

E-TENDER SPECIFICATION

S. No.	E- TENDER SPECIFICATION NUMBER
01	PW/NGP/PUR/2006129

FOR

HIRING RMX AGENCY FOR INSTALLATION OF BATCHING PLANT, PRODUCTION OF REQUIRED GRADE OF CONCRETE, CONVEYING AND PLACEMENT/POURING OF CONCRETE IN FOUNDATION INCLUDING CEMENT, AGGREGATE, SAND MIXTURE, ETC. AS PER SCOPE OF WORK AT 2X250 MW NSPCL BHILAI FGD PROJECT.

VOLUME I – TECHNICAL BID

THIS TENDER SPECIFICATION CONSISTS OF:

Notice Inviting Tender	
Volume-IA	Technical Conditions of Contract
Part of Vol-IA	Special conditions of Contract
Volume-IB	Not Applicable
Volume-IC	General conditions of Contract
Volume-ID	Forms & Procedures
Volume-IE	Technical Specifications and Layout
Volume II	Price Bid



Bharat Heavy Electricals Limited
(A Government of India Undertaking)
Power Sector - Western Region
345-Kingsway, Nagpur-440001

CONTENTS		
Volume No	Description	Hosted in website www.bhel.com (Briefly) and detailed in BHEL e-Procurement Portal as files titled
NIL	Tender Specification Issue Details	(Part of <u>Vol-IA-2006129</u>)
NIL	Notice Inviting Tender	(Part of <u>Vol-IA-2006129</u>)
I-A	Technical Conditions of Contract	Vol-I-A-2006129
---	Special Conditions of Contract	(Part of <u>Vol-IA-2006129</u>)
I-B	Not Applicable	----
I-C	General Conditions of Contract	(Part of Vol-I-BCD-2006129)
I-D	Forms & Procedures	(Part of Vol-I-BCD-2006129)
I-E	Technical Specifications and Layout	Vol-IE-2006129
II	Price Bid Specification as specified in E-Procurement Portal	Volume-II-2006129

E-TENDER SPECIFICATION

S. No.	E- TENDER SPECIFICATION NUMBER
01	PW/NGP/PUR/2006129

FOR

HIRING RMX AGENCY FOR INSTALLATION OF BATCHING PLANT, PRODUCTION OF REQUIRED GRADE OF CONCRETE, CONVEYING AND PLACEMENT/POURING OF CONCRETE IN FOUNDATION INCLUDING CEMENT, AGGREGATE, SAND MIXTURE, ETC. AS PER SCOPE OF WORK AT 2X250 MW NSPCL BHILAI FGD PROJECT.

EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR TENDER SUBMISSION Refer Notice Inviting Tender

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING VOLUME-I AND VOLUME- II ARE ISSUED TO:

M/s.

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PLEASE NOTE:
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

AGM (Purchase)

Place: Nagpur

Date:

2006129

NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 5 of 94

Date: 07/12/2020

NOTICE INVITING TENDER (NIT)
NOTE: BIDDER MAY DOWNLOAD FROM WEB SITES

To,

Dear Sir/Madam,

Sub : NOTICE INVITING E-TENDER

Sealed offers in two part bid system (National competitive bidding (NCB) or International Competitive Bidding (ICB) are invited from reputed & experienced bidders (meeting PRE QUALIFICATION CRITERIA as mentioned in Annexure-1) through E-Procurement Portal <https://eprocurebhel.co.in> only, for the subject job by the undersigned on the behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender document. Following points relevant to the tender may please be noted and complied with.

1.0 Salient Features of NIT

S No.	ISSUE	DESCRIPTION
i	TENDER NUMBER	PW/NGP/PUR/2006129
ii	Broad Scope of job	HIRING RMX AGENCY FOR INSTALLATION OF BATCHING PLANT, PRODUCTION OF REQUIRED GRADE OF CONCRETE, CONVEYING AND PLACEMENT/POURING OF CONCRETE IN FOUNDATION INCLUDING CEMENT, AGGREGATE, SAND MIXTURE, ETC. AS PER SCOPE OF WORK AT 2X250 MW NSPCL BHILAI FGD PROJECT.
iii	DETAILS OF TENDER DOCUMENT	
A	Volume-IA	Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc. Applicable
---	(Part of Vol-IA)	Special Conditions of Contract (SCC) Applicable
B	Volume-IB	Not Applicable Not Applicable
C	Volume-IC	General Conditions of Contract (GCC) Applicable
D	Volume-ID	Forms and Procedures Applicable
E	Volume-IE	Technical Specifications and Layout Applicable
F	Volume-II	Price Schedule (Absolute value). Applicable
iv	Issue of Tender Documents	Tender documents will be available for downloading from BHEL website (www.bhel.com) or e-procurement portal (https://eprocurebhel.co.in) as per schedule below: Start : 07/12/2020 , Time :17:00 Hrs Closes: 22/12/2020 , Time : 10:00 Hrs Brief information of the tenders shall also be Applicable

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 6 of 94

S No.	ISSUE	DESCRIPTION	
		available at central public procurement portal. (https://eprocure.gov.in/epublish/app)	
v	DUE DATE & TIME OF OFFER SUBMISSION	Date: 22/12/2020, Time : 11.00 Hrs The bidder should submit their offer online in e-Procurement portal at https://eprocurebhel.co.in <u>Bidders are requested to upload their offer well in advance in order to avoid last minute congestion at this website.</u> Hard copy bid or bids through E-mail / fax shall not be accepted.	Applicable
vi	OPENING OF TENDER (Techno-Commercial Bid)	Date: 22/12/2020, Time: 17.00 Hrs Notes: (1) In case the due date of opening of tender becomes a non-working day, then the due date & time of offer submission and opening of tenders get extended to the next working day. (2) Bidder may depute representative to witness the opening of tender. For e-Tender, Bidder may witness the opening of tender through e-Procurement portal only.	Applicable
vii	EMD AMOUNT	Not Applicable	Not-Applicable
viii	COST OF TENDER	NIL	
ix	LAST DATE FOR SEEKING CLARIFICATION	One day before due date of offer submission. Along with soft version also, addressing to undersigned & to others as per contact address given below: 1) Name: P R Chiwarkar Designation: AGM Deptt: Purchase Address: Floor no. 5 & 6, Shree Mohini Complex, 345 Kingsway, Nagpur-440001 Phone: Landline: +91-712-2858-633 Email :prchiwarkar@bhel.in Fax: +91-712-2858600 2) Name: Neeraj Tiwari Designation: Manager Deptt: Purchase Address: Floor no. 5 & 6, Shree Mohini Complex, 345 Kingsway, Nagpur-440001 Phone: Land Line: +91-712-2858-651	Applicable

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Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 7 of 94

S No.	ISSUE	DESCRIPTION	
		Email :nktiwari@bhel.in Fax:+91-712-2858600	
x	SCHEDULE OF Pre Bid Discussion (PBD)	---	<i>Not Applicable</i>
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	Sh. Arun Chandra Verma, IPS (Retd.) and Sh Virendra Bahadur Singh, IPS (Retd.)	<i>Applicable</i>
xii	Latest updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage (www.bhel.com -->Tender Notifications →View Corrigendum), Central Public Procurement portal (https://eprocure.gov.in/epublish/app) & on e-tender portal https://eprocurebhel.co.in and not in the newspapers. Bidders to keep themselves updated with all such information.	

2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly signed digitally using Class III DSC & uploaded in E-Procurement Portal, as part of offer. **Rates/Price including discounts/rebates, if any, mentioned anywhere/in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.**

3.0 Not Used

4.0 Unless specifically stated otherwise, bidder shall deposit EMD as per clause 1.9 of General Conditions of Contract.

For Electronic Fund Transfer the details are as below:-

NAME OF THE BENEFICIARY	BHARAT HEAVY ELECTRICALS LTD
ADDRESS OF THE COMPANY	SHREE MOHINI COMPLEX 345, KINGSWAY,NAGPUR
NAME OF BANK	STATE BANK OF INDIA
NAME OF BANK BRANCH AND BRANCH CODE	SBI,KINGSWAYBRANCH,BRANCH CODE-00432
CITY	NAGPUR
ACCOUNT NUMBER	31380025872
ACCOUNT TYPE	CURRENT A/C
IFSC CODE OF THE BANK BRANCH	SBIN0000432
MICR CODE OF THE BANK BRANCH	440002002

(Note -: In case of E-Tenders, proof of remittance of EMD should be uploaded in the E-Procurement Portal and originals, as applicable, shall be sent to the officer inviting tender within a reasonable time, failing which the offer is liable to be rejected.

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Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 8 of 94

5.0 Procedure for Submission of Tenders:

This is an E-tender floated online through our E-Procurement Site (<https://eprocurebhel.co.in>). The bidder should respond by submitting their offer online only in our e-Procurement platform at (<https://eprocurebhel.co.in>). Offers are invited in two-parts only.

Documents Comprising the e-Tender

The tender shall be submitted online ONLY EXCEPT EMD (in physical form) as mentioned below:

a. Technical Tender (UN priced Tender)

All Technical details (e.g. Eligibility Criteria requested (as mentioned below)) should be attached in e-tendering module, failing which the tender stands invalid & may be REJECTED. Bidders shall furnish the following information along with technical tender (preferably in pdf format):

- i. Earnest Money Deposit (EMD) furnished in accordance with NIT Clause 4.0. ~~Alternatively, documentary evidence for claiming exemption as per clause 29 of NIT.~~
- ii. Technical Bid (without indicating any prices).

b. Price Bid:

- i. Prices are to be quoted in the attached Price Bid format online on e-tender portal.
- ii. The price should be quoted for the accounting unit indicated in the e-tender document.
- iii. Note: It is the responsibility of tenderer to go through the Tender document to ensure furnishing all required documents in addition to above, if any. Any deviation would result in REJECTION of tender and would not be considered at a later stage at any cost by BHEL.
- iv. A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warrantee that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages.
- v. A tender, which does not fulfil any of the above requirements and/or gives evasive information/reply against any such requirement, shall be liable to be ignored and rejected.

DO NOT'S

Bidders are requested NOT to submit the hard copy of the Bid. In case offer is sent through hard copy/fax/telex/cable/electronically in place of e-tender, the same shall not be considered. **Also, uploading of the price bid in prequalification bid or technical bid may RESULT IN REJECTION of the tender.**

Digital Signing of e-Tender

Tenders shall be uploaded with all relevant PDF/zip format. The relevant tender documents should be uploaded by an authorized person having Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION digital signature certificate (DSC).

The Requirement:

1. A PC with Internet connectivity &
2. DSC (Digital Signature Certificate) (**Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION**)

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 9 of 94

BHEL has finalized the e-procurement service Provider:-

BHEL has finalized the e-procurement service Provider:-

NIC PORTAL (<https://eprocurebhel.co.in>)

For E-PROCUREMENT ASSISTANCE & TRAINING, NIC PORTAL HELPDESK CONTACTS AS PER FOLLOWING:

For any technical related queries, please call at 24 x 7 Help Desk Number

0120-4001 002

0120-4200 462

0120-4001 005

0120-6277 787

1. Peter Raj, NIC, Ph: 9942069052

Email Support: support-eproc@nic.in

The process of utilizing e-procurement necessitates usage of **DSC (Digital Signature Certificate) (Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION)** and you are requested to procure the same immediately, if not presently available with you. Please note that only with DSC, you will be able to login the e-procurement secured site and take part in the tendering process.

Please refer <http://www.mca.gov.in/> → MCA SERVICES → DSC SERVICES for DSC certifying authorities.

Vendors are also requested to go through bidder manual available on <https://eprocurebhel.co.in>.

Procedure for Submission of Tenders (To be used in case of Paper bid only): The Tenderers must submit their Tenders to Officer inviting Tender, as detailed below:-

- ~~PART I consisting of 'PART I A (Techno Commercial Bid)' & 'PART I B (EMD)' in two separate sealed and superscribed envelopes (ENVELOPE I & ENVELOPE II)~~
- ~~PART II (Price Bid) in sealed and superscribed envelope (ENVELOPE III)~~
- ~~One set of tender documents shall be retained by the bidder for their reference~~

6.0 The contents for ENVELOPES and the superscription for each sealed cover/Envelope are as given below. **(All pages to be signed and stamped) (To be used in case of Paper bid only):**

Sl. no.	Description	Remarks
	Part-I A	
	<u>ENVELOPE – I superscribed as:-</u> PART I (TECHNO COMMERCIAL BID) TENDER NO:- NAME OF WORK:- PROJECT:- DUE DATE OF SUBMISSION:- <u>CONTAINING THE FOLLOWING:-</u>	
i. —	Covering letter /Offer forwarding letter of Tenderer.	
ii. —	Duly filled in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above. <u>Note:</u> a. In case of any deviation, the same should be submitted separately for technical & commercial parts, indicating respective clauses of tender against which deviation is taken by bidder. The list of such deviation	

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Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 10 of 94

	shall be placed after document under sl no (i) above. It shall be specifically noted that deviation recorded elsewhere shall not be entertained. b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding. i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL ii). In case of unacceptable deviations, BHEL reserves the right to reject the tender	
iii. —	Supporting documents/ annexure/ schedules/ drawing etc. as required in line with Pre Qualification criteria.	
	It shall be specifically noted that all documents as per above shall be indexed properly and credential certificates issued by clients shall distinctly bear the name of organization, contact ph. no, FAX no, etc.	
iv. —	All Amendments/Correspondences/Corrigenda/Clarifications/Changes/ Errata etc. pertinent to this NIT.	
v. —	Integrity Pact Agreement (Duly signed by the authorized signatory)	If applicable
vi. —	Duly filled in annexures, formats etc. as required under this Tender Specification/NIT	
vii. —	Notice inviting Tender (NIT)	
viii. —	Volume I A : Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc.	
ix. —	Volume I B : Special Conditions of Contract (SCC)	
x. —	Volume I C : General Conditions of Contract (GCC)	
xi. —	Volume I D : Forms & Procedures	
xii. —	Volume II (UNPRICED — without disclosing rates/price, but mentioning only 'QUOTED' or 'UNQUOTED' against each item	
xiii. —	Any other details preferred by bidder with proper indexing.	

PART-I B		
	<u>ENVELOPE – II superscribed as:</u> PART I (EMD) TENDER NO: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION: <u>CONTAINING THE FOLLOWING:-</u>	
	Earnest Money Deposit (EMD) in the form as indicated in this Tender	

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

Registered Office: BHEL House, Siri Fort, New Delhi – 110 049, India
Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 11 of 94

	in words as well as figures)	
	OUTER COVER	
	ENVELOPE-IV (MAIN ENVELOPE / OUTER ENVELOPE) superscribed as: TECHNO-COMMERCIAL BID, PRICE BID & EMD TENDER NO: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION: CONTAINING THE FOLLOWING:	
i	☐ Envelopes I ☐ Envelopes II ☐ Envelopes III	

- **SPECIAL NOTE: All documents/ annexures to be submitted should be uploaded in respective places in the E-Tender portal as per the list mentioned given in this NIT. BHEL shall not be responsible for any in-complete documents.**

7.0 Deviation with respect to tender clauses and additional clauses/suggestions in Techno-commercial bid / Price bid shall NOT be considered by BHEL. Bidders are requested to positively comply with the same.

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

9.0 Void

10.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage structure, wage rules, etc. before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions.

11.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail and/or through e-procurement portal <https://eprocurebhel.co.in>, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.

12.0 BHEL may decide holding of pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.

13.0 In the event of any conflict between requirement of any clause of this specification/ documents/drawings/data sheets etc. or requirements of different codes/standards specified, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 12 of 94

error/missing pages/ other clerical errors in the tender documents, noticed must be pointed out before pre-bid meeting/submission of offer, else BHEL's interpretation shall prevail.

- 14.0 Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
- 15.0 Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer), **if applicable**, along with techno-commercial bid. This pact shall be considered as a preliminary qualification for further participation. **The names and other details of Independent External Monitor (IEM) for the subject tender is as given at point (1) above.**

"Integrity Pact (IP)"

- (a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

Sl. No.	IEM	Email
1.	Shri Arun Chandra Verma, IPS (Retd.)	acverma1@gmail.com
2.	Shri Virendra Bahadur Singh, IPS (Retd.)	vbsinghips@gmail.com

- (b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.
- (c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:

Details of contact person(s):

Name: (1) P R Chiwarkar/ AGM (Purchase)

2) Neeraj Tiwari / Manager (Purchase)

Dept.: Purchase Department

Address: Floor No. 5 & 6, Shreemohini Complex, 345 Kingsway, Nagpur-440001

Phone: (LL/ Mobile) (1) 0712-2858633

0712-2858651

Email: prchiwarkar@bhel.in

nktiwari@bhel.in

Fax: 0712-2858699

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 13 of 94

- 16.0 The Bidder has to satisfy the Pre-Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of satisfying the Pre-Qualification Criteria specified in this NIT as per Annexure-I (as applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.
- 17.0 In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorized representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.
- 18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.
- 19.0 **Reverse Auction.:** "BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com on "**supplier registration page**".) for this tender. RA shall be conducted among all the techno-commercially qualified bidders.
- Price Bids of all the techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 21.0 In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR, along with supporting documents.
- 22.0 The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.
- 23.0 Void
- 24.0 The bidder shall submit/upload documents in support of possession of 'Qualifying Requirements' duly self-certified and stamped by the authorized signatory, indexed and properly linked in the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.
- 25.0 The bidder may have to produce original document for verification if so decided by BHEL.
- 26.0 The consultant / firm (and any of its affiliates) shall not be eligible to participate in tender(s) for the related works or services for the same project, if they were engaged for the consultancy services.
- 27.0 Guidelines/rules in respect of Suspension of Business dealings, Vendor evaluation format, Quality, Safety & HSE guidelines, Experience Certificate, etc. may undergo change from time to time and the latest one shall be followed. The abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' is available on www.bhel.com on "**supplier registration page**".
- 28.0 The offers of the bidders who are on the banned/ hold list and also the offer of the bidders, who engage the services of the banned/ hold firms, shall be rejected. The list of **banned/ hold firms** is available on BHEL web site www.bhel.com.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 14 of 94

28.1 Integrity commitment, performance of the contract and punitive action thereof:

28.1.1 Commitment by BHEL:

BHEL commits to take all measures necessary to prevent corruption in connection with the tender Process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.

28.1.2 Commitment by Bidder/ Supplier/ Contractor:

- (i) The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.
- (ii) The bidder/ supplier/ contractor 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 and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.
- (iii) The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the prices or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such bidder/ supplier/ contractor as per extent guidelines of the company available on www.bhel.com and / or under applicable legal provisions.

29.0 Micro and Small Enterprises (MSE)

Any Bidder falling under MSE category, shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.

Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ ST & Women Owned)
Micro			
Small			

- a) MSE suppliers have to submit attested copies of either Udyam Registration Certificate or EM-II certificate having deemed validity (five years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or Udyog Aadhar Memorandum (UAM) & Acknowledgement or EM-II Certificate along with attested copy of a CA certificate (format enclosed as Annexure – 3) where deemed validity of EM-II certificate of five years has expired applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders. Benefits, as applicable for this tender shall be applicable only if the above required documents are submitted along with the offer. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer. Documents submitted by the bidder may be verified by BHEL for rendering the applicable benefits.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 15 of 94

b) Since splitting of the contract is not applicable against the subject tender, preferential award to MSE bidders will not be applicable against this tender.

30.0 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.

31.0 PREFERENCE TO MAKE IN INDIA:

For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/Non-Local Supplier and purchase preferences to Class I local supplier, is as defined I Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.

32.0 Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection.

All overwriting/cutting, etc., will be numbered by bid opening officials and announced during bid opening.

33.0 In the course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders.

In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss/ draw of lots, in the presence of the respective L-1 bidder(s) or their representative(s).

Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding.

34.0 The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). 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.

In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.

35.0 Order of Precedence:

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

- a. Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL
- b. Notice Inviting Tender (NIT)
- c. Price Bid
- d. Technical Conditions of Contract (TCC)—Volume-1A
- e. Special Conditions of Contract (SCC) — Part of Volume-1A
- f. General Conditions of Contract (GCC) — Volume-1C
- g. Forms and Procedures — Volume-1D

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 16 of 94

It may please be noted that guidelines/ circulars/ amendments/ govt. directives issued from time to time shall also be applicable.

For BHARAT HEAVY ELECTRICALS LTD

(Addl. General Manager - Purchase)

Enclosure:

01. Annexure-1: Pre Qualifying Requirements.
02. Annexure-2: Check List.
03. Annexure-3: Certificate by Chartered Accountant
04. Annexure-4: Reverse Auction Process Compliance Form
05. Annexure-5: Authorization of representative who will participate in the online Reverse Auction Process
06. Annexure-6: RA Price Confirmation and Breakup
07. Annexure-7: Integrity Pact
08. Annexure-8: Undertaking as per PQR C4 of Annexure-1 i.e. PQR
09. Annexure-9: Declaration reg. Related Firms & their areas of Activities (x) Other Tender documents as per this NIT.
010. Annexure-10: In-line with Department of Expenditure's (DoE) Public Procurement Division Order vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020
011. Annexure 11: Important information.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 17 of 94

ANNEXURE - 1

PRE QUALIFYING CRITERIA

E-Tender Specification Number: PW/NGP/PUR/2006129	
JOB	HIRING RMX AGENCY FOR INSTALLATION OF BATCHING PLANT, PRODUCTION OF REQUIRED GRADE OF CONCRETE, CONVEYING AND PLACEMENT/POURING OF CONCRETE IN FOUNDATION INCLUDING CEMENT, AGGREGATE, SAND MIXTURE, ETC. AS PER SCOPE OF WORK AT 2X250 MW NSPCL BHILAI FGD PROJECT.

S No	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Applicability	
A	Submission of Integrity Pact duly signed (if applicable) (Note: To be submitted by Prime Bidder & Consortium / Technical Tie up partner jointly in case Consortium bidding is permitted, otherwise by the sole bidder)	Applicable	
B	<u>TECHNICAL PQR</u> Bidder shall essentially meet all the Qualifying Requirements (i.e. B.1, and B.2) as under, in the last seven years as on latest date of bid submission: B.1: Bidder should have Executed <u>"Piling or RMC Supply or Civil or Structure or 'Civil and Structural works' or RCC Chimney or RCC Cooling Tower or RCC Silo or Mill Bunker or any combination of these works"</u> for any one of the following in the last seven years from latest date of bid submission: B.1.1) Executed One work of value not less than Rs. 1504.00 Lakhs against single work order. OR B.1.2) Executed Two works each of value not less than Rs. 940.00 Lakhs against maximum two work orders. OR B.1.3) Executed Three works each of value not less than Rs. 752.00 Lakhs against maximum three work orders. AND B.2: Bidder should have Achieved any one of the following in the last seven years from latest date of bid submission (either B.2.1 or B.2.2): B.2.1) Bidder should have experience of supplying / execution of Ready Mix Concrete Work by providing batching plant including aggregates and Cement with RCC quantities of at least 17943 cum within a common period of twelve consecutive months in cumulative of two running / completed contracts.	Applicable	

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 18 of 94

	OR		
	B.2.2) Bidder should have experience of supplying / execution of Ready Mix Concrete Work by providing batching plant including aggregates and cement with RCC quantities of at least 11962 cum within a period of twelve consecutive months in one running / completed Contract.		
C-1	<u>Financial TURNOVER</u> Bidders must have achieved an average annual financial turnover (audited) of Rs. 564.00 Lakhs or more over last three Financial Years (FY) i.e. '2016-17, 2017-18 & 2018-19' OR '2017-18, 2018-19 & 2019-20'* *To consider last three financial years as '2016-17, 2017-18 & 2018-19', bidder must provide a declaration that they do not have financial (audited) statements for FY 2019-20.	Applicable	
C-2	<u>NETWORTH</u> (only in case of Companies) Net worth of the Bidder based on the latest Audited Accounts as furnished for 'C-1' above should be positive.	Applicable	
C-3	<u>PROFIT</u> Bidder must have earned profit in any one of the three Financial Years as applicable in the last three Financial Years as furnished for 'C-1' above.	Applicable	
C-4	Bidder must not be under Insolvency Resolution Process or Liquidation or Bankruptcy Code Proceedings (IBC) as on date, by NCLT or any adjudicating authority/authorities, which will render him ineligible for participation in this tender, and shall submit undertaking (Annexure-8) to this effect	Applicable	
D	Assessment of Capacity of Bidder to execute the work as per sl no 9 of NIT (if applicable)	Not-Applicable	
E	Approval of Customer (if applicable) Note: Names of bidders (including consortium/Technical Tie-up partners in case consortium bidding is permitted) who stand qualified after compliance of criteria A to D shall be forwarded to customer for their approval	Applicable	BY BHEL
F	Price Bid Opening Note: Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E		BY BHEL
G	Consortium tie-ups	Not Applicable	
<u>Explanatory Notes for the PQR (unless otherwise specified in the PQR):</u> <u>Explanatory Notes for PQR B.1 (Technical)</u> 1. The evaluation currency for this tender shall be INR. 2. For the criteria (B.1), actual executed value shall be considered.			

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 19 of 94

3. Value of work is to be updated with indices for "All India Avg. Consumer Price index for industrial workers" and "Monthly Whole Sale Price Index for All Commodities" with base month as per last month of work execution and indexed up to three (3) months prior to the month of latest due date of bid submission as per following formula-

$$P = R + \left\{ 0.425 \times R \times \frac{(X_N - X_0)}{X_0} \right\} + \left\{ 0.425 \times R \times \frac{(Y_N - Y_0)}{Y_0} \right\}$$

Where

P = Updated value of work

R = Value of executed work

X_N = All India Avg. Consumer Price index for industrial workers for three months prior to the month of latest due date of bid submission (e.g. If latest bid submission date is 02-Mar-17, then bid submission month shall be reckoned as March'17 and index for Dec'16 shall be considered).

X₀ = All India Avg. Consumer Price index for industrial workers for last month of work execution.

Y_N = Monthly Whole Sale Price Index for All Commodities for the month, three months prior to the month of latest due date of bid submission (e.g. If latest bid submission date is 02-Mar-17, then bid submission month shall be reckoned as March'17 and index for Dec'16 shall be considered).

Y₀ = Monthly Whole Sale Price Index for All Commodities for last month of work execution.

Explanatory Notes for PQR B.2 (Technical):

4. Unless otherwise specified, for the purpose of "B.2 Technical Criteria", the word 'EXECUTED' means achievement of milestones as defined below:
- a) "ACHIEVEMENT OF VALUE/PHYSICAL QUANTITIES" as per PQR.
 - b) "READINESS FOR COAL FILLING" of at least one Bunker, in respect of Mill Bunker Structure.
 - c) "CHARGING" in respect of Power Transformers/ Bus Ducts/ "HT/LT Switchgears" / "HT/LT Cabling".
 - d) For C&I works: "SYNCHRONISATION" in case of power project / "WORK EXECUTION of the value as defined in PQR" in case of industry.
 - e) "BOILER LIGHT UP" in respect of Boiler / CFBC / ESP.
 - f) "CHARGING OF ATLEAST ONE PASS" in respect of ESP(R&M)
 - g) "GAS IN" in respect of HRSG.
 - h) "STEAM BLOWING" in respect of Power Cycle Piping.
 - i) "HYDRAULIC TEST" / ANY OTHER EQUIVALENT TEST LIKE "100% RT/UT OF WELDED JOINTS" of the system in respect of Pressure parts/ LP Piping/CW Piping.
 - j) "FULL LOAD OPERATION OF THE UNIT" in respect of Insulation work.
 - k) "SYNCHRONISATION" in respect of STG / GTG.
 - l) "SPINNING" in respect of HTG.
 - m) "GAS IN" in respect of FGD
5. Boiler means HRSG or WHRB or any other types of Steam Generator.
6. Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 20 of 94

7. For the purpose of evaluation of the PQR, one MW shall be considered equivalent to 3.5 TPH where ever rating of HRSG/BOILER is mentioned in MW. Similarly, where ever rating of Gas Turbine is mentioned in terms of Frame size, ISO rating of the same in terms of MW shall be considered for evaluation.

Explanatory Notes for PQR -C (Financial):

C-1:

- i. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against C-1 above.
- ii. Evaluation of Turnover criteria shall be calculated from the Audited Balance Sheet and Profit & Loss Account for the three Financial Years (FY) .
- iii. In case audited Financial statements have not been submitted for all the three years as indicated against C-1 above, then the applicable audited statements submitted by the bidders against the requisite three years, will be averaged for three years.
- iv. If financial statements are not required to be audited statutorily, then instead of audited financial statements, financial statements are required to be certified by Chartered Accountant.

C-2: Net Worth (Only in case of companies) of the bidder should be positive.

Note: Net worth shall be calculated based on the latest Audited Accounts as furnished for 'C-1' above.

Net worth = Paid up share capital + Reserves

C-3: Bidder must have earned profit in any one of the three financial years as applicable in the last three financial years as furnished for 'C-1' above.

Note: PROFIT shall be PBT earned during any one year of last three financial years as in 'C-1' above.

C-4: Bidder must not be under Bankruptcy Code Proceedings (IBC) by NCLT or under Liquidation / BIFR, which will render him ineligible for participation in this tender, and shall submit undertaking to this effect.

Common Explanatory Notes:

1. For evaluation of PQR, in case Bidder alone does not meet the pre-qualifying technical criteria B1 above, bidder may utilize the experience of its Parent/ Subsidiary Company along with its own experience, subject to following:
 - a) The parent company shall have a controlling stake of $\geq 50\%$ in the subsidiary company (as per Format-1).
 - b) The Parent Company/ Subsidiary Company of which experience is being utilized for bidding shall submit Security Deposit(SD) equivalent to 1% of the total contract value
 - c) The parent/ subsidiary company and bidder shall provide an undertaking that they are jointly or severally responsible for successful performance of the contract (as per Format-2).
 - d) In case Bidder is submitting bid as a Consortium Partner, option of utilizing experience of parent/subsidiary Company can be availed by Prime Bidder only.
 - e) Parent Company/ Subsidiary Company of which experience is being used for bidding, cannot participate as a 'Standalone Bidder' or as a 'Consortium bidder'.
2. Completion date for achievement of the technical criteria specified in the Common QR should be in the last 7 years ending on the 'latest date of Bid Submission' of Tender irrespective of date of the start of work.
3. "Executed" means the bidder should have achieved the technical criteria specified in the Common

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 21 of 94

- QR even if the Contract has not been completed or closed.
4. In case the Experience/PO/WO certificate enclosed by bidders do not have separate break up of prices for the E&C portion for Electrical and C&I works (i.e. the certificates enclosed are for composite order for supply and erection of Electrical and C&I and other works if any), then value of Erection & Commissioning for the Electrical and C&I portion shall be considered as 15% of the price for supply & erection of Electrical and C&I.
5. **Following shall be complied with in case of consortium:**
- a. ~~The Prime Bidder and Consortium Partner(s) are required to enter in to a consortium agreement and certify to BHEL regarding existence and validity of their consortium agreement in line with validity period mentioned in NIT.~~
 - b. ~~Prime Bidder and Consortium partners shall be approved by Customer for being considered for the tender (applicable if customer approval is required).~~
 - c. ~~Number of partners including prime Bidder shall be NOT more than 2 (two).~~
 - d. ~~Prime Bidder alone shall necessarily comply with "B1 Technical Criteria" except for mechanical package where B1 criteria is not applicable.~~
 - e. ~~Prime Bidder and Consortium Partner shall together comply with the 'Pre-Qualification Requirements' specified for the respective category of technical requirement as per "B2 technical criteria".~~
 - f. ~~Prime Bidder shall comply with all other Pre-Qualifying criteria for the Tender unless otherwise specified.~~
 - g. ~~All other conditions shall be read in conjunction with clause no 23.0 of NIT.~~
 - h. ~~Prime Bidder shall be the Bidder who has a major share of work.~~
 - i. ~~Prime Bidder shall be responsible for the overall execution of the Contract.~~
 - j. ~~Performance shall be evaluated for Prime Bidder and the Consortium partner for their respective scope of work.~~
 - k. ~~In case the Consortium partner backs out, another consortium partner meeting the QRs, has to be engaged by Prime Bidder and if not, the respective work will be withdrawn and executed on risk and cost basis of the prime bidder.~~
 - l. ~~In case Prime Bidder withdraws or insolvency / liquidation / winding up proceedings have been initiated / admitted against the Prime Bidder, BHEL reserves the right to cancel, terminate or short close the contract or take any other action to safeguard BHEL's interest in the Project / Contract. This action will be without prejudice to any other action that BHEL can take under Law and the Contract to safeguard interests of BHEL~~
 - m. ~~After successful execution of one work with a consortium partner under direct orders of BHEL, the Prime Bidder shall be eligible for becoming a 'standalone' bidder for works similar to that for which consortium partner was engaged, for subsequent tenders.~~
 - n. ~~The Consortium partner shall submit SD equivalent to 1% of the total contract value in addition to the SD to be submitted by the Prime Bidder for the total contract value.~~
6. **Relaxation in Pre-Qualifying Requirement (PQR) for Micro and Small Enterprises (MSE's) and Startups:**
- a) **Technical Pre Qualifying Requirement (PQR) for prior experience:** The technical pre-qualifying requirements, is relaxed by 50% (quantities or amount) of the original Pre - Qualifying Requirement specified in the tender (round off to the higher limit or number. Further, if the required quantity as per Original PQR is only one (1), then relaxed PQR shall also remain the same, since quantity is non-divisible in this case.)
 - b) **Financial Pre Qualifying Requirement (PQR) including Turnover:** The financial pre-qualifying requirements is relaxed by 50% of the original Pre -Qualifying Requirement specified in the tender.
 - c) Other Pre-Qualifying requirements such as Machineries, BIS, or any form of licenses or

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 22 of 94

customer approval or requirements other than stated in **Point no. (a) and (b)** above, shall remain the same for all bidders.

- d) Definition of Startup shall be in line with Gazette Notification No DL 33004/99 dated 19.02.2019 and subsequent amendments, if any.

BIDDER SHALL SUBMIT ABOVE PRE-QUALIFICATION CRITERIA FORMAT, DULY FILLED-IN, SPECIFYING RESPECTIVE ANNEXURE NUMBER AGAINST EACH CRITERIA AND FURNISH RELEVANT DOCUMENT INCLUSIVE OF WORK ORDER AND WORK COMPLETION CERTIFICATE ETC IN THE RESPECTIVE ANNEXURES IN THEIR OFFER.

Credentials submitted by the bidder against "PRE QUALIFYING CRITERIAS" shall be verified for its authenticity. In case, any credential (s) is/are found unauthentic, offer of the bidder is liable to the rejection. BHEL reserves the right to initiate any further action as per extant guidelines for Suspension of Business Dealings.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/URI-CIVIL/2328

Page 23 of 94

Format-1

Certificate for relationship between Parent Company / Subsidiary Company and the bidder

To,

.....

.....

Dear Sir,

Sub: Bid for NIT Nodated..... for “.....” (name of the tender).

We hereby certify that M/s..... is Parent Company/ Subsidiary Company of M/s.....(the bidder) and details of equity holding of the Parent Company in Subsidiary Company as on(not earlier than seven days prior to the Bid Submission Date) are given as below:

Name of Parent Company	Name of Subsidiary Company	Percentage of Equity Holding of Parent Company in Subsidiary Company

(Insert Name and Signature of Statutory Auditor or practicing Company Secretary of the Bidder)

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 24 of 94

Format-2

Undertaking from the Parent Company/ Subsidiary Company of the bidder
(On the Letter Head of Parent Company/ Subsidiary Company, as applicable)

From,
Name:
Full Address:

Telephone No.:
E-mail address:
Fax/No.:

To,

Dear Sir,

We refer to the NIT No dated for "....." (name of the Tender).

"We have carefully read and examined in detail the NIT/Tender Terms and Conditions, including in particular, Clause of the NIT/Tender, regarding submission of an Undertaking, as per the prescribed Format 1 of the NIT/ Tender.

We confirm that M/s.....(the Bidder) has been authorized by us to use our Technical capability for meeting the Technical Criteria as specified in Clause.....of the PQR of the NIT/Tender referred above.

We agree to submit the Security Deposit equivalent to 1% of the total contract value in addition to Security Deposit to be submitted by Bidder as per Clause.....of the NIT/Tender for fulfillment of all obligations in terms of provisions of the contract, in the event of(the Bidder) being selected as the Successful Bidder.

We confirm that we along with M/s.....(the bidder), are jointly or severally responsible for successful performance of the contract.

We confirm that our company shall not participate in the above tender as a 'Standalone Bidder' or as a 'Consortium bidder' and also shall not authorize any other bidder to use our Technical capability for the above tender.

All the terms used herein but not defined, shall have the meaning as ascribed to the said terms under the referred NIT/Tender.

Signature of Managing Director/Authorized signatory of Parent/ Subsidiary Company

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/URI-CIVIL/2328

Page 25 of 94

ANNEXURE - 2

CHECK LIST

NOTE: - Tenderers are required to fill in the following details and no column should be left blank

1	Name and Address of the Tenderer		
2	Details about type of the Firm/Company		
3.a	Details of Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
3.b	Details of alternate Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
4	EMD DETAILS	DD No: Date : Bank : Amount: <u>Please tick (√) whichever applicable:-</u> ONE TIME EMD / ONLY FOR THIS TENDER	
5	Validity of Offer	TO BE VALID FOR SIX MONTHS FROM DUE DATE	
		APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
6	Whether the format for compliance with PRE QUALIFICATION CRITERIA (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable/ Not Applicable	YES / NO
7	Audited profit and Loss Account for the last three years	Applicable/ Not Applicable	YES/NO
8	Copy of PAN Card	Applicable/ Not Applicable	YES/NO
9	Whether all pages of the Tender documents including annexures, appendices etc. are read understood and signed	Applicable/ Not Applicable	YES/NO
10	Integrity Pact	Applicable/ Not Applicable	YES/NO
11	Declaration by Authorized Signatory	Applicable/ Not Applicable	YES/NO
12	No Deviation Certificate	Applicable/ Not Applicable	YES/NO
13	Declaration confirming knowledge about Site Conditions	Applicable/ Not Applicable	YES/NO

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 26 of 94

14	Declaration for relation in BHEL	Applicable/ Not Applicable	YES/NO
15	Non-Disclosure Certificate	Applicable/ Not Applicable	YES/NO
16	Bank Account Details for E-Payment	Applicable/ Not Applicable	YES/NO
17	Capacity Evaluation of Bidder for current Tender	Applicable/ Not Applicable	YES/NO
18	Tie Ups/Consortium Agreement are submitted as per format	Applicable/ Not Applicable	YES/ NO
19	Power of Attorney for Submission of Tender/Signing Contract Agreement Power of Attorney of Consortium Partner.	Applicable/ Not Applicable	YES/NO
20	Analysis of Unit rates	Applicable/ Not Applicable	YES/NO

NOTE: STRIKE OFF 'YES' OR 'NO', AS APPLICABLE. TENDER NOT ACCOMPANIED BY THE PRESCRIBED **ABOVE APPLICABLE DOCUMENTS** ARE LIABLE TO BE SUMMARILY REJECTED.

DATE :

AUTHORISED SIGNATORY
(With Name, Designation and Company seal)

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 27 of 94

ANNEXURE-3

Certificate by Chartered Accountant on letter head

(applicable upto 31st March'2021 in line with MSME notification no. S.O. 2119 (E), dated 26th June'2020)

This is to Certify that M/S
(hereinafter referred to as 'company') having its registered office at
..... is registered under MSMED Act 2006, (Entrepreneur
Memorandum No (Part—II)/ Udyam Registration Certificate No.
..... dtd:, Category: (Micro/Small/Medium)).
(Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the latest audited financial year..... as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No. S.O.1722(E) dated October 5, 2006:
RsLacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the **MSMED** Act, 2006:
RsLacs
3. **For Enterprises** (having EM-II Certificate/ valid NSIC Certificate or Udyog Aadhar Memorandum): Investment in plant and machinery or equipment is Rs..... Lacs and turnover is Rs. Lacs (as notified in MSME notification no. S.O. 2119 (E) dated 26.06.2020)
4. **For Enterprises** (having EM-II Certificate/ valid NSIC Certificate or Udyog Aadhar Memorandum): Investment in plant and machinery or equipment is Rs..... Lacs and turnover is Rs. Lacs (as notified in MSME notification no. S.O. 2119 (E) dated 26.06.2020)

(Strike off whichever is not applicable)

The above investment of RsLacs is within permissible limit of
Rs Lacs for Micro / Small/ Medium (*Strike off which is not applicable*)
Category under MSMED Act 2006.

Or

The enterprise has been graduated upward from its original category (micro/small/medium) (*strike off which is not applicable*), the enterprise shall maintain its prevailing status till expiry of one year from the close of year of registration, as notified vide S.O. No. 2119 (E) dated 26.06.2020 published in the gazette notification dated 26.06.2020 by Ministry of MSME.

Or

The enterprise has been reverse-graduated from its original category (micro/small/medium) (*strike off which is not applicable*), the enterprise will continue in its present category till the closure of the financial year and it will be given the benefit of the changed status only with effect from 1st April of the financial year following the year in which such change took place, as notified vide S.O. No. 2119 (E) dated 26.06.2020 published in the gazette notification dated 26.06.2020 by Ministry of MSME.

Date:

(Signature)

Name:

Membership Number:

Seal of the Chartered Accountant

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**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: PW/NGP/PUR/2006129

Page 28 of 94

ANNEXURE-4

Reverse Auction Process Compliance Form

(The bidders are required to print this on their company's letterhead and sign, stamp before RA)

To

- M/s. {Service provider
- Postal address}

Sub: Agreement to the Process related Terms and Conditions

Dear Sir,

This has reference to the Terms & Conditions for the Reverse Auction mentioned in the RFQ document for {Items} against BHEL enquiry/ RFQ no. { PW/NGP/PUR/2006129} dt. {.....}
This letter is to confirm that:

- 1) The undersigned is authorized official/ representative of the company to participate in RA and to sign the related documents.
- 2) We have studied the Reverse Auction guidelines (as available on www.bhel.com), and the Business rules governing the Reverse Auction as mentioned in your letter and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the auction tool and have understood the functionality of the same thoroughly.
- 4) We also confirm that, in case we become L1 bidder, we will FAX/ email the price confirmation & break up of our quoted price as per Annexure - 6 within **two** working days (of BHEL) after completion of RA event, besides sending the same by registered post/ courier both to M/s. BHEL and M/s. {Service provider.}

We, hereby confirm that we will honor the Bids placed by us during the auction process.

With regards

Signature with company seal

Name:

Company / Organization:

Designation within Company / Organization:

Address of Company / Organization:

Sign this document and FAX/ email it to M/s {Service provider} at {.....} prior to start of the Event.

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 29 of 94

ANNEXURE – 5

Authorization of representative who will participate in the on line Reverse Auction Process:

1	NAME OF THE BIDDER	
2	NAME & DESIGNATION OF OFFICIAL	
3	POSTAL ADDRESS (COMPLETE)	
4	TELEPHONE NOS. (LAND LINE & MOBILE BOTH)	
5	E-MAIL ADDRESS	
6	NAME OF PLACE/ STATE/ COUNTRY, WHEREFROM S/HE WILL PARTICIPATE IN THE REVERSE AUCTION	

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 30 of 94

ANNEXURE – 6

Reverse Auction price confirmation and breakup
(To be submitted by L1 bidder after completion of Reverse Auction)

To

- M/s. Service provider
- Postal address

CC: M/s BHEL

{Unit-
Address-}

Sub: **Final price quoted during Reverse Auction and price breakup**

Dear Sir,

We confirm that we have quoted.

Rs.{__in value & in words__} for item(s) covered under tender enquiry No. {
PW/NGP/PUR/2006129} dt.{...}

Total price of the items covered under above cited enquiries is inclusive of {Packing & forwarding, GST, E.D., C.S.T., freight and insurance charges up to {.....} District,{.....} State and Type Test Charges etc., (exclusive of service tax), other as per NIT}

as our final landed prices as quoted during the Reverse Auction conducted today {date} which will be valid for a period of {__ in nos. & in words __} days.

The price break-up is as given below.

Total

=====

- Rs. in value & in words

=====

Yours sincerely,

For _____

Name:

Company:

Date:

Seal:

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**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: PW/NGP/PUR/2006129

Page 31 of 94

ANNEXURE – 7

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.

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 32 of 94

.....
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 Indian Penal Code (IPC) and Prevention of Corruption 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 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. 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.

2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

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

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 33 of 94

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- 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 Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.
- 6.2 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 /Subcontractors

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 in line with Non- disclosure agreement.
- 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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 34 of 94

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the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

- 8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.9 IEM should examine the process integrity; they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.
- 8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption 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.
- 8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.12 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified 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.

Registered Office: BHEL House, Siri Fort, New Delhi – 110 049, India Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 35 of 94

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- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal

(Office Seal)

Place-----

Date-----

Witness: _____

(Name & Address) _____

For & On behalf of the Bidder/ Contractor

(Office Seal)

Witness: _____

(Name & Address) _____

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: PW/NGP/PUR/2006129

Page 36 of 94

ANNEXURE – 8

UNDERTAKING

(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/Madam,

Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS

Ref: NIT/Tender Specification No: PW/NGP/PUR/2006129

I/We, _____ declare that, I/We
am/are not under insolvency resolution process or liquidation or Bankruptcy Code Proceedings (IBC) as
on date, by NCLT or any adjudicating authority/authorities, which will render us ineligible for
participation in this tender.

**Sign. of the AUTHORISED SIGNATORY
(With Name, Designation and Company seal)**

Place:

Date:

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 37 of 94

ANNEXURE-9

DECLARATION

Date: _____

To _____
BHEL, _____

Email: _____

Sub: Details of related firms and their area of activities

Dear Sir/ Madam,

Please find below details of firms owned by our family members that are doing business/ registered for same item with BHEL, _____ (NA, if not applicable).

1	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
2	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	

Note: I certify that the above information is true and I agree for penal action from BHEL in case any of the above information furnished is found to be false.

Regards,
(_____)

From: M/s _____
Supplier Code: _____
Address: _____

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Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 38 of 94

ANNEXURE-10

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

In-line with Department of Expenditure's (DoE) Public Procurement Division Order vide ref.
F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020

Tender no

Job:

"I/ we have read the clauses pertaining to Department of Expenditure's (DoE) Public Procurement Division Order (Public procurement no 1, 2 & 3 vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020) regarding restrictions on procurement from a bidder of a country which shares a land border with India. I/We hereby certify that I/ we the bidder < name of the

bidder.....
.....> is / are

a) Not from such a country and eligible to be considered for this tender.

OR

b) From such country, has been registered with the competent authority and eligible to be considered for this tender. (Evidence of valid registration by the competent authority shall be attached)

For and behalf of _____ (Name of the bidder)

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

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 39 of 94

ANNEXURE-11

IMPORTANT INFORMATION

E -Tender for this work is invited by BHEL PSWR NAGPUR and offer shall be submitted through BHEL e-procurement portal only. All correspondences regarding this tender shall be through E-procurement portal.

Postal Address:

AGM /Purchase BHEL PSWR,
SRIMOHINI COMPLEX, Floor No. 5 & 6, 345 KINGSWAY, NAGPUR 440001, INDIA

Following are the concerned BHEL officials to whom bidders can contact in case of any difficulty:

AGM Purchase, Email: prchiwarkar@bhel.in. Ph: +91 – 712 – 2858 - 633
Manager Purchase, Email: nktywari@bhel.in Ph: +91 – 712 – 2858 -651
Dy. Manager Purchase, Email: svm@bhel.in Ph: ++91 – 712 – 2858 -715
Dy. Engineer Purchase, Email: bajjnath@bhel.in , Ph: +91 – 712 -2858 - 652

1. Suspension of Business dealings

- 1.1 BHEL reserves the right to take action against contractors who fail to perform or indulge in malpractices, by suspending business dealings with them.
- 1.2 Suspension could be in the form of 'Hold', 'De-listing' or 'Banning' a contractor.
- 1.3 A bidder may be put on HOLD for a period of 6 months, for future tenders for specific works on the basis of one or more of the following reasons:
 - a) Bidder does not honour his own offer or any of its conditions within the validity period.
 - b) Bidder fails to respond against three consecutive enquires of BHEL.
 - c) After placement of order, Bidder fails to execute a contract.
 - d) Bidder fails to settle sundry debt account, for which he is legitimately liable, within one year of its occurrence.
 - e) Bidder's performance rating falls below 60% in specific category (more fully described in Chapter 'Performance Monitoring'.
 - f) Bidder works are under strike/ lockout for a long period.
- 1.4 A Bidder may be de-listed from the list of registered Bidders of the region for a period of 1 year on the basis of one or more of the following reasons:-
 - a) Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics.
 - b) Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL.
 - c) Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.
- 1.5 A Bidder can be banned from doing any business with all Units of BHEL for a period of 3 years on the basis of one or more of the following reasons:

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BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 40 of 94

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

1.6 Contracts already entered with a contractor before the date of issue of order of 'HOLD' or 'DE-LISTING' shall not be affected.

1.7 All existing contracts with a 'BANNED' contractor shall normally be short closed.

1.8 Once the order for suspension is passed, existing offers/new offers of the contractor shall not be entertained

1.9 The above guidelines are not exhaustive but enunciate broad principles governing action against contractors

2. Refer above clause no 1 regarding Suspension of Business Dealings: The abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' has now been uploaded on www.bhel.com on "supplier registration page" at the following link: http://www.bhel.com/vender_registration/pdf/Suspension_guidelines_abridged.pdf

3. Void

4. All Statutory Requirements as applicable for this project shall be complied with.

5. BHEL 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."

6. OCCUPATIONAL HEALTH, SAFETY & ENVIRONMENT MANAGEMENT/QUALITY ASSURANCE PROGRAMME :

BHEL, Power Sector Regions (PSNR/ER/WR/SR) are each certified for ISO 9001. Quality of work to customer's satisfaction and fulfillment of system requirements are the essence of ISO 9001 certification. BHEL, PS Regions have HSE certification (ISO 14001 & OHSAS 18001) and therefore Contractor also shall organise/ plan/ perform all their activities to meet with the applicable requirements of these standards.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 41 of 94

6.1 Contractor shall comply with HSE (Health, Safety & Environment) requirement of BHEL as per the "HSE Plan for Site Operations by Sub-Contractors" (Document No HSEP:14:Rev 00)

Document No HSEP:14:Rev 00 has been uploaded/issued/attached separately as file titled 'HSE Plan for Site Operations by Sub-Contractors'

6.2 "In case of any financial deduction made by Customer for lapses of safety other than what is provided elsewhere in the contract, the same shall be charged on back-to-back basis on the defaulting contractor without prejudice to any other right spelt anywhere in the tender /contract"

7. Following clause shall not be applicable for this contract:

a) Over Run Compensation)

8. Void

9. Void

10. The following paragraph has been added in clause 2.7.1 under clause 2.7 "Rights of BHEL" of General Conditions of Contract (Volume-IC GCC)

In case of inadequate manpower deployed by contractor, BHEL reserves the right to deploy additional manpower through any other agency for expediting activities in the interest of the project. Supplied manpower shall be put on job by the contractor and payments and other statutory compliances related to manpower shall be the contractor's responsibly. In case of contractor's failure to fulfil his obligations in respect of such manpower, BHEL reserves the right to take necessary action as per contract conditions

11. Void

12. Compensation in case of Death/ Permanent Incapacitation of Person: BHEL shall recover the amount of compensation paid to victim (s) by BHEL towards loss of life/ permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employee as detailed below:

a) Victim: Any person who suffers permanent disablement of dies in an accident as defined below.

b) Accident: Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious occurrence caused during the manufacturing/ operation and works incidental thereto at BHEL factories/ offices and precincts thereof, project execution, erection and commissioning, services, repairs and maintenance, trouble shooting, serving, overhaul, renovation and retrofitting, trial operation, performance guarantee testing undertaken by the company or during any works/ during working at BHEL Units/ Offices/ townships and premises/ Project sites.

c) Compensation in respect of each of the victims:

(i) In the event of death or **permanent disability** resulting from **Loss of both limbs**: Rs 10,00,000/- (Rs Ten Lakh)

(ii) In the event of **other permanent disability**: Rs 7,00,000/- (Rs Seven Lakh)

d) Permanent Disablement: A disablement that is classified as a permanent total disablement under the proviso to Section 2(I) of the Employee's Compensation Act, 1923.

13. Void

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Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 42 of 94

14. Broad Terms & Conditions of Reverse Auction:

In continuation to Clause 19.0 of NIT (Notice Inviting Tender) following are the broad terms and conditions of Reverse Auction:

"BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) (http://www.bhel.com/vender_registration/pdf/Guidelines%20for%20Reverse%20Auction-2020.pdf) for this tender. RA shall be conducted among all the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking."

~~BHEL shall open the Sealed Envelope Price bid through conventional method (either in E-Procurement Portal or in Hard Copy method) of all the techno-commercially qualified bidders with applicable loading, if any and same shall be considered for their ranking.~~

Note-01:- In case the tender is an e-tender and bids are submitted on e-procurement portal of BHEL → <https://eprocurebhel.co.in>, the sealed electronic price bid (e-bid) is to be treated as sealed envelope price bid.

15. Ordering Philosophy: The subject tender consists of only one Package. L-1 Bidder with acceptable L-1 rate shall be considered for award of subject Package in totality.

16. "Towards compliance of Department of Expenditure's (DoE) Public Procurement Division Order vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020 - Bidder shall submit duly filled & signed 'Annexure-10' along with their techno-commercial offer. In this connection, following may be noted:

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms, or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this order means: -
 - a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

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Website: www.bhel.com

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: PW/NGP/PUR/2006129

Page 43 of 94

IV. The beneficial owner for the purpose of (iii) above will be as under:

1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation-

- a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;
 - b. "Control" shall include the right to appoint the majority of the directors or to control the management of policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who hold the position of senior managing official;
 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V. An agent is a person employed to do any act for another, or to represent another in dealings with third person.

VI. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

However, in this regard, provision of Clause no 1.15.9 of Vol-IC GCC shall also be applicable.

2006129

TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS
LIMITED



TECHNICAL CONDITIONS OF CONTRACT (TCC)

CONTENTS

SL. NO.	DESCRIPTION	CHAPTER
Volume-IA	Part-I: Contract specific details	
1.	Index (Scope of Work)	Chapter-I
2.	Scope of Works and Technical Specifications	Chapter-II
3.	Special Conditions of Contracts	Chapter-III
4.	Taxes and other Duties	Chapter-IV
5.	Bill of Quantities & %age Weightages of Individual Items	Chapter-V

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-I: Index (Scope of Work)

CLAUSE NO	DESCRIPTION
1.00.00	SCOPE
2.00.00	GENERAL
3.00.00	INSTALLATION
4.00.00	SAMPLING AND TESTING OF MATERIALS
5.00.00	ACCEPTANCE CRITERIA
6.00.00	LABORATORY AND FIELD TESTING
Annexure-I	LIST OF RMC FIELD QUALITY ASSURANCE LABORATORY APPARATUS
Annexure-II	INDICATIVE LIST OF BOUGHT OUT ITEMS FOR READY MIX CONCRETE WORKS
7.00.00	LIST OF I.S. CODES AND STANDARDS FOR REFERENCE
8.00.00	INDICATIVE FIELD QUALITY PLAN

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

1.00.00 SCOPE

This specification covers all the requirements, described hereinafter for general use of Plain and Reinforced Cement Concrete work in Structures and locations, cast-in-situ or precast, and shall include all incidental items of work not shown or specified but reasonably implied or necessary for the completion of the work.

IS: 4926 and IS: 456 shall form a part of this specification and shall be complied with unless permitted otherwise. For any particular aspect not covered by this Code, appropriate IS Code, specifications and/or replacement by any International Code of practice as may be specified by the Engineer shall be followed. All codes and Standards shall conform to its latest revisions. A list of IS codes and Standards is enclosed hereinafter for reference. However, should the list be not exhaustive and does not cover any aspect of the work, then relevant Indian and, in its absence, relevant International code shall apply.

2.00.00 GENERAL

2.01.00 Work to be provided by the Contractor

The work to be provided by the Contractor, unless otherwise specified shall include but not be limited to the following: -

- a) Furnish all labour, supervision, services including facilities as may be required under statutory labour regulations, materials, forms, templates, supports, scaffolds, approaches, aids, construction equipment, tools and plants, transportations, etc. required for the work.
- b) Submit for approval detailed schemes of all operations required for executing the work, e.g. Material handling, Concrete mixing, Placement of concrete, services, Approaches, etc.
- c) Design and submit for approval concrete mix designs required to be adopted on the job.
- d) Furnish samples and submit for approval results of tests of various properties of the following:
 - i) The various ingredients of concrete
 - ii) Concrete
- e) Provide all incidental items not shown or specified in particular but reasonably implied or necessary for successful completion of the work in accordance with the specifications.
- f) For supply of certain materials normally manufactured by specialist firms, the Contractor may have to produce, if directed by the Engineer, a guarantee in approved proforma for satisfactory performance for a reasonable period as may be specified, binding both the manufacturers and the Contractor, jointly and severally..

2.02.00 Work by Others

Labour work for PCC/RCC (Concreting including Vibration) up to any thickness and height/depth or as directed by Site engineer complete in all respect, repairs of concrete, water curing work and bund making will be excluded from this scope.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

2.03.00 Information to be submitted by the Tenderer

2.03.01 With Tender:

The following technical information are required with the tender:

- a) Source and arrangement of processing of aggregates proposed to be adopted.
- b) Type of plant and equipment proposed to be used.

2.03.02 After Award:

The contractor shall be following information and data including samples where necessary, progressively during the execution of the contract.

a) Programme for Installation & Commissioning of the RMC plant:

Within 15 days of the award of contract, the contractor shall submit a Master Programme for Installation & Commissioning of the RMC plant.

b) Samples

Samples of the following materials and any other materials proposed to be used shall be submitted as directed by the Engineer, in sufficient quantities for approval. Approved samples will be preserved by the Engineer for future reference. The approval of the Engineer shall not, in any way, relieve the Contractor of his responsibility of supplying materials of specified qualities:

- i) Coarse and fine aggregates
- ii) Admixtures

c) Design Mix

Design mix as per Clauses 2.01.00 (c) & 3.04.00 of this specification giving proportions of the ingredients, sources of aggregates and cement, along with accompanying test results of trial mixes as per relevant I.S., is to be submitted to the Engineer for his approval before it can be used on the works.

d) Test Reports for Cement & admixtures.

e) Inspection Reports

Inspection Reports in respect of any item of work as may be desired by the Engineer in accordance with Clause 2.4 of this specification.

f) Test Reports

Reports of tests of various materials and concrete as required under Clause 4.0: SAMPLING & TESTING of this specification.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- g) Any other data which may be required as per this specification.
- 2.04.00 Conformity with Design**

One of the mix designs developed by the Contractor as per the I.S. Specifications and established to the satisfaction of the Engineer by trial mixes shall be permitted to be used by the Engineer, the choice being dictated by the requirements of designs and workability. The methods of mixing, conveyance as per requirement, making test samples, curing, protection and testing of concrete will be as approved or directed by the Engineer.

2.05.00 Materials to be used

2.05.01 General Requirement

All materials whether to be incorporated in the work or used temporarily for the construction shall conform to the relevant IS Specifications unless stated otherwise and be of best approved quality.

2.05.02 Cement

Fly ash based Portland pozzolana cement conforming to IS:1489 (Part-1) shall be used for all areas other than for the critical structures identified below. Other properties shall be as per IS code.

Ordinary Portland Cement (OPC) shall necessarily be used for the following structures.

- a) Spring supported decks of limestone crusher
- b) RCC for Chimney shell.

The grade of cement shall be Grade 43 for OPC conforming to IS:269.

In place of fly ash based portland pozzolana cement, OPC mixed with Fly Ash can be used. Batching plant shall have facility for mixing fly ash. Fly ash shall conform to IS:3812(Part I & Part II). Percentage of fly ash to be mixed in concrete shall be based on trial mix. Mix design shall be done with varying percentage of fly ash mix with cement.

2.05.03 Aggregates

- a) **Coarse Aggregate**
Coarse aggregate for concrete shall be crushed stones chemically inert, hard, strong, durable against weathering of limited porosity and free from deleterious materials. It shall be properly graded. It shall meet the requirements of IS: 383.
- b) **Fine Aggregate**
Fine aggregate shall be hard, durable, clean and free from adherent coatings of organic matter and clay balls or pellets. Fine aggregate in concrete shall conform to IS: 383. For plaster, it shall conform to IS: 1542 and for masonry work to IS: 2116.
- c) Petrographic examination of aggregate shall be carried out by the contractor at National Council for Cement and Building Materials (NCB), Ballabgarh, or any other approved

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

laboratory to ascertain the structure and rock type including presence of strained quartz and other reactive minerals. In case, the coarse aggregate sample is of composite nature, the proportions (by weight) of different rock types in the composite sample and petrographic evaluation of each rock should also be ascertained. While determining the rock type, special emphasis should be given on identification of known reactive rocks like chalcedony, opal etc. The procedure laid down in IS 2430 for sampling of aggregates may be followed.

The laboratory shall determine potential reactivity of the aggregate, which may lead to reaction of silica in aggregate with the alkalis of cement and / or potential of some aggregates like limestone to cause residual expansion due to repeated temperature cycle. If the same is established, the contractor shall further carry out alkali aggregates reactivity test as per IS 2386 (Pt.VII) and / or repeated temperature cycle test to establish the suitability of the aggregates for the concrete work. The test results, with the final recommendations of the laboratory, as to a suitability of the aggregate, for use in the concrete work for various structures and suggested measures, in case of results are not satisfactory, shall be submitted to the Engineer for his review, in a report form. In case in the report, it is established, that the aggregates contain reactive silica, which would react with alkalis of the cement, the contractor shall change the source of supply of the aggregate or use low alkali cement as per recommendation or take measures as recommended in the report as instructed by Engineer. In case aggregates indicate residual expansion, under repeated temperature cycle test (from 10o Celsius to 65o Celsius and for 60 temperature cycles) the material shall not be used for concreting of Lime stone crusher decks, Mills, Fans and other equipment foundations which are likely to be subjected to repeated temperature cycle. The contractor shall use aggregates free from residual expansion under repeated temperatures cycle test.

2.05.04 Water

Water for use in Concrete shall be clear and free from injurious oils, acids, alkalis, organic matter, soluble silts or other deleterious substances which may cause corrosion, discolouration, efflorescence etc. Normally potable water is found to be suitable. Generally, IS: 3550 will be followed for routine tests. Acceptance test for water shall be as per IS: 3025, and Table-1 of IS: 456. In case of doubt regarding development of strength, the suitability of water for making concrete shall be ascertained by compressive strength and initial setting time tests as per method of tests in accordance with the requirements of IS-516 & IS- 4031 respectively. The pH value of water shall generally be not less than 6.

2.05.05 Admixture

Only admixture of approved quality will be used when directed or permitted by the Engineer. The different types of admixtures which may be necessary to satisfy the concrete mix and the design requirement shall be as per the following I.S. Standards:

IS: 2645 - Integral cement water proofing compound

IS: 9103- Indian standard specification for Admixtures for Concrete or equivalent American Codes (ASTM C494 and ASTM C260) or British Codes (BS 5075 , Part 1 to 3) and may be one of the following:

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- a) Accelerating admixtures:
 - Set accelerating admixtures like "Sigunit Powder" / "Sigunit LN10" or equivalent.
- b) Retarding admixtures:
 - Modified ligno sulphonate based set retarding concrete admixture like, "Plastiment R" or equivalent.
- c) Water reducing admixtures :
 - Modified sulphonated melamine formaldehyde based water reducing concrete admixture like, "Sikament" or equivalent.
- d) Air entraining admixtures:
 - Modified ligno sulphonate based air entraining concrete admixture like "FLOMO AEP" or surface - active agents like "Sika AER" or equivalent.
- e) Water proofing admixtures

The waterproofing admixture for concrete shall conform to relevant IS code. The admixture shall not cause decrease of strength of concrete / plaster at any stage and it is free from chlorides and sulphates. The admixture shall not affect the setting time by more than 5 %

The maximum permissible dosage of admixture will be 3% (three percent) by weight of cement but a lower dosage will always be preferred.

However, in case of important structures where M25 or higher grade concrete is specified, the use of melamine based, high range water resistant concrete admixture shall be used to provide a waterproof concrete around 410 Kg/Cum, a melamine based super plasticizer will be preferable.

In concrete: The approved admixture shall be based on modified lingo sulphate like "Pastorate - N/Super" or approved equivalent. The method of application and other details shall conform to the manufacturer's specification and/or as instructed by the Engineer. The Contractor shall have the services of the manufacturer's supervisor to supervise the work, if desired by the Engineer.

However, the Contractor shall furnish following technical information about the admixtures (along with the manufacturer's Catalogue) which he is planning to use in different areas within the scope of work for the approval of the Engineer:

- i) Type of admixture
- ii) Mix proportion & mode of application in concrete.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- iii) Manufacturer's specification & necessary quality assurance certificates (mainly on chloride & sulphate content, PH value infra-red analysis & solid content.)

2.06.00 Storage of Materials

2.06.01 General

All materials shall be as stored as to prevent deterioration or intrusion of foreign matter and to ensure the preservation of their quality and fitness for the work. Any material, which has deteriorated or has been damaged or is otherwise considered defective by the Engineer, shall not be used for concrete and shall be removed from site immediately, failing which, the Engineer shall be at liberty to get the materials removed and Storage of materials shall conform to IS: 4082.

2.06.02 Cement

Sufficient space for storage, with open passages between stacks, shall be arranged by the Contractor to the satisfaction of the Engineer.

Cement shall be stored above the ground in perfectly dry, leak proof (watertight), well-ventilated ware-houses at the works in such a manner as to prevent deterioration due to moisture or intrusion of foreign matter.

Cement shall be stored in easily countable stacks with consignment identification marks. The bags shall be stacked in a manner so as to facilitate removal or first in first out basis. Sub-standard or partly set cement shall not be used and shall be removed from the site, with the knowledge of the Engineer, as soon as it is detected.

Different types of cement shall be clearly marked with the Type and different types of cement shall not be intermixed.

2.06.03 Aggregates

Aggregates shall be stored on brick soling or an equivalent platform so that they do not come in contact with dirt, clay, grass or any other injurious substances at any stage. Each size shall be kept separated with wooden or steel or concrete or masonry bulk-heads or in separate stacks and sufficient care shall be taken to prevent the material at the edges of the stock piles from getting intermixed. Stacks of fine and coarse aggregates shall be kept sufficiently apart with proper arrangement of drainage. The aggregates shall be stored in easily measurable stacks of suitable depths as may be directed by the Engineer.

2.06.04 Admixtures

Admixtures shall be stored in strong moisture proof packings / as per recommendations of manufacturer.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

2.07.00 Quality Control

Contractor shall establish and maintain quality control for different items of work and materials as may be directed by the Engineer to assure compliance with contract requirements and maintain and submit to the Engineer records of the same.

The quality control operation shall include but not be limited to the following items of work:

- a) Admixture : Type, quantity, physical and chemical properties that affects strength, workability and durability of concrete.

For air entraining admixtures, dosage to be adjusted to maintain air contents within desirable limits.
- b) Aggregate: Physical, chemical and mineralogical qualities. Grading, moisture content and impurities.
- c) Water: Impurities tests.
- d) Cement: Tests to satisfy relevant IS Specifications (only association with Owner's tests, if the supply is made by Owner).
- g) Grades of Concrete : Usage and mix design, testing of all properties.
- h) Batching & Mixing: Types and capacity of plant, concrete mixers and transportation equipment.

3.00.00 INSTALLATION

All installation requirements shall be in accordance with IS 4926 & IS:456 and as supplemented or modified herein or by other best possible standards where the specific requirements mentioned in this section of the specification do not cover all the aspects to the full satisfaction of the Engineer.

3.01.00 Washing and Screening of Aggregates

Washing and Screening of coarse aggregate shall be carried out to remove fines, dirt or other deleterious materials.

Washing of fine aggregate shall not be allowed, Fine aggregates shall be screened only to remove dirt or other deleterious materials.

However, all washing & screening of aggregates shall be carried out by approved means to ensure compliance with the aggregate specification.

3.02.00 Admixture

All concrete shall be designed for normal rate of setting and hardening at normal temperature. Variations in temperature and humidity under different climatic conditions will affect the rate of setting and hardening, which will, in turn, affect the workability and quality of the concrete.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

Admixtures may be permitted to be used in accordance with IS: 456 to modify the rate of hardening, to improve workability or as an aid to control concrete quality. The Engineer reserves the right to require laboratory test or use test data, or other satisfactory reference before granting approval. The admixture shall be used strictly in accordance with the manufacturer's directions and/or as directed by the Engineer.

3.03.00 Grades of Concrete

All R. C. C. works to be done under this specification, unless specified otherwise shall be design mix concrete. Minimum grade of concrete for various structures shall be as follows:

- a) M25 - For all underground / sub-structural/ super-structure R. C. C. work.
- b) M30- For Block Foundation
- c) M35- For spring supported RCC deck and rail load bearing structure (if applicable)

For concreting of underground structures requiring water tightness, plasticizer cum water proofing admixture shall be added to the concrete mix. Both coarse and fine aggregates shall conform to IS: 383 for concrete, shot concreting etc. unless otherwise mentioned.

3.04.00 Proportioning and Works Control

3.04.01 General

Proportioning of ingredients of concrete shall be made by any of the two following methods as directed by the Engineer.

- a) With preliminary tests by designing the concrete mix. Such concrete shall be called 'Design Mix Concrete'.
- b) Without preliminary tests adopting nominal concrete mix. Such concrete shall be called 'Nominal Mix Concrete'.

As far as possible, design mix concrete shall be used on all concrete works. Nominal mix concrete, in grades permitted in accordance with IS: 456, may be used if shown on drawings or approved by the Engineer. In all cases the proportioning of ingredients and works control shall be in accordance with IS 4926 and IS: 456 and shall be adopted for use after the Engineer is satisfied regarding its adequacy and after obtaining his approval in writing.

3.04.02 Mix Design Criteria

Concrete mixes will be designed by the Contractor to achieve the strength, durability and workability necessary for the job, by the most economical use of the various ingredients. In general, the design will keep in view the following considerations:

- a) Consistent with the various other requirements of the mix, the quantity of water should be kept at the lowest possible level.
- b) The nominal maximum size of coarse aggregate shall be as large as possible within the limits specified.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- c) The various fractions of coarse and fine aggregates should be mixed in such a proportion as to produce the best possible combined internal grading giving the densest and most workable mix.
- d) Chemical admixtures may be used to modify the rate of hardening, to improve workability (maintaining low water - cement ratio) or as an aid to control concrete quality.
- e) The finished concrete should have adequate durability in all conditions, to withstand satisfactorily the weather and other destructive agencies which it is expected to be subjected to in actual service.

The requirement of adequate structural strength is catered for by the choice of proper grade of concrete by the Engineer. The Contractor will strictly abide by the same in his design of concrete mix installation. Notwithstanding anything mentioned in various tables given in IS: 456 giving specific values and degrees of workability for different condition of concrete placing, minimum cement content and maximum water-cement ratio for concrete exposed to sulphate attack and for concrete to ensure durability under different condition of exposure, strength requirement for different grades of concrete, proportion for nominal mix concrete, values given in the tables in IS: 456, shall be followed.

Various trials shall be given by the Contractor with specific cement content on each trial. In some cases, plasticizers and other admixtures may be necessary to achieve the desired results.

3.05.00 Strength Requirements

The strength requirements of both design mix and nominal mix concrete where ordinary Portland Cement or Portland slag cement is used, shall be as per Table-2 of IS:456. All other relevant clauses of IS:456 shall also apply.

3.06.00 Minimum Cement Content

The minimum cement content for each grade of concrete shall be as per following Hierarchy: -

- 1) Customer Specification
- 2) Drawing
- 3) BHEL Specification
- 4) IS Code

3.07.00 Water-Cement Ratio

The choice of water-cement ratio in designing a concrete mix will depend on -

- a) The requirement of strength.
- b) The requirement of durability.

3.07.01 Strength Requirement

In case of 'Design Mix Concrete', the water-cement ratio of such value as to give acceptable test results as per IS: 456, will be selected by trial and error. The values of water-cement ratios for different grade and mix designs will have to be established after conducting sufficiently large

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

number of preliminary tests in the laboratory to the satisfaction of the Engineer. Frequent checks on test will have to be carried out and the water-cement ratios will be revised if the tests produce unsatisfactory results. Notwithstanding anything stated above the Contractor's responsibility to produce satisfactory test results and to bear all the consequences in case of default remains unaltered.

In case of nominal mix concrete, proportions for different grades of concrete are specified in Table-9 of IS: 456 and no tests are necessary. The acceptance test criteria for nominal mix concrete shall be as per IS: 456.

3.07.02 Durability Requirement

Table-5 of IS: 456 gives the maximum water-cement ratio permissible from the point of view of durability of concrete subjected to adverse exposure to weather, sulphate attacks, and contact with harmful chemicals. Impermeability may also be an important consideration.

Whenever the water-cement ratio dictated by durability consideration is lower than that required from strength criterion, the former shall be adopted.

In general, the water cement ratio between 0.4 and 0.45 will be desirable to satisfy the durability requirement and from the consideration of impermeability of concrete. The Contractor may propose lower water cement ratio as mentioned above by addition of a suitable plasticizer / super-plasticizer. However, the Contractor has to propose specifically along with field trials in the event of lower cement content if found suitable along with a plasticizer. It will be preferable to use Melamine based plasticizer.

All test cubes shall be made and tested for compressive strength in accordance with IS-456. The compressive strength class of concrete for various structures shall be as follows:

TABLE - I
STRENGTH REQUIREMENT OF CONCRETE

TABLE - II

MIX PROPORTIONS (BY WEIGHT) EXPECTED TO GIVE
DIFFERENT DEGREES OF WORKABILITY WITH DIFFERENT VALUES OF WATER -
CEMENT RATIO

(FOR GUIDANCE & INFORMATION PURPOSE ONLY)

CEMENT/TOTAL AGGREGATE RATIOS

WORKABILITY	WATER/ CEMENT RATIO	RATIO BY WEIGHT OF CEMENT OF GRAVEL AGGREGATE		RATIO BY WEIGHT OF CEMENT OF CRUSHED STONE AGGREGATE	
		20 mm size	38 mm size	20 mm size	38 mm size

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

Very low	0.4	01:04.8	01:05.3	01:04.5	01:05.0
Slump	0.5	01:07.2	01:07.7	01:06.5	01:07.4
0-25 mm	0.6	01:09.4	1:10	01:07.8	01:09.6
	0.7	1:10	1:12	01:08.7	01:10.6
Low	0.4	01:03.9	01:04.5	01:03.5	01:04.0
Slump	0.5	01:05.5	01:06.7	01:05.0	01:05.5
25-50 mm	0.6	01:06.8	01:07.4	01:06.3	01:07.0
	0.7	01:08.0	01:08.5	01:07.4	01:08.0
Medium	0.4	01:03.5	01:03.8	01:03.1	01:03.6
Slump	0.5	01:04.8	01:05.7	01:04.2	01:05.0
50-100 mm	0.6	01:06.0	01:07.3	01:05.2	01:06.2
High	0.4	01:03.2	01:03.5	01:02.9	01:03.3
Slump	0.5	01:04.4	01:05.2	01:03.9	01:04.6
100-175 mm	0.6	01:05.4	01:06.7	01:04.7	01:05.7
	0.7	01:06.2	01:07.4	01:05.5	01:06.5

NOTE: 1 - Notwithstanding anything mentioned above, the cement/Total aggregate ratio is not to be increased beyond 1:9.0 without specific permission of the Engineer.

NOTE: 2 - It should be noted that such high aggregate cement ratios will be required for concretes of very low slump and high water- cement ratios which may be required to be used in mass concrete work only.

NOTE: 3 - The above figures are for guidance only, the actual Cement/aggregate ratios are to be worked out from the specific gravities of coarse aggregates and sand being used and from trial mixes.

3.08.00 Workability

The degree of workability necessary to allow the concrete to be well consolidated and to be worked into the corners of formwork and around the reinforcement and embedment's and to give the required surface finish shall depend on the type and nature of structure and shall be based on experience and tests. The usual limits of consistency for various types of structures are given below:

TABLE - III LIMITS OF CONSISTENCY

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

Degree of workability	Slump in mm with Standard Cone as per IS:1199		Use for which concrete is suitable.
	Min.	Max.	
Very low	0	25	Large Mass concrete structure with heavy compaction equipment, roads and like.
Low	25	50	Uncongested wide and shallow R.C.C. structures.
Medium	50	100	Deep but wide R.C.C. structures with congestion or reinforcement and inserts.
High	100	150	Very narrow and deep R.C.C. structures with congestion due to reinforcement and inserts.

(NOTE: Notwithstanding anything mentioned above, the slump to be obtained for work in progress shall be as per direction of the Engineer)

With the permission of the Engineer, for any grade of concrete, if the water has to be increased in special cases, cement shall also be increased proportionately to keep the ratio of water to cement same as adopted in trial mix design for each grade of concrete. The workability of concrete shall be checked at frequent intervals by slump tests. Alternatively, where facilities exist or if required by the Engineer, the compacting factor test in accordance with IS: 1199.

3.09.00 Size of Coarse Aggregates

The maximum size of coarse aggregates for different locations shall be as follows unless otherwise directed by the Engineer:-

Very narrow space	- 12 mm
Reinforced concrete except foundation	- 20 mm
Ordinary Plain concrete and Reinforced concrete foundations	- 40 mm

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

Mass concrete	- 80 mm
Mass concrete in very large structure	- 150 mm

Grading of coarse aggregates for a particular size shall conform to relevant I.S. Codes and shall also be such as to produce a dense concrete of the specified proportions, strength and consistency that will work readily into position without segregation.

Coarse aggregate will normally be separated into the following sizes and stacked separately in properly designed stockpiles:

150 mm to 80 mm, 80 mm to 40 mm, 40 mm to 20 mm and 20 mm to 5mm. In certain cases it may be necessary to further split the 20 mm to 5 mm fraction into 20 mm to 10 mm and 10 mm to 5 mm fractions.

This separation of aggregates in different size fractions is necessary so that they may be remixed in the desired proportion to arrive at a correct internal grading to produce the best mix.

3.10.00 Mixing of Concrete

Concrete shall always be mixed in mechanical mixer unless specifically approved by the Engineer for concrete to be used in unimportant out of the way locations in small quantities. Water shall not normally be charged into the drum of the mixer until all the cement and aggregates constituting the batch are already in the drum and mixed for at least one minute. Mixing of each batch shall be continued until there is a uniform distribution of the materials and the mass is uniform in colour and consistency, but in no case shall mixing be done for less than 2 (two) minutes and at least 40 (forty) revolutions after all the materials and water are in the drum. When absorbent aggregates are used or when the mix is very dry, the mixing time shall be extended as may be directed by the Engineer. Mixers shall not be loaded above their rated capacity as this prevents thorough mixing.

The entire contents of the drum shall be discharged before the ingredients for the next batch are fed into the drum. No partly set or remixed or excessively wet concrete shall be used. Such concrete shall be immediately removed from site. Each time the work stops, the mixer shall be thoroughly cleaned & when the next mixing commences, the first batch shall have 10% additional cement to allow for loss in the drum.

Regular checks on mixer efficiency shall be carried out as directed by the Engineer as per IS: 4634 on all mixers employed at site. Only those mixers whose efficiencies are within the tolerances specified in IS: 1791 will be allowed to be employed.

Ingredients for design mix concrete shall be measured by weight. For small jobs portable swing weigh Batchers conforming to IS: 2722 may be used.

Batching plant conforming to IS: 4925 shall be used for large jobs. The accuracy of the measuring equipment shall be within + 2% of the quantity of Cement, water or total aggregates being measured and within + 5% of the quantity of any admixture being used.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

The batching equipment shall be fitted with an accurate mechanism for weighing separately the cement, fine aggregate and coarse aggregate. Water may be measured by volume or by weight. All measuring equipment should be maintained in a clean serviceable condition, and their accuracy shall be checked periodically.

Mechanical / electrical control shall be provided on the mixing equipment to ensure the batch cannot be discharged until approved mixing time has elapsed and the entire batch shall be discharged before the mixer is recharged.

Where admixtures are employed, separate containers & measuring devices shall be used.

For minor concreting works, batching by volume according to specific weight may be permitted by the Engineer. In that case the whole bags of cement shall be used and gauge boxes used for measuring aggregates.

When hand mixing is permitted by the Engineer, it shall be carried out on a water-tight platform and care shall be taken to ensure that mixing is continued until the mass is uniform in colour and consistency. In case of hand-mixing, 10% extra cement shall be added to each batch.

3.11.00 Cold Weather Concreting

When conditions are such that any operation of concreting may be expected to be done at 5°C atmospheric temperature or below the work shall conform to the requirement of Clause 14 of IS:456 and IS:7861.
(Part. II).

3.12.00 Hot Weather Concreting

When depositing concrete in very hot weather, the Contractor shall take all precautions as per IS:7861 (Part-I) and stagger the work to the cooler parts of the day to ensure that the temperature of wet concrete used in massive structures does not exceed 40°C while placing. Positive temperature control by pre cooling, post cooling or any other method, if required, will be specified.

3.13.00 Concreting Under Water

When it is necessary to deposit concrete under water it shall be done in accordance with the requirements of clause 14 of IS: 456.

4.00.00 SAMPLING AND TESTING OF MATERIALS

4.01.00 General

4.01.01 The method of sampling for testing of construction materials and work / job samples shall be as per the relevant IS / standards / codes and in line with the requirements of the technical specifications / quality plans. All samples shall be jointly drawn, signed and sealed wherever required, by the Contractor and the engineer or his authorized representative.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- 4.01.02 The Contractor shall carry out testing in accordance with the relevant IS / standards/codes and in line with the requirements of the technical specifications/quality plans. Where no specific testing procedure is mentioned, the tests shall be carried out as per the best prevalent engineering practices and to the directions of the Engineer. All testing shall be done in the presence of the engineer or his authorized representative.
- 4.01.03 Before execution of any civil work the Contractor shall conduct full scale suitability tests on various construction and building material such as fine and coarse aggregates, cement, admixtures, supplementary cementations materials and construction water to ascertain their suitability for use and the concrete mix designs conducted from all IITs, NCB, CSMRS, reputed government / autonomous laboratories / organizations, NITs and other reputed testing laboratories. On approval of NSPCL. The test samples for such full scale testing shall be jointly sampled and sealed by the engineer and Contractor, thereafter these shall be sent to the concerned laboratory through the covering letter signed by field quality assurance (FQA) representative of the engineer.
- 4.01.04 The Contractor shall timely initiate the action with regard to the evaluation of aggregates and other building material including concrete mix design, so as to ensure completion of these tests before start of civil works at site, thereby not affecting any project work. The test reports and recommendations for suitability of the materials including concrete mix design shall be promptly submitted by the Contractor to the engineer.
- 4.02.00 Aggregates**
- Evaluation of aggregate for potential alkali-aggregate reactivity shall be carried out as per following scope of work
- A. Evaluation of Aggregates for Mechanical / Physical Properties
- a) To carry out different tests on coarse aggregate sample i.e. specific gravity, water absorption, sieve analysis, deleterious material; soundness, crushing value, impact value, abrasion value, elongation index and flakiness index, as per IS: 2386.
 - b) To carry out different tests on fine aggregate sample i.e. specific gravity, water absorption, sieve analysis, deleterious material, soundness, silt content, clay content and organic impurities as per IS: 2386.
 - c) To prepare evaluation report based on test results of a) and b) above and to advise regarding suitability of fine and coarse aggregates.
- B. Evaluation of Aggregates for Potential Alkali-Aggregate Reactivity:
- a) To carry out petrographic analysis and accelerated Mortar bar Test on aggregate samples (1N NaOH at 80 deg. Centigrade for 14 days as per ASTM 1260, or the method established/ developed by CSMRS for 22days test).

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- b) To prepare a report based on test results of a) above and to advise regarding suitability of aggregates to be used and further testing required if any.

4.03.00 Cement

Representative samples will be taken from each consignment of cement received from the manufacturer/supplier for carrying out the tests for fineness (by hand sieving), setting time and compressive strengths. Soundness Tests may also be required to be carried out if required by the Engineer.

The tests shall be carried out free of charge by the Owner if cement is supplied by him. In case the Contractor is directed to arrange for the supply of cement as per the terms and conditions of the Contract the tests shall be carried out by him. In case due to any circumstances, the agency of supply is changed in the middle of the Contract, the party who bore the original contractual obligation will carry on with the test, free of charge to the other, till the end of the job.

No cement from a particular consignment/batch will be used on the works unless satisfactory 3 (three) days and 7 (seven) days test results for compressive strength are known. The Owner, Engineer and Contractor will jointly associate themselves with the tests irrespective of whether they are carried out by the Owner or the Contractor. These tests are of great importance as their results will have a bearing on the acceptance of concrete or otherwise as per the terms and conditions of the Contract.

4.04.00 Water

Sampling and Testing of water being used for concrete works as per IS: 3550 will be carried out by the Contractor at regular intervals and whenever directed by the Engineer. The final acceptance criteria in case of doubt will be as per IS: 3025 & IS: 456.

4.05.00 Admixture

4.05.01 Air Entraining Agents (A.E.A)

Initially, before starting to use A.E.A., relationship between the percentage of air entrained and the cube crushing strength vis-à-vis quantity of A.E.A. used for all types of concrete will be established by the Contractor by carrying out sufficiently large number of tests. After then, at regular intervals and whenever directed by the Engineer, the Contractor will check up the actual percentages of air entrained and corresponding crushing strengths to correlate with the earlier test results.

4.05.02 Other Admixtures

Tests for establishing the various properties of any other admixtures which may be required to be added shall be carried out by the Contractor.

4.06.00 Concrete

The sampling of concrete, making the test specimens, curing and testing procedure etc. shall be in accordance with IS:516 and IS:1199 the size of specimen being 15 cm cubes. Normally,

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

only compression tests shall be performed but under special circumstances the Engineer may require other tests to be performed in accordance with IS: 516.

Sampling procedure, frequency of sampling and test specimen shall conform to Clause 14 of IS: 456.

To control the consistency of concrete from every mixing plant, slump tests and/or compacting factor tests in accordance with IS: 1199 and as mentioned in Clause 3.6 of this Specification shall be carried out by the Contractor every two hours or as directed by the Engineer. Slumps corresponding to the test specimens shall be recorded for reference.

The acceptance criteria of concrete shall be in accordance with Clause 15 of IS: 456.

Concrete work found unsuitable for acceptance shall have to be dismantled and replacement is to be done as per specification by the Contractor. No payment for the dismantled concrete, the relevant formwork and reinforcement, embedded fixtures, etc. wasted in the dismantled portion shall be made. In the course of dismantling, if any damage is done to the embedded items or adjacent structures, the same shall be made good to the satisfaction of the Engineer.

5.00.00 ACCEPTANCE CRITERIA

5.01.00 Standard Deviation

Standard deviation shall be based on test results and determination of Standard deviation shall conform to clause 16 of IS: 456.

5.02.00 Acceptance Criteria

The strength requirements and acceptance criteria shall conform to Clause 16 of IS: 456.

5.03.00 Inspection and Core Tests

Inspection of concrete work immediately after stripping the formwork and core test of structures shall conform to Clause 17 of IS: 456.

6.00.00 LABORATORY AND FIELD TESTING

6.01.00 The field laboratory for QA and QC activities shall be constructed and setup by the Contractor in line with the indicative field QA&QC laboratory set-up enclosed at Annexure-I. The Laboratory building shall be constructed and installed with the adequate facilities to meet the requirement of envisaged test setup. Temperature and humidity controls shall be available wherever necessary during testing of samples. The quality plan shall identify the testing equipment / instrument, which the Contractor shall deploy and equip the field quality laboratory for meeting the field quality plan requirements. The Contractor shall furnish a comprehensive list of testing equipment / instrument required to meet the planned/scheduled tests for the execution of works for OWNER acceptance/ approval. The Contractor shall mobilize the

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

requisite laboratory equipment and QA&QC manpower at least 15 days prior to the planned test activity as per the schedule of tests.

- 6.02.00 All equipment and instruments in the field shall be calibrated before the commencement of tests and then at regular intervals, as per the manufacturer's recommendation and as directed by the OWNER. The calibration certificates shall specify the fitness of the equipment and instruments within the limit of tolerance for use. Contractor shall arrange for calibration of equipment and instruments by an NABL / NPL accredited agency and the calibration report shall be submitted to OWNER.
- 6.03.00 The tests which cannot be carried out in the field laboratory shall be done at a laboratory of repute. This includes all IITs, NCB, CSMRS, reputed government / autonomous laboratories / organizations, NITs and other reputed testing laboratories. The test samples for such test shall be jointly selected and sealed by the engineer and thereafter these shall be sent to the concerned laboratory through the covering letter signed by OWNER engineer. The test report along with the recommendations shall be obtained from the laboratories without delay and submitted to OWNER.
- 6.04.00 Based on the schedule of work agreed with the engineer-in-charge and the approved FQP, the Contractor shall prepare a schedule of tests and submit them to the engineer-in-charge and organize to carry out the tests as scheduled /agreed.

Annexure-I

LIST OF RMC FIELD QUALITY ASSURANCE LABORATORY APPARATUS

SL NO	DESCRIPTION	QUANTITY
1	Cube moulds - 150 mm (ISI marked)	50
2	Cube moulds - 70.6 mm	9
3	Cube testing machine with two dial gauge and brick plate attachment	1 sets of 2000 kN capacity each
4	Digital thermometer - 200°C	3
5	Electrical oven	1
6	IS sieve set along with sieve shaker – 75 µ, 150 µ, 300 µ, 600 µ, 1.18 mm, 2.36 mm, 4.75 mm, 6.3 mm, 10 mm, 12.5 mm, 16 mm, 20 mm, 22.4 mm, 25 mm, 31.5 mm, 40 mm, 50 mm, 53 mm, 63 mm, 80 mm, 90 mm, 120 mm, 125 mm, pan	1 Set for Sand & 1 set for coarse aggregate
7	Measuring cylinder (glass) 50 ml, 200 ml, 500 ml	2 each
8	Physical balance Digital 10 kg capacity L.C. – 1 gm	1

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

9	Platform balance – Digital: 200 kg capacity	1
10	Pycnometer	2
11	Slump cone with tamping rod	4
12	Specific gravity bottle – 50 ml	2
13	Air entrainment meter capacity – 0.005 cum	2
14	English type trowel	4
15	Impact testing machine	1
16	Le-Chatelier apparatus with water bath	2
17	Measuring cylinder (plastic) 50 ml, 100 ml, 200 ml, 500 ml	1
18	pH meter	1
19	Screw gauge	2
20	Spatula	4
21	Standard sand grade 1, 2, 3 500 kg	each
22	Stop watch - Digital	1
23	Thermometer ordinary 50°C	5
24	Vernier calipers - Digital	1
25	Vicat apparatus	2
26	Weigh Boxes	4
27	Cylindrical measures: - capacity 0.01 cum, Dia (I) – 250 mm, Height – 280 mm, (I) with tamping rod as per IS 1199.	1
28	Rapid Curing Water Tank (IS: 1199)	1
29	Flow Table for self compacting Concrete	1

Annexure-II

INDICATIVE LIST OF BOUGHT OUT ITEMS FOR READY MIX CONCRETE WORKS

Sl. No	Bought out Item	Proposed Make	Proposed list of Manufacturers
1	Cement		
2	Construction Chemicals admixtures, waterproofing, accelerators,		

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

3	Any other specific high value and critical bought out Item required, meeting the specification requirements		
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Note: The Bidders are required to indicate the list of proposed manufacturers/ subvendors for each of the BOI in their Bid proposal, which shall be discussed for finalization at post bid stage.

7.00.00 LIST OF I.S. CODES AND STANDARDS FOR REFERENCE

All work under this specification shall, unless specified otherwise, conform to the latest revisions and/or replacements of the following or any other Indian Standard Specifications and Codes of Practice. In case any particular aspect of work is not specifically covered by Indian Standard Specifications, any other standard practice, as may be specified by the Engineer, shall be followed: -

- IS: 269 - Indian Standard Specification for Ordinary Portland Cement
- IS: 383 - Indian Standard Specification for Coarse and Fine Aggregates from Natural Sources for Concrete
- IS: 455 - Indian Standard Specification for Portland Slag Cement
- IS: 456 - Indian Standard Code of Practice for Plain and Reinforced Concrete
- IS: 516 - Indian Standard Specification for Methods of Test for Strength of Concrete
- IS: 1200 - Indian Standard Specification for Method of (Part-II) Measurement Cement Concrete Works.
- IS: 1489 - Indian Standard Specification for Portland - Pozzolona Cement - Part 1 & 2
- IS: 1791 - Indian Standard Specification for Batch Type Concrete Mixers
- IS: 2386 - Indian Standard Specification for Methods of Test for Aggregates for Concrete - Part-I to VIII
- IS: 2430 - Indian standard specification for method of sampling of Aggregate for concrete.
- IS: 2514 - Indian Standard Specification for Concrete Vibrating Tables
- IS: 2645 - Integral Cement water proofing compound
- IS: 2722 - Indian Standard Specification for Portable Swing Weigh Batcher for Concrete (Single and Double Bucket type)

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- IS: 2770 - Indian Standard Specification for Method of Testing Bond in Reinforced Concrete. Part - 1: Pull out Test
- IS: 3025 - Indian Standard Specification for Methods of Sampling and Test (Physical and Chemical) for Water & waste water - Part - 1 to 37
- IS: 3550 - Indian Standard Specification for Method of Test for Routine Control for Water used in Industry
- IS: 3812 - Indian Standard Specification for Fly Ash for Use as Pozzolana & Admixture
- IS: 4031 - Indian Standard Specification for Method of Tests for Hydraulic Cement - Part - 1 to 14
- IS: 4082 - Indian Standard Specification for Recommendation on Stacking and Storage of Construction Materials at site
- IS: 4634 - Indian Standard Specification for Method of Testing Performance of Batch-type Concrete Mixers
- IS: 4925 - Indian Standard Specification for Concrete Batching and Mixing Plant
- IS: 4926 - Indian Standard Specification for Ready Mixed Concrete
- IS: 5512 - Indian Standard Specification for Flow Table for use in Tests of Hydraulic Cement and Pozzolanic Materials
- IS: 5513 - Indian Standard Specification for Vicat Apparatus
- IS: 5515 - Indian Standard Specification for Compaction Factor Apparatus
- IS: 5816 - Indian Standard Specification for Method of Test for Splitting Tensile Strength of Concrete Cylinders
- IS: 5891 - Indian Standard Specification for Hand Operated Concrete Mixers
- IS: 6452 - Indian Standard Specification for High Alumina Cement for Structural Use
- IS: 6909 - Indian Standard Specification for Super sulphated Cement
- IS: 6925 - Indian Standard Specification for Method of Test for Determination of Water Soluble Chloride in Concrete Admixtures
- IS: 7320 - Indian Standard Specification for Concrete Slump Test Apparatus
- IS: 7861 - Indian Standard Specification for (Part-I Recommended Practice for hot and cold & II) Weather Concreting
- IS: 7969 - Safety Code for Storage and Handling of Building Materials

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II: Scope of Works and Technical Specifications

- IS: 8041 - Indian Standard Specification for Rapid Hardening Portland cement
- IS: 8112 - Indian Standard Specification for 43 grade Ordinary Portland Cement
- IS: 8142 - Indian Standard Specification for Determining Setting time of Concrete by Penetration Resistance
- IS: 9103 - Indian Standard Specification for Admixtures for Concrete.
- IS: 10262 - Recommended Guideline for concrete Mix Design
- IS: 12330 - Indian standard specification for sulphate resisting Portland cement
- IS: 12600 - Indian standard specification for low heat Portland cement.

8.00.00 INDICATIVE FIELD QUALITY PLAN

Please refer the 'Volume-IE-Technical Specification and Layout-2006129' for "Indicative Field Quality Plan".

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

CONTENTS

CLAUSE NO	DESCRIPTION
1.0	PROJECT SYNOPSIS AND GENERAL INFORMATION
2.0	SCOPE OF THE CONTRACT
3.0	SITE VISIT
4.0	OPEN SPACE FOR OFFICE & STORAGE
5.0	WATER
6.0	ELECTRICITY
7.0	MATERIAL SUPPLY
8.0	INSPECTION, TESTING AND INSPECTION CERTIFICATES
9.0	INSURANCE
10.0	DEVIATIONS/ CLARIFICATIONS
11.0	DEWATERING
12.0	TIME SCHEDULE/ COMPLETION PERIOD
13.0	PRICE BID, CONTRACT PRICE & EVALUATION OF PRE-QUALIFICATION CRITERIA
14.0	TERMS OF PAYMENT
15.0	TAXES AND DUTIES
16.0	PRICE VARIATION CLAUSE/ ESCALATION
17.0	PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT
18.0	QUALITY CONTROL & QUALITY ASSURANCE
19.0	QUALITY ASSURANCE PROGRAMME
20.0	GENERAL REQUIREMENTS – QUALITY ASSURANCE
21.0	HEALTH, SAFETY & ENVIRONMENT
22.0	SPECIFIC REQUIREMENTS FOR ISO 9002
23.0	INTEREST BEARING RECOVERABLE ADVANCE (IBRA)
24.0	OVER RUN CHARGES
25.0	LIQUIDATED DAMAGES
26.0	GUARANTEE / WARRANTY
27.0	EXTENSION OF TIME FOR COMPLETION
28.0	PERFORMANCE BOND
29.0	CERTIFICATE TOWARDS COMPLETION
30.0	SPLITTING OF THE CONTRACT
31.0	CIVIL LABORATORY
32.0	CONSTRUCTION SCHEDULE
33.0	MATERIAL HANDLING
34.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)
35.0	OTHER TERMS

ANNEXURE- A: LIST OF EQUIPMENTS FOR CIVIL SITE LABORATORY

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

The Special Conditions of Contract (SCC) inscribed hereunder shall be read and construed along with General Conditions of Contract (GCC, Volume-IC) and in case of any conflict or inconsistency, the provision of the Special Conditions of Contract, shall prevail.

1.0	PROJECT SYNOPSIS AND GENERAL INFORMATION
1.1	
1.2	APPROACH TO SITE
	The proposed site is located at Bhilai (East) in Durg district of Chattisgarh. Latitudes : 21.210 N Longitudes : 81.380 E Place : Bhilai (East) District : Durg Nearest Railway Station : Bhilai (4KM) Nearest Airport : Raipur (35KM) Nearest Town/City : Bhilai (10KM)
1.3	Owner: NSPCL
2.0	SCOPE OF THE CONTRACT
2.1	The scope of work includes the followings: Procurement, Supply, storage of approved quality aggregates, Cement, admixtures etc. for ready mix concrete of various grades as per details given in BOQ or elsewhere in the contract document. Establishment of Design mix of various grades as per IS-456 and IS-10262 or equivalent Standard. Production of ready mix concrete in computerised automatic batching plant of required capacity as per quality norms and as per Field Quality Plan (FQP) approved by Customer. Conducting various tests in established ready mix concrete testing Laboratory at site as per FQP. Scope also includes transportation of Concrete through Transit Mixer from Batching Plant to Pouring Point & Concrete Pouring through Concrete Pump/Suitable Boom Pressure as per site requirement. All T&P required shall be arranged by contractor. Concrete testing Cube shall be taken at both Pouring and Batching Point by agency as per frequency mentioned in IS 456 and FQP. Supervision of concrete laying by Quality engineer of Agency. Responsibility of Concrete Quality and soundness lies with Agency.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

2.2	Mix design (M 20, M 25, M 30, M 35 or as required grade) for all concreting shall be carried out from a reputed & approved laboratory of BHEL / NSPCL. contractor may add admixture for minimizing of cement content in line with relevant IS code as advised by BHEL time to time without any additional cost. BHEL is carrying out concrete design mix this project for advancement of work. BHEL concrete design mix if available at initial phase, agency has to utilize it for start of work before its mix design is established. In case of non-availability of mix design from BHEL agency cannot claim any financial implication. Ordinary Portland Cement (OPC) shall necessarily be used for the following structures. Spring supported decks of limestone crusher (M35 Grade of Concrete as per specification, Tentative Quantity: -125 Cum) b) RCC for Chimney shell. (M35 Grade of Concrete as per specification, Tentative Quantity: -7000 Cum) The grade of cement shall be Grade 43 for OPC conforming to IS:269. Bidder has to asses accordingly and no additional claim will be entertained on account of change in cement from PPC to OPC. Mix design parameter for Grade of M35 concrete for above two structure shall be as per Engineer In charge instruction.
2.3	The work to be performed under this specification consists of providing all labour, materials, consumables, equipment, temporary works, temporary storage sheds for contractors own use, temporary colony for labour and staff, temporary site offices, constructional plant's transportation / handling and all incidental items not shown or specified but reasonably implied or necessary for the completion of subject scope, all in strict accordance with the specifications including revisions and amendments thereto as may be required during the execution of work.
2.4	Batching plant area along with 6m wide & approx. 250 m long approach road shall have to be properly hard surfaced with interlocking pavers or brick bats etc. with adequate drainage system. There should be separate area for parking of bulker and transit miller. Tentative probable location of batching plant is earmarked in Plot Plan.
2.5	Minimum Two-month stock of raw material including admixture are to be maintained all time at batching plant. Initially minimum monthly requirement would be 2000 cum. Separate shed for storage of cement and admixture is to be made.
2.6	SANITARY The Contractor shall furnish and maintain sanitary facilities for the use of all personnel engaged in the Work under this Contract. These facilities shall be subject to the approval by the Employer.
2.7	The scope shall also include testing of material & ready mix concrete in laboratory with necessary equipment for conducting relevant tests as required. Instruments used in Lab shall have valid calibration certificate from authorized agency.
2.8	All quality standards & other technical requirements shall be strictly adhered to. The Bidder shall fully apprise himself regarding prevailing conditions at the site, climatic conditions including monsoon pattern, soil conditions, local conditions and site specific parameters and shall include for all such conditions and contingent measures in the bid, including those which may not have been specifically mentioned in the specifications.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

2.9	All works under this specification, unless specified otherwise, shall conform to the latest revision of Indian Standard Specifications and Codes of Practice. In case any particular aspect of work is not covered specifically by customer Specification, any other IS standard practice as may be specified by the Engineer shall be followed.
3.0	SITE VISIT
3.1	Contractor should visit site and acquire full knowledge & information about site conditions prevailing at site and in and around the plant premises together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the bid in line with the above, site visit confirmation will be required to be submitted by the bidder with the technical bid.
4.0	OPEN SPACE FOR OFFICE & STORAGE
4.1	Open spaces for material storage yard & construction of temporary site office may be allocated as made available by the customer / BHEL free of cost. Contractor has to make his own arrangements for labour colony including Electricity and water for the labour colony.
4.2	Construction of necessary stores and storage of materials shall be in contractor's scope. BHEL shall provide available space as received from customer on mutually agreed basis. Security of stores & work place shall be in Contractor's scope.
4.3	REMOVAL OF TEMPORARY FACILITIES When the Work is completed all such temporary structures and facilities shall be removed from the Site and the area shall be restored to its original condition.
5.0	WATER
5.1	Contractor shall make all arrangements himself for the supply of construction water as well as potable water for labour and other personnel at the work site/ colony. Any statutory clearance required shall be obtained by the contractor. Assistance, if required shall be provided by BHEL/NSPCL.
5.2	Further necessary network for construction & drinking water system shall be done by the bidder at his own cost.
5.3	Contractor should arrange on their own, drinking water in their labour colony.
5.5	Contractor will have to arrange for storage of water to meet the day-to-day requirement. Bidder will ensure adequate supply of construction water to meet the requirement of water during major concreting.
6.0	ELECTRICITY
6.1	Construction power (three phase, 415 V/ 440 V) will be provided near the site at a distance of approx. 500M on chargeable basis (source of construction power shall be provided at two locations). However, During Construction Power interruption, vendor has to keep their DG back-up to maintain steady production of Ready mix concrete till end of contract. The bidder will have to procure & install adequate area illumination system during construction right from start of his work. This system will include temporary pole lighting, portable lighting towers with sufficient DG back-up for area lighting at different working areas for execution of the work & safety of workmen within the quoted rate. The illumination should be such that minimum illumination requirement as specified in specification or any-where for general illumination is maintained. GENERAL: - If any other voltage level (other than normally available) is required, the same shall be

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

	arranged by the contractor from power supply as above. Contractor will have to provide at his own cost necessary calibrated energy meters (tamper proof, suitably housed in a weather proof box with lock & key arrangement) at point of power supply along with calibration certificate from authorized / accredited agency for working out the power consumption. In case of recalibration required for any reason the necessary charges including replacement by calibrated meters is to be borne by the contractor. Supply of electricity shall be governed by Electricity Act and Installation Rules and other Rules and Regulation as applicable. The contractor shall ensure usage of electricity in an efficient manner and the same may be audited by BHEL time to time. In case of any major deviation from normally accepted norms is observed, BHEL will reserve the right to impose penalty as deemed fit for such cases. The charges only for the actual energy consumed by the contractor shall be recovered based on prevalent rate of DISCOM.
6.2	The bidder shall have to provide earth leakage circuit breaker at each point wherever human operated electrical drives / T&Ps are deployed.
6.3	The power supply will be from the available source of customer. BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of power supply / variation in voltage level and no compensation for delay in work can be claimed by the contractor due to such non-supply on the grounds of idle labour, machinery or any other grounds.
6.4	Bidder will have to arrange sufficient illumination at their own work areas.
6.5	The contractor should ensure that the work in critical areas is not held up in the event of power breakdown. In the event of breakdown in the electric supply, if the progress of work is hampered, it will be the responsibility of the contractor to step up the progress of work after restoration of electric supply so that overall progress of work is not affected.
6.6	The contractor shall have to make arrangement at their own cost for illumination that will be required in the working area for execution of the work & safety of workmen.
6.7	The contractor shall have to make arrangement at their own cost for illumination etc in labor colony. However there may be provision of Chargeable Power for labor colony for which contractor has to install meters and necessary accessories
7.0	MATERIAL SUPPLY
7.1	SUPPLY OF MATERIALS – All requisite approved quality materials viz. cement aggregates, sand, admixtures and consumables (like gas, electrodes etc. and other materials required for the work) shall be supplied by the contractor in time during execution. BHEL shall not supply any materials for this work.
7.1.1	Cement shall be as per Technical specification and BOQ item of the contract
7.1.2	Test certificates in respect of Cement for each consignment to be furnished and also to be tested as per FQP before use. The contractor shall submit the consumption statement of cement used in the works along with bill.
8.0	INSPECTION, TESTING AND INSPECTION CERTIFICATES
8.1	The engineer, his duly authorized representative and / or an outside inspection agency acting on behalf of BHEL / owner shall have access at all reasonable times to inspect & examine the materials & workmanship of the works during its manufacture and if part of the works is being manufactured or assembled on other premises or works, the vendor shall obtain for the engineer and for their duly authorized representative permission to inspect as if the works were manufactured or assembled on vendor's own premises or works. Necessary arrangement for carrying out inspection including

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

	supply of labour, IMTEs, area illumination and scaffolding, if required will be vendor's responsibility and same has to be carried out within the quoted price.
8.2	Before any materials, leaves the place of manufacture, BHEL shall be given the option of witnessing inspections & tests for compliance with specifications & related standards. The vendor shall give the engineer / inspector 15 days written notice of any material being ready for testing. Such test shall be to the vendor's account except for the expenses of the inspector. The engineer / inspector, unless the inspection is waived will attend such tests within 15 days of the date on which the equipment is notified as being ready for test / inspection, failing which the vendor may proceed with test which shall be deemed to have been made in the inspector's presence and he shall forthwith forward to the Inspector duly certified copies of test reports.
8.3	In all cases where the vendor provides the tests at the premises of the vendor or any sub-vendor, the vendor except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by the engineer/ inspector to carry out effectively such tests on the equipment in accordance with the contract and shall give facilities to the engineer/ inspector to accomplish testing.
9.0	INSURANCE
9.1	BHEL shall arrange comprehensive MCE (marine cum erection) Insurance Policy for total project supply & services including balance of plant package covering transit risks & loss, destruction or damage during handling at Site, Storage, civil works ,erection, testing and commissioning up to trial operation completion of unit including theft, sabotage, fire, lightning and other natural calamities.
9.2	Contractor shall report to BHEL in writing any damages to equipment/components on receipt, storing, and during withdrawal of the materials from stores, in transit to site and unloading at place of work and during erection and commissioning till trial operation completion including handing over. The above report shall be as prescribed by BHEL site management. Any consequential loss arising out of non-compliance of this stipulation will be borne by contractor.
9.3	The contractor will take necessary precautions/ due care to protect the material at Project site, while in his custody from any damage/ loss till the same is handed over to BHEL/ customer at Project site. For lodging/ processing of insurance claim the contractor will submit necessary documents. BHEL will reserve the right to recover the loss from the contractor as detailed below in case the damage/loss is due to negligence/ carelessness on the part of the contractor. In case of theft of material under contractor's custody, the same shall be reported to police by the contractor immediately and copy of FIR and subsequently police investigation report shall be submitted to BHEL/ customer for taking up with insurance. However, this will not relieve the contractor of his contractual obligation for the materials in his custody.
9.4	In case the damage/loss/theft of materials are attributable to negligence/failure in discharging the duties and obligations of the contractor, the expenses incurred for repair/replacement of such components in excess of the amount realized from the underwriters, limited to Normal Excess (Deductible Franchise) shall be recovered from the contractor.
9.5	Other conditions of Insurance shall be as per relevant clause of GCC/SCC.
10.0	DEVIATIONS/ CLARIFICATIONS
	Normally no deviation with respect to tender is acceptable to BHEL. However, in case

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

	of unavoidable circumstances, the bidder may submit their query for seeking clarifications of BHEL as per modality stipulated in NIT or may submit the same along with his offer as per prescribed schedule/ format without any ambiguity. Any assumptions, presumptions, deviations etc. indicated or implied anywhere by the bidder except those indicated in the deviation schedule/ format will not be recognized and will not form apart of consideration / offer. In the absence of such filled-up schedule / format it will be understood and agreed that the bidder's offer is based on strict conformance to the specification and no negotiation would be allowed in this regard. BHEL reserve the right not to recognize any/ all deviations submitted after opening of the bid.
11.0	DEWATERING Contractor shall ensure at all times that his work area & approach / access roads are free from accumulation of water, so that the materials are safe and the operation of plant / progressive delivery schedule are not affected. No separate claim in this regard shall be admitted by BHEL. No separate payments for dewatering of subsoil, surface water or catchments water, if required, at any time during execution of the work including monsoon period shall be considered by BHEL.
12.0	TIME SCHEDULE/ COMPLETION PERIOD The entire work under the scope of work shall be successfully completed in all respect as below: Supply of Ready Mix Ready mix concrete(RMC): within 15 (Fifteen) months from date of start of work, as certified by Construction Manager, BHEL. The date of start of contract shall be reckoned as the commissioning of the 1st Batching Plant. Approximate 3000 – 4000 Cum / Month of ready mix concrete may have to be supplied during peak period i.e. except rainy season as per requirement if BHEL. In rainy season the approximate quantity shall be 1500 – 2500 Cum/ Month. Weekly & daily requirement of RMC shall be finalized with designated representative of BHEL suitably and production/supply to be made accordingly. Records of such requirements shall be properly maintained.
13.0	VOID
14.0	TERMS OF PAYMENT
14.1	The contractor shall submit his running bill (RA bill) once in a month at the end of each month in line with payment terms / billing schedule indicated below. The RA bill complete in all respects accompanied by BHEL engineers certified / measurement sheet, jointly signed, will be paid after passing of the bill subject to completeness & correctness. The measurement will be taken as specified in terms & conditions of contract and certified by the BHEL engineer of actual work. However, no extra payment shall be made in the event of delay in release of payment. 95% pro-rata monthly RA payment shall be considered for payment based on monthly work completion certificate to be issued by BHEL engineer as per approved BBU/Price Schedule.
14.2	VOID
14.3	Balance 5% shall be after completion of warranty period of 03 months from the date of completion of work and handing over back of site / land to BHEL / NSPCL.
14.4	Contractor shall make their own arrangement for making payment of impending labour wages and other dues in the meanwhile.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

14.5	Contractor has to submit entry gate pass for cement and admixture required for the work to BHEL. Contractor have to submit entry gate pass along with royalty paid certificate for Fine & coarse aggregate required for the work to BHEL. In absence of the above their corresponding RA bills shall not be processed.
14.6	Subject to any deduction which BHEL may be authorized to make under the contract, the contractor shall on the certification of the BHEL engineer at site, be entitled to payment explained hereunder.
14.7	The bills will be sent to BHEL, Site Finance for scrutiny and payment will be made after processing / verification only.
14.8	The measurement will be taken by BHEL engineer as per relevant clause of specification and IS standard and certify regarding actual work executed in measurement book and bills for work. However no additional payment shall be made in the event of delay in release of payment beyond the stated period.
14.9	All admissible recovery / adjustment, etc. shall be made from interim payable amount.
14.10	Void
14.11	Payment shall be made as per order from BHEL site office The quoted / accepted price shall remain Firm throughout the contract period Including extension period, if any. However, price variation shall be paid / recovered as per relevant clause.
15.0	TAXES, DUTIES, ETC. Please refer Chapter-IV of Volume-IA Technical Conditions of Contracts.
16.0	PRICE VARIATION CLAUSE/ESCALATION Please refer Clause no. 2.17 of Volume-IC-General Conditions of Contracts.
17.0	PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT
	To meet the need of construction management at site, contractor shall provide the following services within quoted / accepted rates.
17.1	PLANNING & MONITORING
17.1.1	The bidder shall prepare a detail supply schedule (L-3) as per requirement given in this document. This network must conform to the overall supply schedule. The bidder should also ensure monitoring of these activities at least weekly basis to start with and on daily basis whenever required by BHEL.
17.1.2	The bidder will have to Supply & install of 1 Nos. PCs (multimedia PC work station Pentium- Core-i5-650, 3.2 GHZ or above, 500 GB HDD, 4 GB RAM, 100 /1000 MBPS LAN card) of HP / HCL / COMPAQ / ZENITH or equivalent make with window 10 or higher, 64 bit (with roll back to 32 bit O/S and required software like MS Office 2013 or higher, AutoCAD 2014 or higher, ADOBE PDF CREATOR with 1 nos. Multifunction (scanner / copy / print) & 1 No. A4 Colour laser printer as per instruction of BHEL for exclusive use of BHEL. These computers / printer / Multifunction shall remain Vendors property and they will be allowed to take out the same after closing of contract. The contractor shall provide data / information etc. in prescribed formats for periodical updating of the progress reports, material management reports, updating of network pertaining to the contractor's scope of work etc. The contractor shall also provide 1 (One) Number computer operators and 2 (Two) number service staff for miscellaneous service for BHEL's use at site for reconciliation, progress review & day-to-day planning purpose, documentation etc. These facilities are to be provided within 30 days from LOI date till completion of scheduled contract period.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

	If BHEL will not be provided the service of computer / printer / personnel as per requirement, BHEL shall have the right to deduct the amount as per following rates on prorated basis, from contractor's RA bill or any other dues.
17.1.2.1	@ Rs 20,000 (Twelve thousand)/ month for each computer operator.
17.1.2.2	@ Rs 12,000 (Eight thousand)/ month for each computer with printer.
17.1.2.3	@ Rs 16,000 (Eight thousand)/ month for each service staff .
17.1.2.4	In the event of the contract period getting extended beyond the stipulated time for reasons not attributable to the bidder. The bidder will be reimbursed at the above mentioned rate, if the services of operator/ service staff are being used by BHEL.
17.1.3	The contractor's site office must have facilities of communications like Fax, E-mail, and telephone with STD facility within a month from LOI.
17.2	PROGRESS REPORTING
17.2.1	The bidder shall submit monthly progress reports for work force, materials, consumables (cement, aggregates, admixtures etc.) and other as per pro-forma considered necessary by BHEL. In case of any failure on contractor's part to comply with this, BHEL may at its discretion, consider to withhold part payment against their RA bills.
17.2.2	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 slippages do not accumulate and effect the overall program.
17.2.3	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.
17.2.4	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. For discussions, the contractor shall present program of subsequent week. The contractor shall constantly update / revise his work program to meet the overall requirement.
17.2.5	Periodic progress reviews on the entire activities of execution in respect of supply of ready mix ready mix concrete will be held once in a month at Nagpur/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.
17.2.6	During the contract / extended contract period contractor shall take an average ten colour digital photograph / slides each month (not less than two per week) of the works during progress. In case of failure in providing such photograph in each month, an amount of Rs. 5000/- per month shall be deducted from contractor's RA bill.
17.3	SITE ORGANIZATION
17.3.1	The contractor shall maintain a site organization of adequate strength in respect of manpower, construction machinery and other implements at all time for smooth execution of the contract headed by a competent construction manager for site operations with sufficient level of authority to take site decisions. The vendor will submit organization chart (showing the name of SITE-IN-CHARGE) with individual bio-data indicating various levels of experts to be posted for supervision and execution, quality, material management, planning, safety, etc. The organization shall be

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

	reinforced from time to time, as required to make up slippage (if any) from the schedule without any commercial implication to BHEL. The organization chart is to be submitted within 10 days from the date of LOI.
17.3.2	Following (minimum) engineering manpower with power plant construction background to be deployed at site by the successful vendor for their day to day supervision etc.
17.3.2.1	Qualified safety officers (exclusive for safety supervision). 2 No.
17.3.2.2	Quality Engineer & Quality Assistant Two no Graduate Engineer (Minimum 5 years' Experience) One Quality assistants (min. Diploma In Civil Engineering)
17.3.2.3	Deputation of above man-power shall be jointly decided at site in line with requirement.
17.3.2.4	Engineer / supervisor for other functions like store & purchase, material management, fin, administration etc. are to be provided as per site requirement and not considered above.
17.3.2.5	In the event of non-deputation of engineer/ supervisor by the bidder as per above agreed schedule, BHEL shall reserve the right to deduct Rs. 50000/- per man-month for engineer, Rs. 30000/- per man-month for the supervisor / safety officer / Assistant from RA bills. Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement without any financial implication.
17.3.2.6	BHEL reserves the right to reject or approve the list of personnel proposed by the contractor. The persons whose bio-data have been approved by BHEL will have to be posted at site and deviation in this regard will not be permitted unless specific & reasonable justification is made.
17.3.2.7	In addition to above, a well experienced qualified engineer to be designated, as 'Project Co-coordinator', shall be deployed by the contractor. Such engineer shall have adequate exposure on the job and shall remain fully involved in all planning activities, guidance etc. to contractor's own team during the complete execution period of contract.
17.3.2.8	The contractor should also submit to BHEL for approval a list of T&Ps along with their fitness certificates. The tools & tackles shall not be removed from site without written permission of BHEL.
17.3.2.9	Parallel working of all installed batching plants is envisaged. Hence every batching plant should have independent Batching Plant operator, Transit mixer operator, Concrete Pump/Boom Placer operator and adequate supporting staff round the clock to cater all the batching plants as per requirement. However, with prior intimation routine maintenance shall be allowed phase wise.
18.0	QUALITY ASSURANCE & QUALITY CONTROL
18.1	INSPECTION & FIELD QUALITY ASSURANCE
18.1.1	Contractor shall carry out all activities conforming to the approved Field Quality Plan (FQP) & technical instructions as revised from time to time. 'Total Quality' shall be the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and quality standards. Contractor shall provide the services of quality assurance engineer as per the relevant clauses.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

18.1.2	Preparation of quality assurance log sheets and protocols with customer / consultants / statutory authority, welding logs, NDE records, testing & calibration records and other quality control and quality assurance documentation as per BHEL engineer's instructions, is within the scope of work / specification. These records shall be submitted to BHEL / customer for approval from time to time.
18.1.3	The protocols between contractor and customer / BHEL shall be made for correctness of foundations, materials, procedures, at each stage of installation, generally as per the requirement of customer / BHEL. This is necessary to ensure elimination of errors and to avoid accumulation and multiplication of errors.
18.1.4	A daily log book (with proper indexing) should be maintained by every supervisor / engineer of contractor, for respective area of work, on the job for detailing and incorporating alignment/ clearance / centering / levelling readings and inspection details of various equipment, etc. This log book shall be always accessible to BHEL engineers. High pressure welding (as applicable under the scope of this contract) details like serial number of weld joints, welders name, date of welding, details of repair, heat treatment etc. will be documented in welding log as per BHEL Engineer's instructions. Record of radiography (as applicable under the scope of this contract) containing details like serial number of weld joints, date of radiography, repairs, if any, re-shots etc shall also be maintained as per BHEL Engineer's instructions. Record of heat treatments (as applicable under the scope of this contract) performed shall be maintained as prescribed by BHEL.
18.1.5	The performance of welders (as applicable under the scope of this contract) will be reviewed from time to time as per the BHEL standards. Welders' performance record shall be furnished periodically for scrutiny of BHEL's Engineer. Corrective action as informed by BHEL shall be taken in respect of those welders not conforming to these standards. This may include removal/ discontinuance of concerned welder(s). Contractor shall arrange for the alternate welders immediately.
18.1.6	Only welders duly authorized by BHEL / customer / consultant after welder qualification test as per ASME Sec-Ix / AWS D1.1 (as applicable) shall be engaged on the work. All the welders shall carry identity cards as per the proforma prescribed by BHEL / Customer / Consultant.
18.1.7	Any re-laying or re-termination of cables / re-erection of instruments / recalibration of instruments etc. required due to contractor's mistake and found at any stage inspection, shall be carried out by the contractor at no extra cost. Repair / rectification procedure to be adopted to make any job acceptable shall be subject to the approval of BHEL.
18.1.8	Weekly Quality Review Meeting at site shall be organised by BHEL to discuss quality issues and next weeks inspection plans. Site in-charge of the contractor along with QAEs of the contractor must be present in the meeting with closure report of the issues raised by BHEL in the previous meetings.
18.2	Void
18.3	MMEs / MMRs
18.3.1	Contractor shall ensure deployment of reliable and calibrated MMEs (Measuring and Monitoring Equipment). The MMEs shall have test / calibration certificates from authorised / Government approved / Accredited agencies traceable to National / International Standards. Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

	price. The contractor will also have alternate arrangements for such MMEs so that work does not suffer when the particular equipment / instrument is sent for calibration. Also if any MMEs not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall i.e. repeat the readings taken by that instrument, failing which BHEL may deploy MME and retake the readings at Contractor's cost.
18.3.2	Contractor shall provide all the Measuring Monitoring Equipment (MMEs) required for completion of the work satisfactorily. These MMEs shall be of brand, quality and accuracy specified by BHEL Engineer and should have necessary calibration and other certificates as per the requirement of BHEL Engineer. Decision of BHEL Engineer regarding acceptance or otherwise of the measuring instruments / gauges / tools for the work under this specification, is final and binding on the contractor. BHEL shall give an indicative list of MMEs required for this work else where in this contract and to be made available by the contractor. The list will be reviewed by BHEL site as per the requirement of approved FQPs and the contractor shall meet any augmentation needed wherever required.
18.3.3	It is the responsibility of the contractor to prove the accuracy of the testing / measuring / calibrating equipment brought by him based on the periodicity of calibration as called for in the BHEL's quality assurance standards/BHEL Engineer's instructions.
18.3.4	Re-work necessitated on account of use of invalid MMEs shall be entirely to the contractor's account. He shall be responsible to take all corrective actions, including resource augmentation if any, as specified by BHEL to make-up for the loss of time.
18.3.5	In the courses of erection, it may become necessary to carry repeated checks of the work with instruments recently calibrated, re-calibrated. BHEL may counter / finally check the measurements with their own MMEs. Contractor shall render all assistance in conduct of such counter / final measurements.
18.4	Void
18.5	CONFORMANCE TO THE STATUTORY REQUIREMENTS (AS APPLICABLE UNDER THE SCOPE OF THE CONTRACT)
	The work to be executed under these specifications has to be offered for inspection, at appropriate stages of work completion, to various statutory authorities for compliance with applicable regulations. The work related statutory inspections, though not limited to, are as under: 1) Inspectorate of Steam Boilers and Smoke Nuisance 2) Electrical Inspector 3) Factory Inspector, Labour Commissioner, PF Commissioner and other authorities connected to this project work. The scope includes getting the approvals from the statutory authorities, which includes arranging for inspection visits of statutory authority periodically as per BHEL Engineer's instructions, arranging materials for ground inspection, taking rub outs for stamping of the pressure parts / pipes to be offered for inspection, submitting co-related inspection reports, documents, radiographs etc and following up the matter with them. Contractor shall also make all arrangements for offering the Products / Systems for inspection at location, as applicable, to the concerned authority.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

18.6	STORAGE & PRESERVATION OF WELDING ELECTRODES & OTHER BHEL-ISSUED MATERIAL
18.6.1	Void
18.7	Void
19.0	Void
20.0	Void
	DELETED
21.0	HEALTH, SAFETY & ENVIRONMENT
	As per Standard HSE Guidelines of BHEL.
22.0	Void
	DELETED
23.	INTEREST BEARING RECOVERABLE ADVANCE/ MOBILISATION ADVANCE
	Not applicable for this contract.
24.0	OVER RUN CHARGES
	Not applicable in this tender.
25.0	LIQUIDATED DAMAGES/PENALTY
25.1	If the contractor fails to maintain the required progress of work, which results in delay in the completion of the work as per the contractual completion period, BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 0. 5% of the contract value, per week of delay or part thereof subject to a maximum of 10% of the contract value. For this purpose, the period of delay shall be the delay attributable to the Contractor for the completion of work as per contract.
25.2	COMPENSATION FOR NON-PERFORMANCE
25.2.1	If the contractor fails to maintain the required production / supply of ready mix concrete in time for which delay occurs in the completion of the works, vendors/agencies as deployed suffers due to non-availability of ready mix concrete in time as well as BHEL suffers financially under such circumstances BHEL reserves the right to recover the cost of compensation with BHEL overhead up to 5%, limited to 10% of the contract value. The amount of such compensation shall be recovered from any money as due or which may become due to the contractor and/or from the bank guarantees / security deposit of the contractor. To impose such compensation, BHEL will not be required to prove that BHEL has incurred financial loss of such amount or proof of payment.
25.3	However, the overall LD and Compensation for Non-Performance will be limited to 10% of Contract Value.
25.4	In case of any nonconformity observed during the execution of contract, BHEL reserve the right to cancel the whole order / contract or a portion thereof at the risk & cost of the contractor and the contractor shall be liable to BHEL for any excess costs thereof.
26.0	GUARANTEE / WARRANTY
26.1	The contractor will be responsible for the quality of ready mix concrete supplied, quality of materials / design of ready mix concrete mix. In case the ready mix concrete fail to give the required strength, the cost of re-test, demolition & other cost / charges shall be recovered from the vendor. Decision of Engineer in this regard is final & binding on the vendor.
26.2	Guarantee / warranty period shall be 3 months from the date of supply of last lot of

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

	ready mix concrete of with submission of accepted test results of ready mix concrete specimens. Commencement of guarantee period shall be from the date completion of work under this contract as certified by BHEL.
27.0	EXTENSION OF TIME FOR COMPLETION
27.1	If the completion of work as detailed in the scope of work gets delayed beyond the contract / completion period due to reasons not attributable to contractor, the contractor shall make request for an extension of the contract and BHEL at its discretion may extend the contract.
27.2	However, if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty / LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.
27.3	A joint program shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources to be deployed by the contractor as per specified format. Review of the programme and record of shortfall shall be done.
27.4	During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program.
27.5	At the end of total work completion as certified by BHEL engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Contractor, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/ levied for the portion of time extensions attributable solely to contractor after adjusting delay attributable to BHEL & Force majeure and recoverable from the dues payable to the contractor.
28.0	PERFORMANCE BOND & SECURITY DEPOSIT
	Performance bond & SD are not applicable for this contract.
29.0	CERTIFICATE TOWARDS COMPLETION
	The work under the scope of the contractor shall be deemed to have been completed in all respects only when so certified by BHEL / owner. The decision of BHEL in this regard shall be final and binding on the contractor. Also please refer the clause no. 2.25 of Volume-IC-General Conditions of Contracts.
30.0	SPLITTING OF THE CONTRACT
	Not Applicable for this contract.
31.0	CIVIL LABORATORY
31.1	Contractor shall establish and maintain civil laboratory with necessary equipment (as per Annexure-A) for conducting relevant tests at site, as required. Instruments used in Lab shall have valid calibration certificate from authorized calibration agency. The Laboratory building shall be of 4.5 m x 10.5 m (minimum) in area with false ceiling along-with air condition area of 27 Sqm. Raised platform (600mm wide) with stone / tile finished up to 1.0m high dado above platform level to be provided. At least 2 Nos. Computer, printer, scanner to be provided with required numbers of good quality table & chairs to be provided. Necessary electrical wiring for operation of various equipment / instrument and other use to be provided. Bidder has to submit a layout drawing of laboratory along with the bid. Subsequently, before start of construction of laboratory,

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

	the lay-out drawing shall be approved by BHEL engineer.		
31.2	Ready mix concrete Cubes shall be taken at site as per FQP / instruction of BHEL and the same shall be tested at Site / Govt. approved laboratory / Institution if required at your own cost.		
31.3	Other than above mentioned test, any testing required to be carried out at site as per FQP / joint discussion at site and technical specification have to be arranged by you for all the works at your own cost		
32.0	CONSTRUCTION SCHEDULE		
32.1	Entire work shall be carried out in accordance with the broad supply schedule given below, within the stipulated period. Within 30 days of LOI, the contractor shall discuss with BHEL site engineer & furnish detail construction schedule (L-3/ L-4) indicating all major activities and get it approved from BHEL engineer. This schedule will undergo review and based on progress vis-à-vis project requirement, contractor shall have to submit revised schedule for approval of BHEL.		
32.1.1	Sl no.	Mobilization Milestone	Time from date of intimation from BHEL
	1	Report to Construction Manager / BHEL Site	10 days
	2	Completion of Installation of 1st Batching Plant.	45 days
	3	Completion of Installation of 2nd Batching Plant.	60 days after Engineer incharge instruction
	4	Completion of finalization & approval of Design Mixes of ready mix concrete	50 days
	5	Earliest Start of production of Ready mix concrete	60 days
32.2	Contractor shall establish mix design for all ready mix concrete grades by taking trial mix at site after submission of Design Mix of various Ready mix concrete grades or from authorized agency (As per BHEL / Customer approval). Contractor shall ensure adding of admixture and minimizing of cement content in line with relevant BS Code.		
32.3	The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL/ NSPCL engineer		
32.4	Contractor shall submit daily work program based on above construction schedule. Deferment of above schedule is not acceptable. Contractor will adhere to schedule and resource planning to be augmented to ensure completion as per schedule.		
32.5	Periodic progress reviews on the entire activities of execution in respect of supply & works in scope of contractor will be held once in a month at Kolkata / 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.		
32.6	Above schedule is indicative. The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL/BIFCL Engineer.		
33.0	Void		
34.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)		
34.1	Tentative list of T&P to be deployed by contractor for successful completion of work is detailed below. It may be noted that the list is not exhaustive and is only for general guidance. The contractor is required to provide all necessary T&P measuring (calibrated) instruments & handing equipment to maintain work progress for timely		

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

	completion of total work as per contract. In case of project requirement, some activities may have to pre-pone, in such cases the contractor may have to deploy additional T&P. Quoted rate shall be inclusive of such emerging requirements. However, contractor shall submit deployment plan of all T&P along with tender bid.	
34.2	Following Major T&Ps to be deployed by contractor within the indicated time from date of LOI / hand over of site which is applicable. Nos of T&Ps to be deployed at site shall be decided w.r.t. monthly plan and review based on site requirement. Below given Nos are suggestive/tentative for planning purposes by the bidder	
	Description of T&P	Quantity
34.2.2	Pay loader of suitable capacity	02 Nos
34.2.3	30 Cum/Hr. capacity of Automatic Batching Plant with Printing facility with required Silo for storing of Cement to be commissioned at Site.	02 Nos
34.2.4	DG set 125KVA	01 Nos
34.2.5	Ready mix concrete Testing Lab AC Lab 4.50 m x 4.50 m and Non-AC Lab 4.50 m x 6.00 m with required Equipment & Instrument as per Annexure - A	01 Nos
34.2.6	Ready mix concrete compressive strength testing moulds	50 Nos
34.2.7	Drinking water tank – 500 lit.	01 Nos
34.2.8	Self-priming water pump 5HP (diesel / electric)	02 Nos
34.2.9	Dumper	02 Nos
34.2.10	Welding rectifier	As per requirement
34.2.11	Transit Mixer	04 Nos
34.2.11 b	Additional Transit Mixer	As per Requirement
34.2.12	Concrete Pump	02 Nos
34.2.13	Boom Placer (1 Nos)	As per Requirement
34.2.11	Portable fire extinguishers as below: Soda acid – 2 sets. Dry chemical powder – 2 sets CO2 – 2 sets. Water & sand bucket (4 buckets in one stand) – 2 sets. Fire hose with nozzle (50 M length) – 2 sets	Within 60 days
34.3	NOTE: This above list is only indicative and neither exhaustive nor limiting. Quantities indicated above are only tentative. Contractor shall deploy all necessary T&P to meet the schedules & as prescribed by BHEL engineer and required for completion of work. In the event of non-mobilisation of any T&P by the successful bidder and as a result progress of work suffered, BHEL reserves the right to deduct suitable amount from the dues of the bidder, with assigning reasons thereof. The contractor should also submit the fitness/calibration certificate for T&Ps regularly and renew as per applicable IS standards and statutory requirements. The tools & tackles shall not be removed from site without written permission of BHEL. All distribution boards, connecting cables/welding cables, wire ropes, hoses etc.,	

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

including temporary air/water/electrical connectors etc. shall have to be arranged by the contractor at his own cost.

The contractor shall engage trained and experienced operators for the operation of T&P's and machinery. BHEL engineer will check their skill and performance before they are allowed to operate the same. However, checking of skills by BHEL does not absolve the contractor of his responsibilities for proper and safe handling of equipment, consistent good performance of operators and regular performance evaluation of operators.

The day to day and routine maintenance of T&Ps and machinery should be carried out by contractor and these shall be maintained in good working condition during the entire period of use T&Ps in defective/damaged condition shall be rectified promptly to the full satisfaction of BHEL engineer. Contractor shall maintain records for maintenance of major T&Ps which shall be made available for inspection whenever required. In case of any lapses on the part of the contractor, BHEL at its own discretion get the servicing/repair of equipment done at the risk and cost of the contractor with BHEL overheads as applicable time to time.

The contractor shall arrange all spares needed for upkeep of all T&Ps and machinery. For cranes, contractor shall arrange spares for repair/replacement of filter, batteries, self, dynamo, gaskets, hoses, oil seals and rubber parts.

The contractor shall permanently deploy with them minimum number of mechanics and skilled workers for undertaking the regular maintenance of tools and plants and machinery and for increasing / shortening of the crane boom as required. The contractor shall also arrange required tools, supports, consumables, illumination etc. for the above purpose.

The contractor shall arrange for consolidation of ground and arrangement of sleeper's/sand bag filling etc. for safe operation / movement of equipment including cranes/trailers etc. at his cost.

In the event of BHEL arranging T&P's and Machineries at the cost and risk of contractor, any loss / damage to any part of T&Ps and machineries provided by BHEL shall be to the contractor's account and any expenditure on these accounts by BHEL will be recovered from the contractor's bill in case the contractor fails to make good the loss.

Contractor shall ensure deployment of serviced and healthy T&Ps including cranes, lifting tackles, wire ropes, manila ropes, winches and slings etc. History card and maintenance records for major T&Ps will be maintained by the contractor and will be made available to BHEL engineer for inspection as and when required. Identification for such T&Ps will be done as per BHEL Engineer's advice.

Contractor shall ensure deployment of reliable and calibrated IMTEs (Inspection Measuring and Test Equipment). The IMTEs shall have test/calibration certificates from authorized / Govt. approved / accredited agencies traceable to National/ International standards. Each IMTE shall have a label indicating calibration status Le., date of calibration, calibration agency and due date for calibration. A list of such instruments deployed by contractor at site with its calibration status is to be submitted to BHEL engineer for control.

Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract price. The contractor will also have alternate arrangements for such IMTE so that work does not suffer when the particular instrument is sent for calibration. Also if any IMTEs not found fit for use,

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

	BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall i.e., repeat the readings taken by that instrument, failing which BHEL may deploy IMTEs and retake the readings at contractor's 'cost. BHEL shall have lien on all T&P, IMTEs and other equipment of the contractor brought to the site for the purpose of erection, testing and commissioning. BHEL shall continue to hold the lien on all such items throughout the period of contract. No material brought to the site shall be removed from the site by the contractor and/or his subcontractors without the prior written approval of the engineer. The contractor shall submit month wise T&P deployment plan. It is only to assess the capability as well as understanding of the contractor to execute the work. However, it shall be the contractor's responsibility to deploy the required T&Ps, for timely and successful completion of the job, to any extent over and above those indicated in the above deployment plan (including those which are not covered in the plan submitted) without any compensation on this account.
34.4	One no. Batching Plant shall not be more than 1.5-year-old and rest all Batching Plant shall not be more than 2 years old. All the batching plants shall maintain adequate spares to cater immediate day to day maintenance.
34.5	T&P shown in the above mentioned list are tentative based on planned progress requirement, construction schedule and material availability at site. It is to be reviewed and mutually agreed with CM, BHEL site periodically from time to time for mobilization of major T&Ps, and the same have to be adhered to. No change will be permitted without written approval of Construction Manager, BHEL site. Further requirement will be reviewed time to time at site and contractor will provide additional T&P/equipment to ensure completion of entire work within schedule time without any financial implication to BHEL. All other T&Ps shall be provided by the contractor without any extra cost to BHEL. Vendor will give advance intimation & certification regarding capacity etc. prior to dispatch of heavy equipment.
34.6	All T&P and all IMTEs, which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by the contractor at his own cost in working condition.
35.0	OTHER TERMS
35.1	All other term & conditions of this specification shall be governed by the pertinent provisions of GCC and other volumes of this tender, as applicable.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

ANNEXURE- A

LIST OF EQUIPMENTS FOR CIVIL SITE LABORATORY

SL NO.	NAME OF TEST	NAME OF EQUIPMENT	SIZE OF EQUIPMENT	IS REF.
1	Initial & final setting time, Consistency of cement	Vicat Apparatus with desk pot	Standard	IS 5513
2	Abrasion value test	Los Angles Abrasion testing machine	Standard	IS 2386
3	Aggregate Impact value test	Aggregate Impact value testing machine.	Standard	IS 9377
4	Aggregate crushing value test	Crushing value apparatus	Standard	IS 2386
5	Flakiness index	Thickness gauge for measuring flakiness index.	Standard	IS 2386
6	Elongation Index	Elongation gauge	Standard	IS 2386
7	Bulk density, voids and bulking apparatus	Measuring cylinders	3, 5,10 & 15 liters cylinders	
8	Ready mix concrete Compressive test	Digital Compressive Testing Machine.	2000KN capacity	IS 2505
9	Cement cube casting	Cube mould	70.6 x 70.6 x 70.6 mm, 09 Nos. minimum	IS 10086
10	Ready mix concrete Cube Testing	Ready mix concrete Cube Mould	150x150x150mm, minimum 120 Nos.	IS 10086
11	Workability of ready mix concrete	Slump cone	Standard, at least 04 nos	IS 456
12	Specific gravity of aggregates	Pycnometer	Standard, at least 02 nos	IS 383
13	Cement mortor vibration	Motorised vibration machine for cement cube casting	Standard	IS 4031
14	Course aggregate Sieve analysis (Ready mix concrete & Road Works)	Sieve set	450mm dia GI Frames Size: 125 mm, 90 mm, 75 mm, 63 mm, 53 mm, 40 mm, 20 mm, 16 mm, 12.5 mm, 10 mm, 4.75 mm, Pan and cover (2 Sets)	IS 383
15	Fine aggregate sieve analysis	Sieve set	200 mm dia Brass sieves; Size 4.75 mm, 2.36 mm, 1.18 mm	IS 383

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III-Part of Special Conditions of Contracts

			600 micron, 300 micron, 150 micron, 75 micron, 75 micron, Pan and cover (2 Sets)	
16	Seive Shaker	Motorised Sieve shaker	Mfg. Catalogue	
17	Silt content check	Sand silt content beaker	Standard	

Process Control Accessories				
Sl	Description of Equipment	Specification	Size / No.	
1	Hot air oven	Temperature range 50° C to 300° C	600 x 600 x 600 mm (min. size)	
2	Electronic balance	600g x 0.01g, 10Kg and 50 kg	3 nos.	
3	Physical balance	5 kg capacity	Loose weights up to 5 kg	
4	Thermometer	Temperature 0°C to 50°C	1 No. Digital & 2 Analogue.	
5				
6	Measuring jars	100ml, 200ml, 500ml & 1000 ml	2 nos. set of each size	
7	Gauging trowel	100mm & 200 mm with wooden handle	4 nos.	
8	Spatula	100mm & 200 mm with long blade wooden handle	2 nos. each size	
9	Stainless steel scoop	2 kg and 5 kg	2 nos. each	
10				
11	Digital pH meter	0.1 least count	02 nos.	
12				
13				
14	GI tray	600 x 450 x 50 mm, 450 x 300 x 40 mm, 300 x 250 x 40 mm	02 nos. each	
15	Electric mortar mixer	0.25 CUM capacity.	01 no	
16	Rebound hammer test	Digital Rebound hammer	01 no	IS 13311
17	Ultrasonic pulse velocity test	UPV apparatus for ready mix concrete	01 no	

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IV: Taxes and Duties

4.0 TAXES, DUTIES, LEVIES (Rev 14 dated 09/10/2020)

1. All taxes excluding GST, GST Cess & BOCW Cess but including, Royalties, fees, license, deposits, commission, any State or Central Levy and other charges whatsoever, if any, shall be borne by you and shall not be payable extra.
2. Any increase of the taxes excluding GST, GST Cess & BOCW Cess, at any stage during execution including extension of the contract shall have to be borne by the contractor. Quoted/ accepted rates/ price shall be inclusive of all such requirements. Please note that since GST on output will be paid by BHEL separately as enumerated below, your quoted rates/ price should be after considering the Input Credit under GST law at your end.
3. **GST** :
The successful bidder shall furnish proof of GST registration .GST along with Cess (as applicable) legally leviable & payable by the successful bidder as per GST Law, shall be paid by BHEL. Hence Bidder shall not include GST along with Cess (as applicable) in their quoted price.
4. GST charged in the Tax Invoice/Debit note by the contractor shall be released separately to the contractor only after contractor files the outward supply details in GSTR-1 on GSTN portal and input tax credit of such invoice is matched with corresponding details of outward supply of the contractor and has paid the GST at the time of filing the monthly return
5. E-invoicing under GST has been implemented with effect from 1st October 2020 for all the taxable persons having turnover more than the threshold limit in any preceding financial year from 2017-18 onwards. Therefore, for all the taxable persons falling under the purview of E-invoice, it is mandatory to mention a valid unique Invoice Reference No. (IRN) and QR code as generated from E-Invoicing portal of the Government for the purpose of issuing a valid Tax Invoice. Only an E-invoice issued in the manner prescribed under rule 48(4) of CGST Rules shall be treated as valid invoice for reimbursement of GST amount.
If the successful Bidder is not falling under the purview of E-Invoicing then he has to submit a declaration in that respect along with relevant financial statements.
6. Bidder shall note that the GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred there under) wherein the 'Bill To' details will as below:
BHEL GSTN – As per **Annexure -1**
NAME -- Bharat Heavy Electricals Limited
ADDRESS – Site address
7. Bidder to immediately intimate on the day of removal of Goods (in case of any supply of goods) to BHEL along with all relevant details and a scanned copy of Tax Invoice to below email ids to enable BHEL to meet its GST related compliances :-
Email id ---- to be intimated later on.
In case of delay in submission of the abovementioned documents on the date of dispatch, BHEL may incur penalty /interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from the successful bidder, if such delay is not attributable to BHEL.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IV: Taxes and Duties

8. In case of raising any Supplementary Tax Invoice (Debit / Credit Note) Bidder shall issue the same containing all the details as referred to in Section 34 read with Rule 53.
9. Bidder shall note that in case GST credit is delayed/ denied to BHEL due to delayed / non receipt of goods and /or tax invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons not attributable to BHEL, GST amount shall be recoverable from the vendor along with interest levied / leviable on BHEL, as the case may be.
10. Bidder shall upload the Invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act. Bidder shall note that in case of delay in declaring such invoice in your return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law , GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from the bidder along with interest levied / leviable on BHEL.
11. Way Bill: Successful Bidder to arrange for way bill / e-waybill for any transfer of goods for the execution of the contract.

The Bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants & machinery at site for execution of the works under this contract, Road Permit/ Way Bill, if required, shall be arranged by the contractor and BHEL will not supply any Road Permit/ Way Bill for this purpose.

12. **New taxes and duties:-**Any New taxes & duties, if imposed subsequent to due date of offer submission as per NIT & TCN, by statutory authority during contract period including extension, if the same is not attributable to you, shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, you shall obtain prior approval from BHEL before depositing new taxes and duties.
Benefits and/or abolition of all existing taxes must be passed on to BHEL against new Taxes, if any, proposed to be introduced at a later date.
In case any new tax/levy/duty etc. becomes applicable after the date of bidder's offer but before opening of the price bid, the bidder must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of the price bids. Claim for any such impact after opening the price bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.
13. For transportation work, bidder shall declare in his quotation whether he is registered under GST, if yes, whether he intends to claim GST on forward charge basis. In absence of this declaration, BHEL will proceed further with the assumption that bidder intends not to claim GST on forward charge basis. However, in case of GST registered transporter, the amount to the extent of goods and service tax will be retained till BHEL avails the credit of GST. Further, transporter shall issue tax invoice which inter alia includes gross weight of the consignment, name of the consigner and the consignee, registration number of vehicle in which the goods are transported, details of goods transported, details of place of origin and destination, GSTIN of the person liable for paying tax whether as consigner, consignee or goods transport agency, and also containing other information as mentioned under rule 46.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IV: Taxes and Duties

14. TDS under Income Tax shall be deducted at prevailing rates on gross invoice value from the running bills unless exemption certificate from the appropriate authority/ authorities is furnished.
15. TDS under GST shall be deducted at prevailing rates on applicable value from the running bills.
16. TCS under Income Tax 1961 has been implemented with effect from 1st October 2020 for every seller having turnover more than threshold limit during financial year immediately preceding financial year in which the sale of goods is carried out, who receives any amount as consideration for sale of any goods of the value or aggregate of such value exceeding threshold limit other than export of goods or who is already covered under other provision of section 206C, collect from the buyer, TCS as per applicable rates of the sale consideration exceeding threshold limit subject to following conditions
 - i. Buyer shall be as per clause (a) of section 206C- (1H)
 - ii. Seller shall be as per clause (b) of section 206C- (1H)
 - iii. No TCS is to be collected, if the seller is liable to collect TCS under other provision of section 206C or the buyer is liable to deduct TDS under any provision of the Act and has deducted such amount.

If Successful Bidder is falling under the purview of TCS then he has to submit a declaration in that respect along with relevant financial statements before the start of work or if bidder is falling under preview of TCS during the work in progress then bidder is compulsorily required to submit relevant financial statement in the beginning of the respective FY.

For TCS claim, vendor has to submit relevant documents required as per Income Tax Act.

17. Refer Annexure – 2 for BOCW Act & Cess Act.

ANNEXURE-1

State wise GSTIN no.s of BHEL

Sl. No	Projects under state	GSTIN
1	Andhra Pradesh	37AAACB4146P7Z8
2	Bihar	10AAACB4146P1ZU
3	Chhattisgarh	22AAACB4146P1ZP
4	Gujarat	24AAACB4146P1ZL
5	Jharkhand	20AAACB4146P5ZP
6	Madhya Pradesh	23AAACB4146P1ZN
7	Maharashtra	27AAACB4146P1ZF
8	Orissa	21AAACB4146P1ZR
9	Telangana	36AAACB4146P1ZG

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IV: Taxes and Duties

ANNEXURE-2

BOCW Act & Cess Act

Bidder may please note that the sub-contractor/bidder of BHEL engaging building or construction worker in connection with building or other construction work, are required to follow the procedures enumerated below:

1. It shall be the sole responsibility of the contractor as employer to ensure compliance of all the statutory obligations under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
2. It shall be sole responsibility of the contractor engaging Building Workers in connection with the building or other construction works in the capacity of employer to apply and obtain registration certificate specifying the scope of work under the relevant provisions of the Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 from the appropriate Authorities.
3. It shall be responsibility of the contractor to furnish a copy of such Registration Certificate within a period of one month from the date of commencement of Work.
4. It is responsibility of the contractor to register under the Building and other Construction Workers' Welfare Cess Act, 1996 and deposit the required Cess for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 at such rate as the Central Government may , by notification in the Official Gazette, from time to time specify. However, before registering and deposit of Cess under the Building and other Construction Workers' Welfare Cess Act, 1996, the contractor will seek written prior approval from the Construction Manager.
5. It shall be sole responsibility of the contractor as employer to get registered every Building Worker, who is between the age of 18 to 60 years of age and who has been engaged in any building or other construction work for not less than ninety days during the preceding twelve months as Beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996.
6. It shall be sole responsibility of the contractor as employer to maintain all the registers, records, notices and submit returns under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
7. It shall be sole responsibility of the contractor as employer to provide notice of poisoning or occupation notifiable diseases, to report of accident and dangerous occurrences to the concerned authorities under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the rules made thereunder and to make payment of all statutory payments & compensation under the Employees' Compensation Act, 1923.
8. It shall be the responsibility of the sub-contractor as employer to make payment/deposit of applicable cess amount on the extent of work involving building or construction workers

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IV: Taxes and Duties

engaged by the sub-contractor within a period of one month from the receipt of payment. It shall also be responsibility of the Contractor to furnish BHEL on monthly basis, Receipts/ Challans towards Deposit of the Cess under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder along with following statistics :

- (i) Number of Building Workers employed during preceding one month.
- (ii) Number of Building workers registered as Beneficiary during preceding one month.
- (iii) Disbursement of Wages made to the Building Workers for preceding wage month.
- (iv) Remittance of Contribution of Beneficiaries made during the preceding month

9. BHEL shall reimburse the contractor the Cess amount deposited for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder. However, BHEL shall not reimburse the Fee paid towards the registration of establishment, fees paid towards registration of Beneficiaries and Contribution of Beneficiaries remitted.
10. It shall be responsibility of the Building Worker engaged by the Contractor and registered as a beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 to contribute to the Fund at such rate per mensem as may be specified by the State government by notification in the Official Gazette. Where such beneficiary authorizes the contractor being his employer to deduct his contribution from his monthly wages and to remit the same, the contractor shall remit such contribution to the Building and other construction Workers' Welfare Board in such manner as may be directed by the Board , within the fifteen days from such deduction.
11. Bidders may please note that though the quoted price is exclusive of BOCW (which will be reimbursed by BHEL as per sub-clause 9 above) , however, If at any point of time during the contract period, non-compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder is observed, BHEL reserves the right to deduct the applicable cess (1%) on the contract value and penalty (if any, imposed by Cess Authorities) from the payables on account of non-compliance.
12. The contractor shall declare to undertake any liability or claim arising out of employment of building workers and shall indemnify BHEL from all consequences / liabilities / penalties in case of non-compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-V - Bill of Quantities and % Weightage of Individual Items

This Chapter consists of Part A & Part B of Volume II “Price bid”:

CONTENTS	
Description	Remarks
PART A: Instructions to the Bidders	Instructions
PART B: % weightage for amount of individual items of Schedule of quantity	Refer Latest Chapter-V of Vol-IA TCC (BILL OF QUANTITIES AND % WEIGHTAGE OF INDIVIDUAL ITEMS)
PART C: Total Lump Sum Price for entire scope of Work	This part is implanted in the E-Procurement portal entitled as “ Part-C of Vol-II Price Bid ”.

Part A: Instructions to the Bidders

- Bidders shall quote Total Lump-sum Price for the entire scope of work at the excel sheet provided in the E-Procurement Portal titled as “Part-C of Vol-II Price Bid”.** Price mentioned elsewhere in the offer of the bidder shall be treated as Null and Void.
- BHEL has fixed the % weightages as in “Part-B” for the amount of individual items of Schedule of Quantity w.r.t. the total price of Price Bid Vol-II.
- Based on the pre-fixed % weightages, amount of individual items shall be derived by BHEL. This amount shall not be rounded off.
- Based on the quantities of individual item and the amount arrived in Sl No 3 above, item rate of individual items shall be derived by BHEL. This item rate shall be rounded off up to two decimal places and shall be used to calculate the total amount of an item.
- For the convenience of bidders, BHEL has issued an excel sheet (file titled as Excel Sheet for Calculation Purpose only-2006129) with all requisite formulae as detailed above. ***However this excel sheet shall not form part of contract document. Further, this sheet should not be uploaded at the e-Portal.***
- Bidders to note that this is an ‘**Item rate contract**’. Payment shall be made for the actual quantities of work executed at the Unit rate arrived at as per serial no 4 above.

PART B: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price (as quoted by the bidder in “Part C of Vol-II-Price Bid”)

Note: This Chapter-V is uploaded separately as file titled ‘**Chapter V-BOQ and Percentage Weightage**’-2006129.