running Account.Bill No.: RAB- dated: forwarded to the Accounts Office on | (E) | | |

- 6 Balance [(D) - (E)]
- 7 Payments now to be made :
- a) by cash / cheque
 - b) by deduction for value of materials supplied by BHEL vide Annexure A attached
 - c) deduction for hire of tools and plant vide
 - d) by deduction for other charges vide Annexure C attached
 - e) by deduction on account of security deposit
 - f) by deduction on account of Income Tax

Note: Amounts relating to items 4 to 6 above should be entered in column II and those relating item 7 in column I. The amount shown against item 6 and the total of item 7 should agree with each other.

V. ENTRIES TO BE MADE IN THE ACCOUNTS OFFICE

Accounts Bill No: _____ Date: _____

Entered in Journal Book vide entry No.....Date: _____

Passed for : _____ Estimate No: _____ Code No: _____

Less Deductions: _____ Name of the work: _____

Rs. _____ Debit _____ Credit _____

Rs. _____ Ledger Head _____ Gross amount _____ Deductions _____

(Rupees.....only) _____ Rs. P. _____

Payable to Shri/M/s..... By cheque/cash _____

Entered in Contractors' Ledger No.....Page.....

Assistant _____ Accounts Officer _____

Date : _____ Date : _____ Total : _____

VI. Received Rs.....(Repees.....only) as per Memorandum of payments on amount of this work.

Signature of witness _____ Signature of Contractor _____

Address : _____ Date : _____

III. CERTIFICATE OF THE ENGINEER IN CHARGE

- 1.0 The measurements on which the entries in column 7 to 12 of Part I of this Bill (Account of work executed) are based were made by Shri _____ (Name & Designation) and are recorded at pages ___ to ___ of Measurement Book No _____
- 2.0 Certified that the methods of measurement are correct and the work has been carried out in accordance with the terms and conditions, schedules, specifications and drawings etc forming part of the contract agreement subject to deviations included in the deviation statement (Annexure D).
- 3.0 Certified that in addition to and quite apart from the quantities of work actually executed as shown in column 10 of Part I, some work has actually been done in connection with several items and the value of such work is in no case, less than the 'on account' payments as per column 3 of Part I, made or proposed to be made, for the convenience of the contractor in anticipation of and subject to the results of, detailed measurement which will be made as soon as possible.

Signature of Contractor _____ Signature of Engineer in Charge _____

Date : _____ Designation : _____

IV. CERTIFICATE OF THE SENIOR ENGINEER

- 1 Certified that the measurements have been check measured to the prescribed extent by Shri _____ (Name and Designation) at site and also by the undersigned and the relevant entries have been initiated the Measurement Book _____ (vide pages ___ to ___)
- 2 Certified that all the measurements recorded in the measurement book have been correctly bill
- 3 Certified that all recoverable amounts in respect of materials tools and plant etc. and other charges have been correctly made vide annexure A to C attached.

Certified for payment* of Rs _____(In words) _____

To be paid in cash/by cheque in presence of _____

ALLOCATION _____ The expenditure is chargeable as under and to be included in the accounts for May 2007

| Ledger Head | Rs. P. | Rs. P. |
|----------------------|--------|---------------------|
| Debit [Gross amount] | | Credit [Deductions] |
| TOTAL | | |

*Here specify the net amount payable. _____ Signature of Senior Engineer _____

Date : _____ Date : _____

VII. ENTRIES TO BE MADE BY TREASURY SECTION

| Cash Book entry No. and date: | Amount paid Rs. | Rs. |
|-------------------------------|-------------------|-----------|
| | _____ | _____ |
| | Amount unpaid Rs. | _____ |
| | Total : | Rs. _____ |

Signature of Cashier _____

Date : _____

ANNEXURE A

Statement showing details of materials issued to the contractor :

in respect of Contract Agreement No.:

Date :

| Sl. No. | Stores issue voucher no. and date | Issue voucher No. and date allotted by stores to the SIV | Description of material issued to the contractor | Quantity issued (MT) | Quantity actually incorporated in the work | Whether recoverable from the contractor or supplied free | If recoverable from the contractor | | | REMARKS | |
|---------|-----------------------------------|--|--|----------------------|--|--|------------------------------------|--------------------|---------------------------------------|---------|----|
| | | | | | | | Rate at which recoverable | Amount recoverable | Amount recoverable upto previous bill | | |
| | | | | | | | Rs. P. | Rs. P. | Rs. P. | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | | | | | | | | | | | |

TOTAL : (MT)

Signature of Contractor

Date:

Signature of Engineer in Charge

Date:

Signature of Senior Engineer

Date:

ANNEXURE B

Statement showing details of materials issued to the contractor :

in respect of Contract Agreement No.:

Date :

| Sl. No. | Description of tools and plant issue | Period for which issued | Rate at which recoverable to be made | Amount recoverable | Amount recoverable upto previous bill | Balance now recovered | Remarks |
|---------|--------------------------------------|-------------------------|--------------------------------------|--------------------|---------------------------------------|-----------------------|---------|
| | | | Rs. P. | Rs. P. | Rs. P. | Rs. P. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

TOTAL :

Signature of Contractor

Date :

Signature of Engineer in Charge

Date :

Signature of Senior Engineer

Date :

ANNEXURE C

Statement showing details of other recoveries to be made from the contractor :

in respect of Contract Agreement No.:

Date :

| Sl. No. | Particulars | Unit | Quantity | Rate at which recoverable to be made Rs. P. | Amount recoverable Rs. P. | Amount recoverable upto previous bill Rs. P. | Balance now recovered Rs. P. | Remarks |
|---------|--|------|----------|--|------------------------------|---|---------------------------------|---------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Water Charges | | | | | | | |
| 2 | Electricity Charges | | | | | | | |
| 3 | Seignorage Charges | | | | | | | |
| 4 | Medical Charges | | | | | | | |
| 5 | Cost of empty gunny bags and empty containers not returned | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |

TOTAL :

Signature of Contractor

Date :

Signature of Engineer in Charge

Date :

Signature of Senior Engineer

Date :

**ANNEXURE D
DEVIATION STATEMENT**

Contract Agreement No.:

Name of the Contractor :

Name of the work :

Date :

| Sl.No. | Description of item | Unit | Quantity as per agreement | Quantity executed | as | Quantity further anticipated | Total quantity anticipated on completion | Rate as per agreement Rs. P. |
|--------|---------------------------|------|---------------------------------|----------------------|----|------------------------------------|--|------------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | | | | | | | |

| Rate as executed Rs. P. | Amount as agreement Rs. P. | per | Amount as executed Rs. P. | Amount further anticipated Rs. P. | Total amount anticipated on completion P. | Difference | | Reason for the deviation with authority if any |
|-------------------------------|----------------------------------|-----|---------------------------------|--|---|------------------|-------------------|--|
| | | | | | | Excess Rs. P. | Savings Rs. P. | |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| | | | | | | | | |

Signature of Engineer in Charge

Date :

Signature of Senior Engineer

Date :

QUESTIONNAIRE TO BE ANSWERED BY ENGINEER IN CHARGE AND SENIOR ENGINEER

(Correct particulars and answers to be recorded)

1. Name of the work :
2. Name of the Contractor :
3. Date of Commencement of the work :
4. Contract Agreement/ Work Order No. and date :
5. Reference to supplementary agreement no. :
6. Whether administrative approval and technical Sanction has been accorded by the competent Authority? If so, cite reference. :
7. Whether sanction of the competent authority And financial concurrence of the Accounts Department for award of the work has been Accorded ? If so, cite reference :
8. Whether the work has been completed in time? If not, whether penalty has been levied Or sanction of the competent authority for Extension of time granted and communicated to the Accounts Department with reasons for grant of extension ? (Due and actual date of completion of the work and reference to letter No. and date granting the extension of time Should be given). :
- 9(a) Whether the rates allowed in the bill have been checked with the contract agreement :
- 9(b) Whether the rates for extra/ supplemental items have been approved by the competent authority and the sanction communicated to the Accounts Department together with rate analysis ? If so, cite reference. :
10. Whether deviations have been approved by the competent authority ? If yes, give reference to the approval; if not, give reasons :
11. Whether the rates of recovery of stores issued to the contractor which are not provided for in the Contract Agreement have been settled in the consultation with Finance. :
12. Whether discrepancies pointed out by the Accounts Department in the stores statement have been reconciled and accepted by the Accounts Department. :

13. Whether materials issued to the contractor in excess of the theoretical requirements have been returned to the stores Department and the No. and date of such returned stores vouchers have been shown in stores statement ? If not, whether the cost of such excess material has been recovered at the prescribed rate ? Whether consumption statement in respect of materials chargeable to the bill? :
14. Whether consumption of materials shown has been technically checked by senior engineer? :
15. Whether materials issued and used in the work is not less than that required for consumption in work according to our specifications? If consumption is less, whether necessary recovery has been made in the bill? :
16. Whether measurements have been checked by the engineer and senior engineer to the extent required and certificates of check recorded in the measurement books? :
17. Whether contractor has signed the bill and the measurement books without reservations? If not, whether reasons have been intimated. :
18. Whether arithmetical calculation have been checked and certificate recorded in the measurement books by person other than the one who calculated initially. :
19. Whether any work was done at the risk and cost of the contractor and whether such cost has been recovered from him? Give particulars. :
20. Whether all advance payment on running accounts have been recovered. :
21. Whether all the recoveries due for services Given to the contractor like rent of accommodation, water charges etc.have been recovered and whether payments made by the company on behalf of the contractor have been adjusted? :
22. Whether the files containing abstracts from measurement books/standard measurement books have been completed/updated? :
23. Whether hire charges of tools & plant have been recovered and the statement of hire charges with full details attached? :

24. Whether the certificate of workmanship & completion of work according to specifications ,drawings etc. is recorded by engineer/senior engineer and whether recoveries have been made for defective works, if any? :
25. Whether the corrections in the bill/ measurement books etc. have been neatly made & attested & there are no over writings? :
26. Whether the final measurements have been taken as soon as possible after completion of the work and the certificate of completion issued? If not, whether reasons for delay have been recorded and communicated to Accounts? :
27. In respect of quantities reduced in the final bill as compared to the running payment, whether adequate reasons have been recorded and communicated to Accounts? :
28. Whether the expenditure has been classified correctly according to heads of account recorded in the sanctioned estimates? :
29. Whether the work has been completed within the estimated cost? If not, what is the percentage of excess over the sanctioned estimate/ administrative approval? In case the excess is beyond the competency of the Senior Engineer, what action has been taken for obtaining the approval of the authority competent to sanction the excess? :
30. (a) If the contractor has furnished bank Guarantee in lieu of cash security deposit towards proper execution of works and guarantee against defects during the maintenance period, whether the period of currency of the bank guarantee covers the entire maintenance period? :
30. (b) If not, whether security deposit has been proposed to be recovered from the final bill? :
31. Whether all the previous audit objections raised on running account bills have been settled? If so, cite reference. :

Signature of Engineer in Charge
Date:

Signature of Senior Engineer
Date:

BHEL-ISG Bangalore, invites offers from reputed Vendors (Refer pre-qualifying requirements and other requirements given in tender enquiry) for “Dust Extraction System” as per mentioned Technical Specifications for “2X660 MW Suratgarh SCTPS, St-V, UNIT-7&8” as per details hosted on website www.bhelisg.com / www.bhel.com / <http://tenders.gov.in> / www.eprocure.gov.in.

The enquiry has been floated through e-procurement and offers shall be accepted through e-procurement only. BHEL shall neither entertain offers through hard copy nor provide any due date extension on account of the same. Interested vendors who do not have login ID and password are requested to register themselves on <https://bheleps.buyjunction.in/> through “Register” or “New supplier” link available on the portal. For assistance, please call the helpdesk numbers available on the website.

Class-III, SHA2 2048 BIT – Signing & Encryption, Digital Signature Certificate (DSC) is required for bidders for authentication purpose (log in and bid submission). Vendors, who do not possess the DSC, are requested to obtain the same. The procedure for obtaining DSCs is detailed in the “Seller Manual” available on the above mentioned website

Tenders shall be submitted in Two parts on or before the Due Date and time indicated on the portal as per the following instructions :

PART – I : Technical & Commercial bid

Comprising of following:

1. PQ qualification documents (Mandatory)
2. Annexure-I to GCC (Mandatory)
3. General conditions of contract, GCC (Mandatory)
4. Special conditions of contract, SCC (Mandatory)
5. Technical offer, comprising of technical specification and other documents as asked in technical specifications e.g. drawings, test report etc. (Mandatory)
6. Annexure-III to GCC (Declaration about completeness of price) - (Mandatory)
7. Annexure-XII to GCC (Optional)

“NO DEVIATION CERTIFICATE” FOR COMMERCIAL TERMS AND CONDITIONS as per General Conditions of Contracts (GCC, Rev.01), Special Conditions of Contracts and RFQ in case of no deviations

8. Integrity Pact Agreement (Mandatory if shown on portal, not applicable otherwise)
9. Unpriced copy of Annexure-II, cost of withdrawal of deviation (Mandatory)

Any deviation not mentioned in un-priced copy of Annexure-II format, but mentioned in the priced copy, shall not at all be accepted.

Bidder to note all the points mentioned in “Notes” of Annexure-II to GCC Rev.01.

Cost of withdrawal for the deviations, for which, the “Cost of withdrawal” is not specified, shall be taken as NIL.

The vendors shall be forced by the system to upload the above documents which are marked mandatory. All the documents are to be stamped and uploaded. The Annexure mentioned at SI no 2, 6 & 7 (if applicable), above should be duly filled by the bidder and should be printed on their letter head before uploading.

PART – II : Price bid

Containing

1. Prices as per price format,
2. Cost of withdrawal of deviation as per Annexure-II, to be uploaded strictly as per Price Schedule of BHEL for complete scope of Tender Enquiry.

NOTE: Offers are liable to be rejected for changes made by vendors in the Price Schedule, except those specified in the unpriced bid and accepted by Purchaser.

The clause nos 2.6 & 2.7 of INSTRUCTIONS TO BIDDERS of GCC shall not be applicable for this tender.

It shall be the responsibility of the bidder to ensure that the tender is submitted on or before the due date and time as mentioned above.

Bidders who are logged in the e-procurement at the time of bid pening can view the bid opening process by joining the discussion panel.

Contact person (Technical) : :

Mr Love Kush Verma, Engineer, 080-22184211, lkv@bhelisg.com

Mr Karthik T, Manager, 080-22184119, kt@bhelisg.com

For Commercial : Mr Sushil Kumar, Senior Engineer, 080-22184527, sk@bhelisg.com

Mr Rajnish Chaudhary, SDGM, 080-22184032, rcd@bhelisg.com

ENQUIRY TERMS AND CONDITIONS

1.The prices offered shall be firm till the completion of project.

2.Tenders shall be submitted strictly in accordance with the requirements of the above tender documents. In case of deviations (Technical/ Commercial), the same shall be highlighted separately giving clause references along with the Cost of withdrawal of Deviations as per Annexure-II to GCC Rev. 01 of "DEVIATION SHEET (COST OF WITHDRAWAL)" along with reasons for taking such deviations.

Cost of withdrawal for the deviations, for which, the "Cost of withdrawal" is not specified, shall be taken as NIL.

Bidder to note all the points mentioned in "Notes" of Annexure-II to GCC Rev.01.

3.Bidder has to submit "NO DEVIATION CERTIFICATE FOR COMMERCIAL TERMS AND CONDITIONS as per General Conditions of Contracts (GCC, Rev.01), Special Conditions of Contracts and Notice Inviting Tender (NIT)" in case of no deviations.

4.Purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any/all tender(s) in part or full without assigning any reason whatsoever.

5.Purchaser reserves the right to split up the scope of the tender enquiry and place the orders for different scope/items with different bidders and also increase or decrease the quantity.

6. Bidders must enclose the Quality Plan in the prescribed format, for approval. Equipment will be dispatched only after Purchaser's/Owner's inspection at the hold points specified in the approved Quality Plan and issue of Material Dispatch Clearance Certificate (MDCC) from BHEL-ISG Material Management Department irrespective of inspection categories.

7. All correspondence thereof, shall be addressed to the RFQ owner as mentioned above.

The bidders shall submit all their queries/clarifications before four days from the due date of submission after which it will be presumed that there are no queries/clarifications and BHEL will be under no obligation to reply queries/clarifications raised after the date.

8. Pre-Qualifying Requirements:

Bidders are requested to furnish the details as per "TECHNICAL AND FINANCIAL PRE-QUALIFYING REQUIREMENTS" (attached with the enquiry document) and to submit the credentials.

Bids of only those bidders shall be evaluated who meet the Technical as well as Financial pre-qualifying requirements, if applicable.

Only those bidders, whose offer is technically and commercially recommended, shall be allowed to participate in RA/ Price-Bid opening.

9. Bidder to note that this is a conditional enquiry for those who are not approved by Customer / Owner for the subject project/ package, and the price bid (Part-II) opening/RA shall be subject to following criterion:

Approval of bidder by Customer / Owner

Approval shall be taken up by BHEL with customer / Owner based on the credentials/reference list. Hence Bidders are requested to submit the following (as part of their credentials) on or before technical bid Part-I opening:-

- i. Company Profile
- ii. Copy of received Purchase Orders of similar equipment

iii. Reference list indicating PO details, customer / Owner name, PO date, execution date etc.

iv. Performance certificate issued by the clients.

10. Bidders, who are not registered with BHEL-ISG, are requested to get registered through online supplier registration portal available on <http://www.bhel.com/home.php>

11. Bidders to indicate their import content (CIF) in the format provided along with the price schedule given with NIT.

12. BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.

In case BHEL decides to go for Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit 'online sealed bid' in the Reverse Auction. Non-submission of 'online sealed bid' by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.

Bidders are requested to refer Terms & Conditions of Reverse Auction' attached along with tender enquiry.

13. All the above Tender Documents shall automatically become a part of the Order/Contract after its finalisation.

14. The evaluation of the offer shall be done based on Total Lump sum Cost to BHEL (i.e. Total F.O.R. site price for supply plus Total E&C charges, if applicable, with necessary loadings as applicable) as per GCC Rev. 01.

15. Bidders are requested to visit our websites on regular intervals to update themselves for any technical or commercial change in the NIT.

16.All corrigenda, addenda, amendments, time extensions, clarifications etc, to the tender will be hosted on websites only. Bidders are requested to visit constantly our websites to keep themselves updated.

17.In order to protect its commercial interests, BHEL may take action against suppliers/ contractors by way of suspension of business dealings with them, who either fail to perform or are in default without any reasonable cause, cause loss of business/ money/ reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price as per the guidelines for Suspension of Business Dealings with Suppliers / Contractors available at www.bhel.com under “supplier registration page”.

18.Integrity Pact is to be duly filled and submitted along with the offer without fail.

19.Name of Independent External Monitor :

Shri V.V.R Sastry,

Ex-CMD/ BEL,

957, 9th Main, 3 Stage,


3 Block, Basaveswaranagar

Bangalore- 560079

20. Order of Precedence

In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:


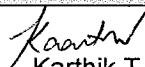
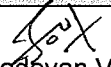
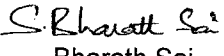


1. Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL.
2. Price Schedule
3. Special Conditions of Contract (SCC)
4. Technical specification & scope of work
5. General Conditions of Contract (GCC)


| | | |
|--|---|---|
| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |

PACKAGE- E

SPECIFICATION NO. – 001


TECHNICAL ENQUIRY SPECIFICATIONS FOR
 DUST EXTRACTION PACKAGE

| | Prepared By | Checked by | Approved by |
|------------|---|--|--|
| Mechanical |  Lovekush Verma |  Karthik T |  Sahadevan V |
| Electrical |  Bharath Sai |  Venkateshwar Rao V |  L Bindu |

| | | |
|--|--|---|
| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |

CONTENTS


| Sl. No. | DESCRIPTION | SHEET No. | | |
|---------|---|-----------|----|----|
| | | | | |
| 1.0 | PROJECT INFORMATION | 03 | of | 19 |
| 2.0 | BROAD SCOPE OF WATER PACKAGE BIDDERS | 04 | of | 19 |
| 3.0 | DOCUMENTS/ INFORMATION TO BE FURNISHED ALONG WITH OFFER. | 11 | of | 19 |
| 4.0 | TECHNICAL REQUIRMENT | 12 | of | 19 |
| 5.0 | EXCLUSIONS | 13 | of | 19 |
| 6.0 | TERMINAL POINTS | 13 | of | 19 |
| 7.0 | ERECTION, SUPERVISION AND COMMISSIONING | 13 | of | 19 |
| 8.0 | DRAWING & DOCUMENTS | 14 | of | 19 |
| 9.0 | QUALITY ASSURANCE | 15 | of | 19 |
| 10.0 | INSPECTION & TESTING | 17 | of | 19 |
| 11.0 | GUARANTEED PARAMETERS, TRIAL OPERATION, TAKING OVER & PG TEST | 18 | of | 19 |
| 12.0 | LIST OF ENCLOSURES | 19 | of | 19 |

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |

1.0 PROJECT INFORMATION

Coal handling plant for 2X660 MW Suratgarh Thermal Power Station (Unit - 7 & 8) of Rajasthan Raja Vidyut Utpadan Nigam Limited (RRVUNL) proposed plant as described in the NIT specs. Salient features of the Project site are,

| 1.1 | | GENERAL SITE CONDITIONS | |
|-------|--|-------------------------|--|
| 1. | Owner / Purchaser | : | Rajasthan Raja Vidyut Utpadan Nigam Ltd. (RRVUNL) |
| 2. | Engineer/consultant | : | Tata Consulting Engineers Ltd (TCE) 73/1, St. Marks Road, Bangalore – 560 001 |
| 3. | Project Title | : | 2 x 660 MW, Super-Critical TPS, Stage-V, Unit # 7 & 8 at Suratgarh, Rajasthan |
| 4. | Project location | : | Prabat Nagar, Suratgarh, Sriganganagar district, Rajasthan. |
| 5. | Elevation (above Sea level) | : | 186 m (approximate) |
| 6. | Temperatures : Monthly basis | : | Mean of daily max. 32.8 deg.C (in the month of May) Mean of daily min. 17.6 deg.C (in the month of Jan) |
| 7. | Temperatures : Annual basis | : | Mean of daily max. 32.3 deg.C Mean of daily min. 19.6 deg.C |
| 8. | Highest temperature recorded | : | 50 deg.C |
| 9. | Lowest temperature recorded | : | (-) 2.8 deg.C |
| 10. | Design temperature | : | 50 deg. C |
| 11. | Relative humidity | : | Varies between 21% and 81% |
| 12. | Annual average rain fall | : | 312 mm |
| 13. | Annual mean wind speed : Calculations for wind effect shall be in accordance with IS:875-1987(Part-3) taking into account the following | : | 4 km/hr a) Basic wind speed = 47 m/sec b) Factor K1 = 1.07 c) Category of terrain = Category 2 d) K3 – as per IS 875 |
| 14. | Seismic data (As per IS: 1893 latest issue) | : | Zone II Designs & design coefficients will be based on IS 1893:2002 |
| 15. | Nearest railway station | : | Suratgarh JN |
| 16. | Nearest airport | : | Jaipur |
| 1.2 | | POWER SUPPLY SYSTEMS | |
| 1.2.1 | | MV System | |
| 1. | System Voltage | : | 6.6 kV \pm 10%, 3 Phase, 3 wire |
| 2. | System Frequency | : | 50 Hz \pm 5% |
| 3. | Combined Variation | : | 10% (absolute) |

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
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| 4. | System Fault level | : | 40 kA for 3s |
| 5. | System Earthing | : | Non effectively earthed |
| 6. | Drives | | 161-1500kW |
| 1.2.2 | LV System | | |
| 1. | System A.C voltage | : | 415 V \pm 10% |
| 2. | System Frequency | : | 50 Hz \pm 5% |
| 3. | Combined Variation | : | 10% (absolute) |
| 4. | Phase | : | 3 ph, 3- wire |
| 5. | System fault level | : | 50 kA for 1s |
| 6. | System Earthing | : | Solidly grounded |
| 7. | Panel space heater, lighting, AC Control & Protection Supply | : | 240V, Single phase |
| 8. | Drives | | up to 160kW |
| 1.2.3 | DC System | | |
| 1. | System Voltage | : | 220V, +10%, -15%, 2-wire |
| 2. | Fault level | : | 20 kA |
| 3. | System Earthing | : | Unearthed |

2.0 BROAD SCOPE OF DUST EXTRACTION PACKGAE BIDDERS:

The scope of bidder for this package includes design, detailed engineering, preparation of Ducting & Piping layout, submission of engineering & civil assignment drawings/ docs./ datasheets/ QAPs/ FQPs, PG test procedures and obtaining the approval from RRVUNL/Consultant/BHEL, Manufacturing/ fabrication, inspection / shop floor testing, shop floor painting, supply of equipment's including essential spares, packing & transportation to site including transit insurance, customs clearance / port clearance, unloading and storage at site, construction of closed & open storage, shifting to erection work place and security. Erection & commissioning, satisfactory completion of Performance Guarantee Tests after successful completion of initial trail operation & final painting after erection along with associated Mechanical, Electrical, Control & Instrumentation and minor associated civil works shall be in bidder scope.

Dust Extraction package shall include following system of CHP:

- Primary Crusher houses (PCH-1, PCH-21) along with duct and accessories
- Secondary Crusher houses (SCH-1, SCH-21) along with duct and accessories
- Bunker Ventilation System (BVS-11,BVS-12, BVS-21, BVS-22) along with duct and accessories
- Compressor, Drier, Receiver along with accessories

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |

e) Hoist required for maintenance of DE system which are in bidders scope.

Along with suction hoods, manual and motorized dampers, ducting & duct support, Centrifugal fan, bag filter system with sequential controller, Rotary air lock, slide gates, supporting structures, bellows, Piping, Fittings, Gauges, Switches, other instrumentations, Valves etc. and all accessories and spares required for the system.


2.1 Scope of Work :

The design, manufacture, inspection and testing of the equipments shall comply with all the currently applicable statutes, regulations and safety codes in the locality where the equipment in to be installed and shall also confirm to the latest edition of Indian and other international standards and codes. Nothing in this specification shall be construed to relieve the contractor of the required statutory responsibility. In case of any conflict & ambiguity in the standard to be followed the decision of the customer / BHEL shall be final and binding.


The brief scope of work includes the following,

- 1) Supply of on line pulse jet bag filter, supporting structure of bag filter, service platform, staircase, dust disposal system, centrifugal fan, suction hoods, ducting, flexible joints, duct supports, dampers in duct line(to adjust suction air quantity), mounted electrics, bag filter control panel, instruments, exhaust duct /stack etc. and control system mentioned elsewhere in the specification for the following,
- 2) Supply of Base frames, stools, foundation bolts (For fixing frame and equipment's over the frame), Couplings (Input and output).
- 3) Submission of drawings and documents as mentioned in annexure-006
- 4) Erection, Supervision & commissioning and demonstration of PG test.
- 5) Preparation of protocols and getting signed from customer for all equipments/system in bidder's scope. Bidder to note and confirm that performance guarantee test for the complete system along with bidders supply shall be in the bidder's scope.
- 6) Major electrical items not limited to is given below.
 - a) Electrical Motors including HT & LT
 - b) Power/Control/Instrumentation Cables erection and commissioning only
 - c) Power cum Control Panels/LPBS
 - d) Field Instruments/Devices
 - e) Cable Trays, Earthing Materials erection and commissioning only

For detailed electrical scope of work **ref. Annexure-001.**

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |


- 7) Painting of all equipments as per painting scheme given by customer / items which are in bidder's scope before dispatch & at site (by others) after erection & commissioning & it will be as per Annexure. – 2 / Vol-II / Sec – C 13 / Sheet- 01 to 14(enclosed). Painting spec minimum requirement mentioned in Annexure-10.
- 8) Submission of commissioning procedures and O & M manuals of all equipment's with related electrics and as built drgs/ doc. shall be in the bidder's scope.
- 9) Supply of consumables (oil, grease and lubricants) for initial flushing, first fill and initial operation and top up during trial run till successful demonstration of PG test.
- 10) Supply of essential spares of all equipment / systems and machines in their scope as per the list furnished in annexure-2 / vol-II furnished by RRVUNL/TCE, same has to be furnished & supplied by bidder.
- 11) Recommended spares list as per the requirement for the entire system mentioned elsewhere in the specification shall be furnished & wherever the list is not furnished by BHEL / RRVUNL / TCE, same has to be furnished by bidder.
- 12) Supply of special tools & tackles as per requirement shall be in bidder's scope of supply.
- 13) Supply of startup & commissioning spares shall be as per requirement at site.
- 14) Inspection & testing shall be as per Vol-I / Sec-2 / CL / 5.0 & testing shall be done line with the approved MQP's & minimum owners requirements are mentioned for the same in the Vol-II/Sec-D. Bidder to include the same in his offer. Such tests shall be to bidder's account including for the expenses like to and fro journey, lodging and any other local conveyance of the inspector's for RRVUL / TCE / Third Party Inspector.
- 15) Bidder to furnish the detailed engineering schedule & submission of drgs/docs within 15 days from the date of order. Engineering shall be completed within two months from date of order. No delay shall be entertained later on.
- 16) Bidder to note that list above is not exhaustive and any work required for completing the system and ensuring its satisfactory running shall also be in the scope of this package bidder.
- 17) Bidder to read and quote Cl 2.2 General requirement and Cl.4.0 Technical requirement and Tender Specification (RRVUNL mentioned elsewhere). Later no deviation acceptable.
- 18) Bidder to quote as per the DBR and technical clarification attached in Annexure -4 and drawings in Annexure -007.

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |


2.2 GENERAL REQUIREMENTS:

Bidders to also consider following in their scope apart from referred bid documents and broad scope/scope of work mentioned above and Annexure's.


- 1) The design, manufacture, inspection and testing of the equipments shall comply with all the currently applicable statutes, regulations and safety codes in the locality where the equipment to be installed and shall also conform to the latest edition of Indian and other international standards and codes. Nothing in this specification shall be construed to relieve the contractor of the required statutory responsibility.
- 2) The Contractor shall be responsible for providing all materials, equipment and services, specified or otherwise (unless specifically excluded) which are required to fulfill the intent of ensuring operability and the reliability of the complete system covered under this specification.
- 3) E&C of all free issued items , if any , related to this package shall be in bidder's scope.
- 4) In case of any ambiguity, conflict in the standard& specification & /or interpretation of clauses in this enquiry spec. and its enclosures the decision of BHEL/RRVUNL shall be final and binding and any change due to this shall have no price implication on BHEL and shall have to be absorbed by successful bidder.
- 5) Bidder shall strictly follow and adhere to the guidelines laid down in the enclosed BHEL's Health, Safety and Environment (HSE) manual and comply these norms during site erection and commissioning.
- 6) Bidder shall visit the site to familiarize with the Coal Handling system and site constraints before submitting the complete offer to BHEL in all respects. No issues arising out of site condition or layout constraints shall be entertained later on during detail engineering and any modification required due to site condition or layout constraints shall be done by successful bidder without any cost implication to BHEL.
- 7) Bidder shall ensure the correctness of civil assignment drgs which shall be an input for BHEL's civil design agency & structural design package bidder. Any issues like cutting / chipping of floors, beams shall not be permitted. Any additional civil works arising if missed out things in civil assignment drg prepared by the bidder like pedestal, foundation etc. shall have to be taken care by this package bidders without any cost implication to BHEL and engaging its own resources.

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |

- 8) Supply of grouting cement and grouting of all mechanical equipment/items and its drives base shall be in bidder's scope. BHEL/BHEL's civil contractors shall provide only the foundation pockets for pedestals (wherever necessary) as per drg given by vendor.
- 9) Supply of all stools, foundation bolts and other embedment in concrete. Bidder to mention the requirement of the same clearly in their respective GA drgs. and it will be erected by BHEL/BHEL's civil & structural contractor. However, supervision of erection can be done by bidder.
- 10) Rust preventive after inspection at shop floor before dispatch shall be in bidder's scope. Rust preventive and Paint at site after erection.
- 11) All coupling shall be of air cooled type (for HT motor, if any). Also, all Coupling guards shall be in bidder's scope.
- 12) Necessary provisions shall be considered in the equipment / items / systems which are in other bidder's scope for integrating with other equipments / systems / items which are part of other contractor's scope.
- 13) Material of construction for all equipment shall be as per NIT & subject to BHEL / RRVUNL /TCE approval during detail engineering. If any issue arises out of this, bidder to consider the same without any price implication BHEL.
- 14) Bidder's scope shall also include system integration & control requirements and control philosophy with other systems / equipments of overall Coal Handling plant.
- 15) Bidder shall be responsible for commissioning, demonstration of performance guarantee parameters of complete system as laid down elsewhere in the specification and support to BHEL's other vendor for integration with Main CHP system like conveyors system, other Auxiliary system and commissioning of the complete CHP after integration. Equipments / systems offered by the bidder shall not be accepted for final handover till the demonstration of performance guarantee parameters of the equipments / systems and in case any changes required in machines to match the overall CHP system PG test parameters without affecting other associated system shall have to be done by the bidder without any cost implication to BHEL / RRVUNL.
- 16) Bidder shall submit the Bi- weekly engineering progress reports in BHEL's/RRVUNL's format and depute full project team for attending all project review meetings called by BHEL and RRVUNL (or their consultant) without fail.

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |


- 17) Bidder to adhere to the vendor list furnished in the Annex-2 / Vol-II. Also, Bidder to note that in case any vendor not approved by RRVUNL / BHEL but considered by bidder in their offer, then same has to be excluded during detail engineering and there shall be no price implication to BHEL in such event. Refer annexure -009 also for the approved vendor list from customer.
- 18) Bidder shall strictly adhere and follow the supply, erection & commissioning terms and conditions as mentioned in the annexure elsewhere.
- 19) Bidder to ensure sufficient manpower throughout the project for parallel engineering activity during detail engineering. Bidder to strictly adhere to BHEL / RRVUNL drg. Formats, document numbering, quality plan & FQP formats.
- 20) Construction Facilities, Construction Power, Construction Water Facilities, Sanitary Facilities, Telecommunication Facilities, Mail Service, Catering, Start-up Spares and Consumables, shall be as per annexure-08.
- 21) Bidder to extend all help and documentary support for compliance and addressing any statutory issues raised at site which pertains to the area / work under bidder's scope.
- 22) Coal flow diagram and Plot plan attached with enclosed RRVUNL NIT Specification is indicative only and doesn't show comprehensive scope of work and it may vary during detail engineering. However, bidder to make all efforts to optimize and restrict the size of compressor. Bidder shall furnish auxiliary power consumption in KW for all the equipments / machines at rated capacity. It is the sole responsibility of the bidder to demonstrate the same during PG test & handing over to customer successfully. However, if any issue arises during that stage, same shall be taken care by bidder without any price implication to BHEL.
- 23) Bidder shall comply with the furnished ratings and performance figures of the equipment as desired by BHEL / RRVUNL.
- 24) Bidders to note minor chipping up to 50mm thk. micro leveling and providing shim plates, provision of temporary platforms / supports, base frame and fixing / foundation bolts for all pumps & compressors & its motor and coupling required during E&C of Mechanical equipments shall be in their scope.
- 25) Bidder has to arrange office and its amenities on his own, only space shall be provided by RRVUNL /BHEL as per approval.
- 26) Leveling & Construction of open storage yard and closed storage shall be in bidder's scope.

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |

- 27) Supply of all pipe sleeves shall be in bidder's scope.
- 28) Supply, E&C of all DE ducting supporting members and its fixing, required for duct/Equipment/ items/ systems during erection shall be in bidder's scope and this shall be done in coordination with BHEL's civil & structural contractor.
- 29) During the entire storage period, equipment must be stored on wooden sleepers to avoid burying in soil and wound with necessary cover to avoid rusting.

Note:

- a) Bidder to note no deviation shall be acceptable to BHEL (pre-bid, bid and post bid) from RRVUNL NIT specification & BHEL enquiry specification amendments and clarifications (in the form of CD) unless and until written approval from BHEL has been accorded except for points mutually agreed upon in pre-bid MOM.
- b) Bidder shall submit the signed and stamped copy of all the pages technical enquiry specification, unpriced copy signed by authorized signatory and clearly mentioning each clause under following two categories to avoid any ambiguity in scope understanding & the scope division as a technical offer during bidding.
- i. "accepted without deviation and considered in scope of work"
 - ii. "Not considered in scope of work"
- c) Complete detail engineering drawings, load data details, sizing calculations, compressor sizing calculations, all other calculations, selection of components for fan, valves, compressors, dryers, receivers, piping's, etc. shall be reviewed & subject to approval of BHEL / RRVUL / TCE during detail engineering.
- d) Successful bidder shall take prior approval from BHEL while placing the E&C contract order for this package to a sub-contractor. BHEL reserves the right to disapprove/reject any such E&C contractor which BHEL deems not fit/not having the adequate experience for executing E&C of this contract.
- e) Bidder to quote for this offer considering the enclosed Plot plan BHEL drg. No. IS-0-PL-843-100-M001, coal flow diagram BHEL drg. no. IS-1-FL-843-100-M002, Gallery cross section drg. IS-1-GA-843-100-M003 and Crusher houses, Bunker floors.
- f) In case of any ambiguity, conflict in the standard & /or interpretation of clauses in this enquiry spec. and its enclosures the decision of RRVUNL/TCE/BHEL shall be final and


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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |

binding and any change due to this shall have no price implication on BHEL and shall have to be absorbed by successful bidder

- g) The quantity & capacity indicated above are tentative only. Same shall be finalized during detailed engineering (DDE). Bidder to take care of the same during detailed engineering without any price implication to BHEL.
- h) Bidder to note & confirm that all data sheets, specification, schedules , vendor list etc furnished in their offer are complying with the BHEL's enquiry spec. and RRVUNL's NIT document and scope & exclusions mentioned there in. If any deviation is there same shall not be acceptable to BHEL and in the event bidder becomes a successful bidder and LOA is placed on the bidder then all such data sheets, specification, schedules etc submitted with the offer having technical deviation shall stand null and void and shall not be considered during detail engineering. And detail engineering shall be done as per the spec. as per BHEL/RRVUNL approval and these changes shall not have any kind of cost implication on BHEL.

3.0 DOCUMENTS/ INFORMATION TO BE FURNISHED ALONGWITH OFFER.

- 1) Confirmation on Scope of supply in line with Tender.
- 2) Type and quantity of oil, lubricants & consumables for initial fill and till successful commissioning of equipment.
- 3) List of Commissioning spares and start-up spares.
- 4) List of special tools and tackles.
- 5) List of recommended spare parts list for 3 years trouble free operation.
- 6) Technical Data sheets duly filled by the vendor (blank data sheets enclosed in VOLUME: III, SECTION: D8, DATA SHEET B, sheet 01 to 11).
- 7) Catalogues/ Leaflets of respective equipments.
- 8) Reference list of your Customers for the similar items / system supplied & executed already.
- 9) Signed & stamped un-priced Copy.
- 10) Latest performance certificates, completion certificates etc obtained from end customer.
- 11) Bidder to also submit tentative list of complete drive schedule. However, shall be finalized during detailed engineering.
- 12) Essential spare parts list for trouble free operation and maintenance as per the price schedule shall be quoted.


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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |

- 13) List of Electrical and C&I drawings along with tentative dates of submission.
- 14) List of field devices including Type, Rating and Duty
- 15) Bidder to furnish the signed & stamped copy of complete NIT documents, without which bidders offer is liable for rejection.
- 16) Bidder to also submit complete drive schedule including pumps, compressors, driers, air receivers etc along with the offer without which bidders offer is liable for rejection.
- 17) Bidder to furnish load data for bunker house along technical bid.

Note: In case the above table is not filled or if it is incomplete, technical bid shall not be evaluated & considered.

4.0 TECHNICAL REQUIREMENT :

- 1) Except for the requirements stipulated in this specification, all other design and construction features of DE system shall be generally in conformity with the recommendation of "American Conference of Governmental Industrial Hygienists". The duct sizing and fan selection shall be based on "balancing without blast gate" criterion.
- 2) All extraction points shall be provided with butterfly type dampers.
- 3) The DE fans shall have straight but backwardly inclined blades.
- 4) The bag filter material shall be fire proof, non-woven type with antistatic property
- 5) The air to cloth ratio of the bag filter shall not exceed 1.5 cum/min/sqm. The bag filter cleaning system shall be reverse pulse jet air system.
- 6) Thickness of suction hood, dust collecting hopper and ducts shall be minimum 5mm. Thickness of casing of centrifugal fan shall be minimum 5mm.
- 7) Dust extraction system shall be provided for BVS-11, BVS-12, BVS-21, BVS-22 and PCH-1, PCH-21, SCH-1 & SCH-21.
- 8) These shall be operated from the local control panels and interlocked with operation of conveyor equipment.
- 9) Dust extraction system shall be complete with all accessories like cyclone separator, screw conveyor, rotary air lock valves, air compressors, drier, air receiver, piping's and fittings and complete duct work as per system requirement.
- 10) For Technical data, refer Tender specification from RVUNL/TCE, VOLUME: III B, Section D8, Page 18 of 37 to 22 of 37.
- 11) Piping shall be as per RVUNL/TCE, Tender specification - VOLUME: III-B, Section D7
- 12) Compressed Air System shall be as per RVUNL/TCE, Tender specification - VOLUME: III-B, Section D11 for compressor, drier and receiver.

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |

- 13) Hoists shall be as per RVUNL/TCE, Tender specification - VOLUME: III-B, Section D10
- 14) However, for exhaust duct the height shall be min 3 m above the roof of building as shown in the sketches.
- 15) SCH-1 and 21 capacity of the DE system shall be 96000 m³/h and Total pressure for fan minimum shall be 450 mmWG, Fan efficiency not less than 75% and motor shall be HT of 6.6kV.
- 16) DE system shall be mounted outside for the PCH-1, PCH-21, SCH-1 and SCH-2. And will be mounted over the outgoing conveyor. Accordingly suitable screw feeder shall be provide to feed into the conveyor with skirt board.

5.0 EXCLUSIONS:


- 1) Civil & structural work
- 2) Civil & structural work of JNT's, WT-complexes, ERH and Crusher houses are excluded. However, all associated civil and structural work as mentioned above in scope of work for E&C and its equipment, ducting & accessories, etc. shall be in the scope of bidder.

6.0 TERMINAL POINTS:

- 1) Supply of the Equipments as per the specifications.
- 2) Supply of Spares, tools & tackles as mentioned in NIT
- 3) Erection & Commissioning as per NIT
- 4) Performance Guarantee as per NIT

7.0 ERECTION, SUPERVISION AND COMMISSIONING:

- 1) Bidder shall make their own arrangements well in advance for heavy erection equipments like bigger cranes that are required for erection of equipments which are at higher height.
- 2) Bidder shall depute continuously and maintain following minimum nos. of engineers and supervisors, not limited to nos. to be deputed at site for supervision of E&C, coordination and commercial activity for the package.
 - a) Resident Manager- **1 no.**
 - b) Mech. Engineer (min 2 yrs site exp.) or mech. Supervisor (min 5 yrs exp.)-**2 nos.**
Bidder shall depute their mechanical engineer to site during construction of civil & structural works for cross-checking the correctness/ compatibility of civil & structural works w.r.t. E&C of mechanical systems/ equipments which are in the scope of mechanical main package bidder.
 - c) Quality- **1no.** storekeeper

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |

- d) Non-engineer- **1no.** storekeeper
- e) Non-engineer- **1no.** commercial activity


In case Bidder fails to maintain the above minimum manpower /site staff at site till project completion, suitable pro-rata deductions shall be made from RAB payables, for the duration of such absences, at the prevailing rate of BHEL manpower cost as penalty at the sole discretion of BHEL whose decision shall be final and binding.

However during erection bidder to increase the manpower to meet the project schedule.

8.0 DRAWING & DOCUMENTS:

Bidder to also consider following things in their scope apart from referred bid document and broad scope mentioned above:

- 1) Bidder shall furnish the complete electrical and mechanical load list of drives and equipments, P&ID diagram within 10 days of LOA.
- 2) Bidder shall furnish the complete basic engineering drg/ doc. along with the civil assignment drgs, GA of ducting layout, Design Basis report within 30 days of LOA.
- 3) Bidder shall furnish the L-2 project schedule for complete project indicating various milestones and constraints along with the bid. Successful bidder shall furnish the L-3 project schedule in line with the L-2 schedule after award of the contract.
- 4) DE system shall be as per RRVUNL commented Design Basis report (which shall be finalized during detailed engineering with RRVUNL / BHEL approval).
- 5) Bidder to note that time is the essence of this contract, thus they shall submit the submission schedule for the list of drgs. indicated in this document in no. of days from zero date i.e. LOI date. No delay shall be entertained later on.
- 6) The list of drgs. / documents to be submitted by bidder shall be finalized with BHEL after award of the contract and bidder shall furnish the drgs./docs accordingly. Engineering drg/doc must recommended contain the following but not limited to these and any drg/doc required by BHEL shall be furnished by the vendor during detail engineering:
 - a) Design Basis Report
 - b) Schematic Diagram of DE ducting layout.
 - c) Technical Data Sheet – bag filter, centrifugal fan, bag filter control panel, instrument, motors, dust disposal system (wherever applicable/required)
 - d) Compressed air system and Piping
 - e) Civil assignment drgs. with Load data.
 - f) Various schedules.

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| BHEL- ISG, BANGALORE  | 2X660 MW Suratgarh Super critical TPS, Stage-V, (Unit-7&8) TECHNICAL ENQUIRY SPECIFICATION FOR DUST EXTRACTION PACKAGE (FOR CH'S AND BUNKER'S) | DOCUMENT NUMBER RRVUNL/CHP PKG-E / 001 |
| | Customer : RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. | Rev. no.: 1 Dtd: 26-02-2016 |


- g) Design calculations.
 - h) Data sheets.
 - i) Review and vetting of Fabrication drgs & other structures (if applicable).
 - j) O&M manuals (06 No. of hard copies to be submitted)
 - k) PG test procedures.
 - l) QAP
 - m) FQP
- 7) Bidder to ensure submission of 06 sets of all engineering drg/doc to BHEL and for all such subsequent revisions in hard form along with a soft copy sent thru email addressed to Project manager and concerned project team.

9.0 QUALITY ASSURANCE:

9.1 Quality Assurance Documents:

Bidder shall be required to submit in six (6) copies the following quality assurance documents within two weeks after dispatch of the equipment:


- 1) All non destructive examination procedures, stress relief and weld repair procedure actually used during fabrication.
- 2) Welding procedures, welder's qualification certificates.
- 3) Welder identification list, listing welders and welding operators' qualification procedures and welding identification symbols.
- 4) Material mill test reports on components.
- 5) The inspection plan with verification, inspection plan check points, verification sketches, if used and method used to verify that the inspection and testing points, in the inspection plan were performed satisfactorily.
- 6) Sketches & drawings used for indicating the method of tractability of the radio graphics to the location on the equipment.
- 7) Non destructive examinations result reports including radiography interpretation reports.
- 8) Stress relief time temperature charts.
- 9) Factory tests results for testing required as per applicable codes and standards.
- 10) Inspection records duly signed by Quality assurance personnel of the employer and contractor for agreed inspection hold points. The same shall be recorded during course of inspection. Also the copy of repair / upgrading process & procedures, requiring employers' approval shall be provided in documentation package.

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- 11) Record of disposition of deviations duly authorized by employer.
- 12) Notification of conformity certifying that the equipment is in compliance with finalized specification requirement.

9.2 General Requirements - Quality Assurance:

- 1) The detailed quality plans for manufacturing and field activities to be drawn up by bidder, separately as per BHEL format and should be submitted for customer approval.
- 2) Manufacturing quality plan will detail out all the components of equipment, various tests/inspection, to be carried out as per the requirement of the specification and standards mentioned and quality practices & procedures followed by bidder, the relevant reference documents and standard, acceptance norms, inspection documents raised etc. during all stages of materials procurement, manufacture, assembly and final testing / performance testing shall be submitted
- 3) Field quality plan will detail out for all the equipments, the quality practices and procedures etc. to be followed by the contractor during various stages of site activities from receipt of materials/equipment at site to commissioning
- 4) Bidder shall also furnish copies of reference documents/plant standards/acceptance norms test and inspection, procedure, etc. as referred in quality plans. These quality plans and reference documents/standards etc. will be subject to customer approval without which manufacture shall not proceed.
- 5) No material shall be dispatched from the manufacturers work before the same is accepted subsequent to pre dispatch final inspection including verification of records of all previous tests / inspection by employers engineer/Authorized representative and duly authorized for dispatch, issuance of MDCC.
- 6) All materials used for equipment manufacture including castings and forgings etc. shall be tested for quality as per relevant codes/standards. Details of results of the tests conducted to determine the mechanical properties, chemical analysis and details of heat treatment procedure shall be recorded on certificates and time temperature charts. Tests shall be carried out as per applicable material standards and/or agreed details.
- 7) All welding /brazing shall be carried out as per procedure drawn and qualified in accordance with, requirements of ASME section IX/BS-4870 or other international equivalent standard acceptable to the customer.
- 8) All brazers / Welders and welding operators employed on any part of the contract either in contractors/ his subcontractors works or at site or elsewhere shall be qualified as per


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ASME section IX or BS 4871 or other equivalent international standards acceptable to the customer.

- 9) Test results of qualification tests and specimen testing shall be furnished for approval.
- 10) All the heat treatment results shall be recorded on time temperature charts and verified with recommended regimes.
- 11) No welding shall be carried out on cast iron components for repair.
- 12) Unless otherwise proven and specifically agreed, welding of dissimilar materials and high alloy materials shall be carried out at shop only.
- 13) All non destructive examination shall be performed in accordance with written procedures as per international standard. NDT shall be recorded in a report which includes details of methods and equipment used, result evaluation, job data and identification of personnel employed and details of correlation of the test report with the Job.
- 14) Quality plan submitted by bidder shall detail out, various stages of manufacture and installation , the quality practices and procedures, the relevant reference documents / standards used, acceptance level, inspection of documentation raised etc.
- 15) Quality audit / Surveillance / approval of the results of tests and inspection will not however, prejudice the right of the customer to reject the equipment if it does not comply with the specification when erected or does not give complete satisfaction in service and the above shall in no way limit the liabilities and responsibilities of the contractor in ensuring complete conformance of the materials / equipment supplied to relevant specification, standard, data sheets, drawings, etc.
- 16) For all spares and replacement items, the quality requirement as agreed for the main equipment supply shall be applicable.
- 17) Repair / rectification procedures to be adopted to make the Job acceptable shall be subject to the customer approval.

10.0 INSPECTION & TESTING:

- 1) Bidder shall give 15 days' advance written notice of equipment being ready for testing. The customer / Inspector, unless the witnessing of the tests is virtually waived, will attend such tests within 15 days of the date on which the equipment is notified as being ready.
- 2) **Cost towards the inspection of indigenous / Offshore equipment's by RRVUNL/TCE Engineer/Inspector will be to Bidders account, which includes to & fro Airfare/Railway/Road fare charges, Boarding and Lodging, local transportation and other related expenses. The cost shall be included in the price.**


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- 3) Type & routine test report / certificates shall include details of standard to which the tests are performed, test parameters, acceptance criteria, test set up etc. used during the testing along with the test piece details / rating and the detailed test record and final test result.
- 4) All inspection, measuring and test equipment used by the contractor shall be calibrated periodically. Bidder shall maintain all relevant records of periodic calibration, instrument identification, and shall provide for inspection by bidder wherever asked specifically; bidder shall calibrate measuring / testing equipment in the presence of employer.
- 5) The details of the checks to be carried out for various components (MQP) are to be submitted within one month from the date of Purchase order by bidder for customer approval. However, some indicative checks on different items are given below which should necessarily form part of the Quality Assurance Plan to be agreed with the customer.
- 6) All plates above 20 mm thickness to be ultrasonically tested for laminations.
- 7) Shaft forgings suspension bars to be checked for hardness, microstructure and ultrasonic testing in addition to check for chemical and mechanical properties.
- 8) Following minimum NDT requirement to be ensured for welds:
 - a) Butt welds - 10% UT/RT and 100% MT.
 - b) Fillet welds - 10%MT.

11.0 GUARANTEED PARAMETERS, TRIAL OPERATION, TAKING OVER & PG TEST:

- 1) The bidder shall guarantee that the equipment offered shall meet as per the approved drg./ calculation / Technical data sheet and performance requirements stipulated below. PG test shall be along with conveyor system.
- 2) These parameters / capabilities shall be demonstrated during guarantee tests of the respective system / equipment as per the detailed test procedure to be approved by the BHEL / RRVUNL.

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| 1. | Noise level | Measured noise level produced by any rotating equipment, individually and collectively should not exceed 85 dBA at a distance of 1.5 metre from it in any direction under any load condition |
| 2. | Compressed Air system | Specific Guarantees: At shop: 1. Capacity and discharge pressure of each air compressor. 2. Power consumption of each air compressor at its rated duty point with its own motor. At site: 1. Parallel operations of air compressors. 2. Capacity & dew point of air at the outlet of air drying plants of instrument air compressors. 3. Pressure drop across the air drying plants of air compressors. 4. Vibration & noise level of air compressors and air drying plant |
| 3. | Fan and compressor | Guaranteed performance (a) Rated capacity (cu.m./hr) (b) Total head (g) overall efficiency % (h) Power input to pump at duty point kW |

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| | | (i) Noise level dBA (j) Vibration level microns |
| 4. | Dust Control System | At the outlet of the dust extraction system , Emission level – 50 mg/N cu.m (+)0.00 Auxiliary Power Consumption for equipment shall be as furnished during detail engineering.(+)0.0% |

- 3) The guaranteed parameters shall be without any tolerance values as indicated in the table below. All the margins required for instrument inaccuracies and all other uncertainties shall be deemed to be included in the guaranteed figures. No tolerances or allowance on the test results will be permitted for instrument inaccuracies, the method of testing or any other cause when comparing the tested performance with the guaranteed value. All costs associated with the tests shall be included in the bid price.
- 4) The bidder shall demonstrate all the guarantees covered herein during guarantee test. In case during tests it is found that the equipment/system has failed to meet the guarantees, the bidder shall carry out all necessary modifications and/or replacements to make the equipment/system comply with the guaranteed requirements at no extra cost to the BHEL/RRVUNL/TCE.

12.0 LIST OF ENCLOSURES:

Following enclosures (enclosed in soft form in CD) is an integral part of this technical enquiry and must be signed and stamped and submitted along with the offer:

Annexure-001-ELECTRICAL SCOPE OF WORK (Total 367 pages).

Annexure-002-RRVUNL BID DOCUMENTS (Volume –II, Volume-III B)_ DOCUMENTS TO BE SIGNED & STAMPED BY BIDDER

Annexure-003-CLARIFICATIONS & AMENDMENT (Total 215 pages).

Annexure-004- DBR for Dust Extraction System (Total 9 pages) AND TECHNICAL CLARIFICATIONS

Annexure-005-BHEL HSE MANUAL (Total 16 pages).

Annexure-006-TENTATIVE LIST OF MECHANICAL DRGS.

Annexure-007-DRAWINGS OF CHP

Annexure-008-CONSTRUCTION POWER & WATER

Annexure-009-SUB VENDOR LIST

Annexure-010-APPROVED PAINTING SCHEDULE

Annexure -011-INSPECTION CHARGES MINIMUM REQUIREMENT FOR THE CUSTOMER
RRVUNL

Annexure-012-ESSENTIAL SPARES

The annexures mentioned in the list of enclosures at page no-19 of the Technical Specification can be downloaded from the following link:

http://www.bhelisg.com/upload/DE SYSTEMR1TENDER_SPEC.zip