Cement Corporation of India Limited

Bokajan Cement Factory

Dist. Karbi Anglong, Assam-782 490
Phone 03675-246106/246109, Fax No. 03675-246107
E-mail: **bokajanmm01@gmail.com**

Notice Inviting e - Tender (NIT)

(Only through E-Procurement)

1.0 Online electronic bids through Electronic Tendering System (ETS) are invited from supplier having adequate experience for procurement of Pre-heater fan motor-1. The complete set of tender documents is available on websites www.cciltd.in, etenders.gov.in/eprocure/app (CPP Portal).

E- Tender No.	BKJ/MM/E-4094/22-23
Mode of Tender	E-procurement System (Online Part-I Techno-Commercial Bid and Part-II Price Bid through etenders.gov.in/eprocure/app) (CPP Portal)
➢ Date of NIT available to parties to download:	14.10.2022 AT 3:00 PM.
➢ Earnest Money Deposit	63,000/-
➢ Date of starting of e-tender for submission of online Techno-Commercial Bid and Price Bid at www.cci-etender.com:	**From :** 14.10.2022 till 04.11.2022 (03:00 PM)
➢ Date & Time of opening of Part - A (i.e. Techno-Commercial Bid) ➢ Date & Time of opening of Part - B (i.e. Price Bid) ➢ Price Bid Meeting-	05.11.2022 at 03:00 PM Shall be informed separately 18.10.2022
➢ Validity of Bids	120 Days from the date of the techno-commercial bid opening.

Offer is invited for the supply of following material on FIRM & FOR destination basis i.e. Bokajan Cement Factory, Dist: Karbi Anglong, Assam, Pin-782490 as per details given below :

Tender Enquiry No.	**Name of the Item**	**Qty.**
CCI/BKJ/ELECT./PH-1/22-23	**Frame :** Equivalent to Existing KDW400, Three Phase AC Slipring Induction Motor, Centrifugal overhung type fan Application ; **Type** - Slip ring ; Degree of Protection :- IP55 ; Cooling system :- IC611 ; Encl. - CACA ; **185 KW** ; **RPM : 1480**, **Voltage :** 415V ±10% , 50 Hz ± 5% ; **Current :** 325 Amp. ; Duty : S1, Insulation Class : "F" ; Connection – Δ ; Efficiency : ≥ 93 % ; Rotor Voltage : 785V ± 5% ; Rotor Amps: 142 A ± 5% ; Rotor Connection :- Star ; **Make :** ***KEC, Siemens , Crompton , Bharat Bijlee , ABB , MARATHON***	**01 No.**

Note :

1. Only those tenders will be considered who fulfill the Pre Qualification Conditions mentioned in the tender documents.
2. The price-bid should be submitted only as per CCI's Price-Bid Format , otherwise , the tender is liable for rejection.

HOD (MM)

List Of Annexure

	Part-I - Instruction to tenderers
	Part-II General terms & conditions
Annexure-I	Covering letter
Annexure-III	Declaration that the officer of the Corporation are related to us/me
Annexure-IV	Unexecuted/ Present Contracts/Jobs in hand
Annexure-V	Additional information
Annexure-VI	Details of plant and machinery installed
Annexure-VII	Details of testing facility installed
Annexure-VIII	Details of orders executed including CCI during last three years
Annexure-IX	Declaration letter
Annexure-X	Part-III – Special Terms and Conditions
Annexure-XI	Part-IV- Technical Specification
Annexure-XII	Price Bid Performa

Note : - Part-I – Instruction to tenderer, Part-II General terms & conditions, all formats and submit the same along with Annexure-9 which is available in CCI web site www.cciltd.in must be submitted by tenderer duly filled & signed.

Important instructions for E-Procurement

This is an E-Procurement event of CEMENT CORPORATION OF INDIA. The e-procurement service provider is NIC-Central Public Procurement Portal, New Delhi-110003

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You are requested to read the terms & conditions of this tender before submitting your online tender. Tenderers who do not comply with the conditions with documentary proof (wherever required) will not qualify in the Tender for opening of price bid.

1.	**Process of E-tender :** **Registration:** The process involves vendor's registration with tender wizard e-procurement portal. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Techno-Commercial Bid as well as Price Bid over the internet will be done. The Vendor should possess Class III signing type digital certificate. Vendors are to make their own arrangement for bidding from a P.C. connected with Internet. NIC-CPPP is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature). SPECIAL NOTE: THE PRICE BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT etenders.gov.in/eprocure/app 1).Vendors are required to register themselves online with etenders.gov.in/eprocure/app Register as Vendor Filling up details and creating own user id and password→ Submit. 2).Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form. In case of any clarification, please contact CCI//NIC-CPPP portal. Contact person (Cement Corporation of India): 1. HOD (M.M.), CCI, Bokajan Cement Factory, Assam. Contact No.: 03675-246109, +91-6303223140 E-mail : bokajanmm01@gmail.com 2. HOD (Elect.), CCI, Bokajan Cement Factory, Assam. Contact No.: +91-8287932783 E-mail : bkjelectrical@gmail.com **(A) Help Desk (NIC-CPPP):** **(E-commerce):** **8077213001** **B) System Requirement:** Windows 8, 10 Professional Operating System, Internet Browser-9,10 &11. Signing type Class 3 digital signature Java JRE 6 and above **THE VENDORS ARE ADVISED TO GO THROUGH THE *Help Manual* LINK AT *etenders.gov.in/eprocure/app* FOR GENERAL GUIDANCE ABOUT TENDER PROCESS.**
2.	(A) Part I Techno-Commercial bid will be opened electronically on specified date and time as given in the NIT. Bidder(s) can witness electronic opening of bid. (B) Part II Price bid will be opened electronically of only those bidder(s) whose Part I Techno-Commercial Bid is found to be Techno-Commercially acceptable by CCI. Such bidder(s) will be intimated date of opening of Part II Price bid, through valid email confirmed by them. Note: The tenderers are advised to offer their best possible rates. There would generally be no negotiations hence please submit your most competitive prices while submitting the price bid. However in case the lowest rate appears to be reasonable taking into account the prevailing market conditions, the order may be awarded to the lowest bidder and if the rate is still considered high, action as per prevailing instruction/guideline shall be taken.
3.	All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.
4.	In case of failure to access the payment towards cost of tender document & EMD for any reason, the vender, in term, will not have the access to on line e-tender and no correspondence in this respect will be entertained and CCI will not be responsible for any such lapses on this account. Bidder(s) are advised to make remittance of tender fee and EMD through Online well in advance and verify completion of transaction in respect of tender fee and EMD. Vendors are instructed to upload documents in document library. Multiple documents can be uploaded. Maximum size of single document for upload is 5 MB.

	Once documents are uploaded in the library, vendors can attach documents through *Attach Document* link against the particular tender. For further assistance please follow instructions of vendor guide..
5.	All notices and correspondence to the bidder(s) shall be sent by email only during the process till finalization of tender by CCI. Hence the bidders are required to ensure that their corporate email I.D. provided is valid and updated at the stage of registration of vendor with Tenderwizard (i.e. Service Provider). Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).
6.	The responsibility of downloading the related corrigenda, if any, will be that of the responsibilities of the parties.
7	E-tender cannot be accessed after the due date and time mentioned in NIT.
8.	Bidding in e-tender & Reverse auction: (a). Bidder(s) need to submit necessary EMD and Tender fees (If ANY) to be eligible to bid online in the e-tender. Tender fees and Transaction fees are non refundable. No interest will be paid on EMD. EMD of the unsuccessful bidder(s) will be refunded by CCI. (b). The process involves Electronic Bidding for submission of Techno Commercial Bid as well as Price Bid is explained in Help Manual. **a.** In all cases, bidder should use their own ID and Password along with Digital Signature at the time of submission of their bid. **b.** During the entire e-tender process, the bidders will remain completely anonymous to one another and also to everybody else. (c). The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above. (d). All electronic bids submitted during the e-tender process shall be legally binding on the bidder. Any bid will be considered as the valid bid offered by that bidder and acceptance of the same by the Buyer will form a binding contract between Buyer and the Bidder for execution of supply. Such successful tenderer shall be called hereafter SUPPLIER. (e). It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system. (f). Buyer reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof. (g). No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms & conditions for the tender. (h). Unit of Measure (UOM) is indicated in the e-tender Floor. Rate to be quoted should be in Indian Rupee as per UOM indicated in the e-tender floor/tender document.
09.	Any order resulting from this open e-tender shall be governed by the terms and conditions mentioned therein.
10.	No deviation to the technical and commercial terms & conditions are allowed.
11.	After submitting online bid, the bidder cannot access the tender, once it has been submitted with digital signature.
12.	CCI has the right to cancel this e-tender or extend the due date of receipt of bid(s) without assigning any reason thereof.
13.	The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website etenders.gov.in/eprocure/app of NIC-CPPP.
14.	The bidders must upload all the documents required as per terms of NIT. Any other document uploaded which is not required as per the terms of the NIT shall not be considered.
15.	The bid will be evaluated based on the filled-in technical & commercial formats.
16.	The documents uploaded by bidder(s) will be scrutinized. In case any of the information furnished by the bidder is found to be false during scrutiny, EMD of defaulting bidder(s) will be forfeited. Punitive action including suspension and banning of business can also be taken against defaulting bidders.
17.	Bidders are requested to read the vendor guide and see the video in the page etenders.gov.in/eprocure/app to familiarize themselves with the system before bidding.

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Annexure X

PART- III

Special Terms & Conditions for Supply of 3 Phase Slipring Induction Motor 185 KW / 220 HP for Centrifugal Overhung Type Fan Application.

This tender contains Part-I and Part-II general terms, Part-III special terms and conditions and price bid.

In addition to the General Terms and conditions of the tender Part- I & II the following Special terms and conditions also apply to the contract for the supply of above category of material. These special terms and conditions if contradictory to any of the conditions given in Part-I & II shall prevail upon the conditions givenherein:-

01) Specification : As per Part-IV(Annexure-XI)

02) Quantity : 1 No.

Frame : Compatiable to Existing KDW400, Three Phase AC Slipring Induction Motor, Centrifugal overhung type fan Application ; **Type** - Slip ring ; Degree of Protection :- IP55 ; Cooling system :- IC611 ; Encl. - CACA ; **185 KW** ; **RPM : 1480**, **Voltage :** 415V ±10% , 50 Hz ± 5% ; **Current :** 325 Amp. ; Duty : S1, Insulation Class : "F" ; Connection – Δ ; Efficiency : ≥ 93 % ; Rotor Voltage : 785V ± 5% ; Rotor Amps: 142 A ± 5% ; Rotor Connection :- Star ; **Make :** KEC, Siemens , Crompton , Bharat Bijlee , ABB , MARATHON	01 No

03) Eligibility Criteria :-

The tenderer should satisfy the following eligibility criteria for qualifying the techno- commercial bid of the tender and should provide the documents as mentioned here under .

Sr. No.	Eligibility Criteria	Proof to be submitted
01	Tenderer should have supplied at least 03 nos. of motors of same rating or above to reputed Cement industries or equivalent.	Purchase order (PO) copies from Cement industries or equivalent where such rating or above motorshave been supplied.
02	The motors supplied to the Cement industries (as stated above) should be working satisfactorily	Performance Certificate are to be submitted from the industries against the supply of motors during last 3 year.
03	In case the suppler is not a manufacturer but is quoting on behalf of the manufacturer, the Authorized dealership certificate / Authorization Letter from the manufacturer is required to be submitted along-with the techno commercial bid.	Authorized Dealership Certificate / Authorization Letter from the Manufacturer.

04) Prices :

The rate should be quoted in prescribed price bid format in Indian Currency i.e. INR only as per Annexure enclosed. **Price quoted other than INR will be rejected outright.** The price quoted should be firm and no revision in the price tendered will be permitted during the period of contract or in the extended period of the contract.

05) GST-TDS @ 2 % will be deducted at source as TDS on GST. Incase GST is mentioned as '0' or left blank in price bid, it shall be treated as inclusive and landed cost shall be arrived for comparison by debiting the input credit from the from the quoted rates GST will be reimbursed to party after the same was paid by him to Govt. & upload the Invoice in GST portal.

06) Statutory Levies :-

It is the sole responsibility of the supplier that they complies with all statutory requirements regarding supply of equipment, payment of statutory levies etc. The supplier indemnifies CCI against any breach of statutory rules / their non- compliance.

07) Delivery Schedule :-

Material is to be supplied within 120 days from the date of receipt of the firm PO/LOI.

08) Liquidated Damages :

In case of any delay in delivery, Liquidated damages @ ½% per Fortnight of the value of un-delivered portion or part thereof to maximum of 5% shall be recovered. Also we may resort to risk purchase**.**

09) Payment Terms :

The 50% value of the order within 30 days of successful completion of supply and balance 40% after successful installation & commissioning including unloading of the motor at site and balance 10% after completion of guarantee/ warranty period. This 10 % can also be paid against submission of Bank Guarantee for equivalent amount towards performance Guarantee as per clause no 11 mentioned below.

10) Earnest Money Deposit (EMD) :-

Earnest money of **Rs. 63,000/- (Rupees Sixty Three Thousand only)** by way of e-payment (through e tendering portal gateway) in favor of Cement Corporation of India Ltd., Bokajan

11) Security Deposit :-

Successful tenderer (s) shall have to furnish a Security Deposit equivalent to **05 %** (Five percent) value of the order by way of Demand Draft / Bank Guarantee (In CCI's format) in terms of Clause No. 2 of Part- II of the tender documents for satisfactory completion / performance of the contract. S.D. will be refunded after 3 months of successful completion of supplies.

12) Quality :-

i. The supplier shall guarantee that the materials to be supplied shall confirm to the specifications and dimensions as specified in the order. Materials shall be free from any defects arising out of use of defective materials or any manufacturing or any other defects.

ii. The supplier shall furnish test certificates of their laboratory and inspection report, if any.

iii. In case of any disputes arising out of rejection of material, joint sampling of material will be done within 7 days and the sample will be sent to National Test House, Calcutta, Shri Ram Test House, New Delhi or any other Govt. approved test house for testing. The test results will be binding on both the parties. If as per Test report the material do not confirm to the specifications, the supplier shall arrange for free replacement to CCI site without any extra expenditure whatsoever. In case supplier does not raise any dispute within 7 days from the date of receipt of complaint, it would be construed that the supplier accepts the responsibility and will make free replacement as stated above.

iv. The chemical composition and tolerances the material will be governed by the relevant latest standard specification. Testing for chemical composition will also be governed by the relevant latest Indian Standard specification.

13) Performance Guarantee :-

Successful tenderer(s) shall have to furnish 10% (Ten percent) value of the order by way of Demand Draft / Bank Guarantee (In CCI's format) as mentioned in payment terms clause No. 08 towards performance Guarantee for satisfactory performance of the equipment supplied. The P.G. shall be refunded after 3 months of successful completion of guarantee/ Warranty period.

14) Warranty :-

The tenderer shall stand guarantee/warranty towards the material used and workmanship for a period of 12 months from the date of commissioning or 18 months from the date of last receipt (whichever is earlier). If at any time during the guarantee period any deficiency is found to our requirement/ specifications and/or don't meet the desired performance, tenderer to revise, modify, rectify and/or replace the design, engineering, material or stores, as the case may be in a manner calculated by tenderer to make good the deficiency or the unsatisfactory performance, at their own expense within a minimum time to be specified by CCI. In the event of tenderer failing to do so, CCI may at his option get the job done by third party and all costs incurred by CCI shall forthwith be reimbursed by tenderer without prejudice to CCI any rights and/or remedies provided in the contract or by the relevant provision of law. In case of malfunctioning of any motor part/body during the warranty period, supplier will send service engineer for rectification without demanding any extra charges.

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Annexure XI

PART – IV

Technical Specification

Scope Of Work :-

Supply of Three phase **Slip-Ring Induction Motor** with IS 325:1996 `Specification and Latest Amendment IS standards of Energy Efficient Norms.

Application : It should operate on 415V ±10%, 50 Hz ±5% and for our existing Pre-Heater fan motor.

Sr. No.	Technical Particulars Of Existing Motor	CCI Requirement	Bidder Specification
01	**Frame :** KDW400, **Type -** IP55 / IC61, Encl. - CACA, **rpm :** 1480, **Voltage :** 415V ± 10% , 50 Hz ± 5%, Current : 304 Amp, Duty : S1 , Insulation Class : "B" , **Connection** – Δ , Rotor Voltage : 493, Rotor Amps : 220, **Rotor Connection :-** Star. **Make :** Kirloskar Electric .	**Frame :** Equivalent to Existing KDW400 , Three Phase AC Slipring Induction Motor , Centrifugal Overhung Type Fan Application, **Type** – Slipring ; Degree of protection : IP55 ; **Cooling System :** IC611 ; Encl. - CACA , **Capacity :** 185 KW , **rpm :** 1480, Voltage : 415V ± 10% ,50 Hz ± 5% , **Current :** 325 Amp, **Duty :** S1 ; Insulation Class: " F " ; **Connection** – Δ ; **Efficiency :** ≥ 93 % , **Rotor Voltage :** 785 V ± 5% , Rotor Amps : 142 A ± 5% , **Rotor Connection :-** Star **Make :-** KEC, Siemens, Crompton, Bharat Bijlee , ABB , MARATHON	--- to be filled by Bidder

This in term should cover the following requirements :

New Motor Specification should be compatible with Existing Motor technical specifications : **Capacity :** 185 KW Centrifugal overhung type fan Application, **FRAME :** KDW400 , **Type -** IP55 / IC61, Encl. – CACA , **rpm :** 1480, **Voltage :** 415V ± 10% , 50 Hz ± 5%, **Current :** 325 Amp, Duty : S1, Insulation Class : "F", **Connection** – Δ , **Efficiency :** ≥ 93% , **Rotor Voltage :** 785 V ± 5%, **Rotor Amps :** 142 A ± 5% , **Rotor Connection :** Star.

1. **(a) Power Ratings :** 185 KW , **Operating Speed :** 1480 rpm , **Three Phase AC Slipring Induction Motor**, Poles : 4, Frequency : 50 Hz , **Operating voltage :** 415V ± 10% , 50 Hz ± 5% **, Frame : KDW400 or equivalent**, **Type :** IP55 / IC61, Foot mounted, **Encl.-**CACA, Ambient Temp. Rise : 50° C .

   b) Torque & GD square value of the equipment :- (250 %)

2. **Site Conditions :**

   The following shall constitute normal site conditions for the purpose of this standard :

   2.1 Ambient Temperature – The reference ambient temperature shall be 50°C.

   Note : For using motors at higher ambient temperature the guidance given in 7.2 shall be followed.

   2.2 Relative Humidity – The maximum relative humidity shall be 85%. However, maximum ambient temperature and 85% relative humidity may not occur simultaneously.

   2.3 Ambient Air – Ambient air may contain fair amount of conductive dust.

   2.4 Altitude – The altitude shall not exceed 1000m.

3. **Type Of Enclosure :**

   3.1 The degree of protection to be provided by the enclosure shall be CACA` Degrees of protection provided by enclosures for rotating electrical machinery (first revision)' or better as required by the purchaser.

3.2 Also, the degree of protection to be provided by the enclosure shall be IP 55 or superior where specified in accordance with IS/IEC 60034-5(2000) [IS 4691:1985 is withdrawn].

4. Construction / Method Of Cooling : The method of cooling shall be IC 0411 in accordance with IS 6362:1995 `Designation of methods of cooling for rotating electrical machines (first revision)' .

5. Class Of Insulation : The AC motors for fan application shall have windings of class `F' insulation with temperature rise limited to class 'B' unless otherwise specified.

6. Mounting :

The mounting shall confirm to any one of the designations horizontal and foot mounted IMB 3, IMB 5 , IM 1001, IM 3001 specified in IS 2253:1974 `Designations for types of construction and mounting arrangement of rotating electrical machines (first revision)'.

7. Rated Voltage & Performance Values :

7.1 Voltage and Frequency Variation - The motors shall be capable of delivering the rated output with :

i) The terminal voltage differing from its rated value by not more than ± 10 % .

ii) System Frequency differing from its rated value by not more than ± 5% .

7.2 Any combination of (i) and (ii).In the case of continuous operation at extreme voltage limits, the temperature-rise limits specified as per IS 325:1996 shall not exceed by more than 10oC. Motors, when operated under the extreme conditions of voltage.

7.3 The motor shall be suitable for Induced Draft (ID) Fan application and Direction of Rotation to be bi-directional.

7.4 The motors shall be suitable for operation on Liquid Rotor Controller (LRC). Current-voltage-torque-slip-efficiency-speed curves, parameter for selectivity of LRC to be provided to be provided by the manufacturer.

8. Motor should be suitable for continues [S1] duty.

9. Dimensions : Dimensions of foot mounted and Frame should be compatible with the existing motor i.e. **Make :** Kirloskar, **Frame -** KDW400,**Type :** IP55 / IC61 (Pls. ref. motor GA Drg. attachment) as per Latest Amendment of IS standards of Energy Efficient Norms. The dimensions shall be in accordance with IS 1231:1974`Dimensions of three phase foot-mounted induction motors (third revision)'.

10. Special Constructional Features :

10.1 Winding grade as per IS 325 / 1996 : The grade of winding wire must be dual coat high grade enameled wire or and winding must be vacuum impregnated as per latest standard. The stators and wound rotors are generally wound with copper strip conductors with class 'F' insulation. Stator windings are brazed and wound rotor overhangs are banded with resin glass to withstand momentary over loads and periodic peak loads.

10.2 Stator Material of Body - These are generally of fabricated steel and hence robust and shock resistant to suit arduous applications. Material of the motor body may be cast iron grade FG-260 confirming to IS 210:2009 `Specification for grey iron castings (fourth revision)', or SG iron confirming to IS 1865:1991 `Specification for iron castings with spheroid or nodular graphite (second revision)' or fabricated steel confirming to IS 2062:2011 `Hot rolled medium & high tensile structural steel'. Non ferrous material for motor body is not acceptable.

10.3 For Foot-mounted motors with cast iron / Spheroid Graphite iron body, the feet shall be integrally cast with the body.

10.4 Separately screwed eyebolts or lifting lugs of suitable sizes shall be provided on the motor for the purpose of lifting. Eyebolts confirming to IS 4190 :1984 `Specification for eyebolts with collars' shall be used.

10.5 Magnetic Core : This is made from low loss, high permeability, varnish insulated, electrical grade stamping sheet steel. Stampings are hydraulically pressed & then clamped to form a rigid structure.

10.6 Terminals / Brush Gears / Slip-rings : Cable terminations are housed in a terminal box of ample proportion and electrical clearances with a casketed bolted cover. All terminal boxes are fitted with large cable spreading's / sealing box with glands. Terminals for foot mounted motors will be located at left hand side when viewed from Non Drive End. It can also be located at right hand side against specific request at the time of placement of order. Brush gears are continuous pressure type and of robust construction. The slip-ring unit comprises of phosphor bronze rings shrink fitted on epoxy fiber glass insulated hub. The Brush Arm fixing arrangement shall be such as to prevent the rotation

of the brush arm. An insulating partition shall be provided between the brush holder clamps / brush holder Brush holder arm shall be of square cross section or should be of two stud design. The brush holder shall be of constant pressure type. To avoid the entry of carbon dust from brushes to winding, there shall be a partition between the winding and the slip-ring. If required the Slip ring chamber shall have a knock out entry of adequate size on two sides for entry of external connection cables.

10.7 **Shaft / Bearings** - This is made from high carbon steel of adequate cross - section to provide exceptional strength and rigidity to minimize deflection and vibration. Grease lubricated roller bearings are housed in end shields. These bearings have 90% survival life of minimum 60,000 working hours, when directly coupled. All bearings shall have an L10 life of at least 60000 working hours `Rolling bearings – Dynamic load ratings & rating life.' The bearings shall be selected so as to take care of the thrust to which the motors are likely to be subjected. The actual thrust value shall be indicated by the user.

10.8 **Lubrication of Bearings** – Re-greasing facility through a grease nipple confirming to IS 4009 (Parts 1 & 2) : 1981 `Specification for grease nipples (*first revision*)', along with facility for excess grease removal shall be provided for the motors as per frame sizes given.

10.9 **Cooling Fan** :

Cooling fans shall be either of cast iron or aluminum alloy integrally cast on steel/cast iron hub. A positive looking system shall be adopted to look the fan both radially and axially.

10.10 The provisions of the terminal box shall be in accordance with clause 5 of IS 1231:1974. It shall be possible to turn the terminal box to any of the positions at 180 Degree intervals to permit cable entry from any of the positions.

10.11 **Interchangeability of Parts** : The motors of identical rating supplied in a lot by the same supplier shall have the interchangeability in the following parts :

a) Rotors ,
b) End shields ,
c) Bearing capsules ,
d) Bearing cups ,
e) Self cooling fans.

11. Earthing :

Two separate earth terminals of proper size suitable to receive galvanized iron conductor shall be provided on the bottom half of the motor body. In addition to the two outside earth terminals, provision for one more earth terminal inside the terminal box is to be kept. Size of earthing terminal shall conform to IS 3043:1987 `Code of practice for earth (first revision)'.

12. Temperature - Rise Test :

12.1 The temperature-rise test shall be carried out at full load in accordance with 22.3 of IS 325:1996 by subjecting the motor to the rated acceleration value (h). The permissible limits of temperature-rise shall not exceed the relevant values given in Table-1 of IS325:1996.

12.2 **Temperature Rise Test Under Stalled Rotor Condition** – The temperature shall be measured by applying rated voltage to the motor with rotor locked. The temperature-rise shall not exceed the permissible value for the relevant insulation class.

13. Limits Of Vibration :

Limits of vibration intensity shall be in accordance as per IS 12075:2008 `Mechanical vibration of rotating electrical machines with shaft heights 56 mm and higher – measurement, evaluation and limits of vibration severity.'

NOTE : The manufacturer shall indicate in the test certificate that rotor has been dynamically balanced with shaft key. Every rotor is dynamically balanced to a higher degree of precision to ensure smooth running. Motors are subjected to routine and type tests in accordance with IS: 325.

14. Limits Of Noise Level :

The noise level shall not exceed the limits specified in IS 12065:1987 `Permissible limits of noise level for rotating electrical machines',

15. Terminal Marking

15.1 Terminals shall be marked in accordance with IS/IEC 60034-8 (2002) [in supersession to IS 4728 : 1975] . Identical markings shall be provided both on the leads and the terminal blocks.

15.2 **Accessories :-** Accessories like anti-condensation heaters,thermostatsto be provided by the party.

16. Motor Name Plate

It should be made of stainless steel stating the following particulars shall be fixed on the body of the motor :

a) Reference to this IS code
b) Rated output in KW,
c) Name of the manufacturer and trademark,
d) Manufacturer's serial number and frame reference,
e) Rated voltage and winding connection of the motor,
f) Rated current in Amps. at rated voltage,
g) Speed in rev/min at rated output,
h) Rated frequency,
i) Class of insulation,
j) Type of duty,
k) Bearing designation,
l) Type of enclosure,
m) Mass of motor in kg,
n) Year of manufacture.
o) Efficiency.
p) Power factor.

NOTE : An additional name plate should be used to indicate the designation of bearings, lubrication details (type, quantity and frequency).

17. Inspection :

The Contractor shall provide without any extra cost to CCI all materials, equipment, tools, labour and maintenance of every kind which CCI Inspecting Engineer may consider necessary for any test and examination to be made at the Contractor's or the Sub-Contractor's (if approved) premises and at site and shall pay all cost attended thereon.

All the equipment and materials shall be tested / inspected by CCI or its authorized Inspecting Engineer and approved before they are installed /used in the execution of the works covered in the contract. If the Contractor uses any equipment / materials without the prior approval of CCI, those are liable to be rejected. The Contractor shall furnish, as and when demanded by the Engineer-in-Charge the T.C. (Test Certificate) and G.C (Guarantee Card) for verification of quality and make of the materials.

The Inspecting Engineer or his authorized Representative shall have at all times access to the Contractor's premises and shall have the power to Inspect and examine the materials and workmanship of the work at any time at the site of erection and Reject any part of the work submitted by the Contractor as not being in accordance with the contract.

Reject the whole of the work including equipment tendered for inspection if after the inspection of such portion as he may, in his discretion think fit he is justified that the same is unsatisfactory.
Mark the rejected equipment with a rejection mark so that the same may be easily identified

Re-inspect at the time of erection at site any equipment both previously inspected and approved by the inspecting Engineer at the Contractor or Sub-contractor's (if approved) premises. Not with standing any approval given earlier, the Contractor shall make good such rejections made based on such re-inspection at site to the satisfaction

18. Submission of Test Certificate :-

Contractor shall submit the all relevant test certificate at the time of inspection

19. Drawings & documents

The Tenderer shall furnish, drawings within 30 days after issuing of Letter of intent/P.O. four copies each of the following drawings/documents incorporating the motor rating for approval. The CCI will approve the drawings and give manufacturing clearance. All drawings/ documents indicated shall be computer generated. Drgs. / documents shall be required in soft form (PDF format) also. All drawings shall be prepared in AUTOCAD latest version. Drawings & documents shall be submitted in CD also. Bidder shall submit the followings drawings/plot for approval :

i. Dimension drawing
ii. Thermal withstand curve
iii. O&M manual
iv. Torque speed characteristics
v. Load Vs efficiency curve
vi. Load Vs power factor curve
vii. Speed, starting time Vs current at 90% voltage , 100% voltage , 11% voltage.

Following Specifications Bidder To Specify	
Full Load Current	
Full Load Speed	
Full Load Torque	
Starting Torque	
Pull Out Torque	
% EFF @ 100 % Load	
% EFF @ 75 % Load	
% EFF @50% LOAD	
PF @ - 100 % Load	
PF @ 75 % Load	
PF @-50 % Load	
Bearing Type ---	
DE / NDE	
Type Of Lubrication	
Net Weight (Appr.) – Kg	
Cable Size Type ---	
Mm. Sq	
Locked Rotor	
Current % Flc	
Rotor Voltage	
Rotor Current	
Recommended	
Current & Thermal Settings	
Settings	

Cement Corporation of India Limited

Bokajan Cement Factory

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E-mail: **bokajanmm01@gmail.com**

Annexure – XII

Price Bid Performa

Tender No. :- BKJ/MM/E-4094/22-23/01 for procurement of Pre – Heater Fan Motor

Sl. No.	Job Description	Quoted Amount (Rs) .
01	**Frame :** Compatible to Existing KDW400, Three Phase AC Slipring Induction Motor, Centrifugal overhung type fan Application ; **Type** - Slip ring ; Degree of Protection :- IP55 ; Cooling system :- IC611 ; Encl. - CACA ; **185 KW** ; **RPM : 1480**, **Voltage :** 415V ±10% , 50 Hz ± 5% ; **Current :** 325 Amp. ; Duty : S1, Insulation Class : "F" ; Connection – Δ ; Efficiency : ≥ 93 % ; Rotor Voltage : 785V ± 5% ; Rotor Amps: 142 A ± 5% ; Rotor Connection :- Star ; **Make :** KEC, Siemens , Crompton , Bharat Bijlee , ABB , MARATHON ; **Qty. : 1 No.**	
02	GST Applicable (%)	
03	Total Landed Cost (Including GST)	
05	Payment Terms :	
06	Validity Period :	
07	Delivery Period (Months)	

Note : - The total cost in Column (10) should be of landed cost at CCI, Bokajan including all elements and incidentals per each item. The L-1 rate will be arrived considering landed cost of the material after GST input credit etc.

Signature of Tenderer :

Name of the Signatory :

Date :- **Designation :**

Place :- **Name of the Party :**

(SEAL)