



# URANIUM CORPORATION OF INDIA LIMITED

## TURAMDIH MILL,

P.O. - SUNDERNAGAR, DISTT - EAST SINGHBHUM

JHARKHAND - 832107

Phone No.: 0657 2318001-4, Extn. No. 7452

Ref: UCIL/Mill/TMD/Elect./ENQ/220KW/06/22

Date: 01/01/2022

(Name of the Contractor)	Last Date of submission of offer: <b>07/01/2022, 5.00 PM</b> Following reference number shall be super scribed on the sealed envelope of quotation <b>Ref: UCIL/Mill/TMD/Elect./ENQ/220KW/06/22</b> <b>Date: 01/01/2022</b>
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You are requested to submit sealed quotation in duplicate for "Complete replacement of damaged rotor shaft of 220 KW 6600 V, 3 Phase, 50 Hz. Squirrel Cage induction motor including rewinding of stator etc." as per enclosed price schedule at Schedule - A.

The 220 KW, 6600 V Squirrel Cage Induction Motor at our RM Shop, Turamdih Mill may be inspected by bidders prior to submission of their offers.

**Name plate specification of above motor is given below:**

### 3-PHASE, 6600 VOLTS, 50Hz. A.C. SQUIRREL CAGE INDUCTION MOTOR

FRAME: SCX355F-SPL	ENCL: IP-55	IC: 411	
OUTPUT: 220 KW	EFF: 93.5 %	AMB.: 50 °C	DUTY: S1
SPEED: 1481 rpm	INS. CLASS: F	CONNECTION: STAR	
VOLTAGE: 6600 V	FREQ.: 50 Hz.	TEMPERATURE RISE: B	
CURRENT: 25 A	BRGS.: (DE): NU322 C3, (NDE): 6322 C3		
M/C NO.: 3110313-01	WT. OF THE MOTOR: 2000 KG		

**MAKE: KIRLOSKAR ELECTRIC, BANGALORE**

The rotor shaft of above motor got damaged due to which the rotor got rubbed against the stator slots at some places damaging the laminations of the stator. The motor may be inspected by the bidders before submitting their offer. The job of complete replacement of rotor shaft, replacement of damaged stator copper bars, repairing of the stator laminations slots, rewinding of stator, cleaning, baking, varnishing etc. of stator including reassembling, fitting of bearings, test trial etc. shall be carried out at the workshop of the bidder.



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The general scope of the above job shall be as follows:

1) **Scope of Work:**

- a) The contractor shall carry out the jobs of dismantling of the 220 KW 6600 V AC squirrel cage induction motor, Separation of Stator, Rotor & checking of the stator as per the schedule of jobs given at **Schedule - A** of this Enquiry. The name plate specification of the 220 KW, 6600 V AC motor is given above:

Thereafter, the following shall be carried out by the contractor.

b) **REWINDING OF THE STATOR:-**

1. Cleaning of stator core with non volatile solvent thoroughly after removal of all coils.
2. Core loss test, ring flux testing of stator core as per standard test practice.
3. Core correction to be done if any hot spot/physical damage observed in stator core. UCIL representative may witness this test.
4. Repairing of damaged laminations of Stator Slots.
5. Removal of Stator coils from slots including installed RTDs for winding temperature.
6. Manufacturing the full set of stator coils using existing and new conductors:
  - i. The coil shall be made from existing reusable stator copper conductor bars and new electrolytic grade copper conductors wherever needed to replace the damaged conductor bars.
  - ii. The bare copper conductor is to be insulated through super enamelled and fiber glass cover or polymica cover.
  - iii. Conductor insulation should be of CONDUCTOFUL, tapes manufactured by reputed manufacture like M/S ISOVLTA Austria / Parmacel / IsolaLaxman / Sunny Isola or equivalent.
  - iv. Slot section insulation should be of SAMICATHERM, manufactured by reputed manufacturer like M/S IsolaLaxman / Parmacel / EPOXYTHERM insulation of M/S AIK Germany / IsolaLaxman / Sunny Isola / Parmacel or equivalent.
  - v. Overhang insulation should be of FILOSAM LEP, manufactured by reputed manufacturer like M/S ISOVLTA Switzerland / MIGAPLAST tapes of M/S AIK Germany or Isola Laxman / Parmacel / Sunny Isola or equivalent .
  - vi. Sealing to be done with EPOFLEX of reputed manufacturer like M/S ISOVLTA / Isola Laxman / Parmacel / Sunny Isola or GLASSOFLEX tapes of reputed manufacturer like M/S ISOVLTA / IsolaLaxman / Parmacel / Sunny Isola or equivalent.
  - vii. Corona protection conducting varnish applied to slot section should be SIB-8003 of reputed manufacturer like M/S ISOVALTA / IsolaLaxman / Parmacel / Sunny Isola or equivalent.
  - viii. Re-installation of temperature detectors (RTDs) for stator winding.
  - ix. Rewinding of stator.
  - x. Testing of space heater of the motor and replacement of space heaters if required.
  - xi. Final test (as per quality checks) may be witnessed by UCIL representative.

c) **FABRICATION AND REPAIRING OF ROTOR SHAFT:**

1. Removal of damaged shaft from the rotor of the motor.



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2. Fabrication of new shaft as per existing dimensions with similar grade material of reputed make.
  3. Fixing of newly fabricated shaft into the rotor
  4. Replacement of the damaged bearings (of both DE & NDE sides). In that case, UCIL shall supply the bearings.
  5. Dynamic Balancing of the Rotor shall be carried out. Certificate for dynamic balancing shall be furnished along with repaired motor.
  6. The motor after complete rewinding of stator and repairing of the rotor shaft shall be assembled by the bidder at their workshop for satisfactory trial.
  7. Any other job required for successful rewinding of stator and repairing of rotor shaft job of the rotor and stator of the 220 KW HT motor shall be in the scope of the bidder.
  8. After complete repairing work motor is to be painted with Smoke Grey paint
  9. The assembled motor shall be tested for satisfactory trial at bidder's workshop in presence of UCIL representative.
- 2) **Validity:** The offer shall be valid for 120 days from the date of submission.
- 3) **Payment:** i) 80 % of the total work value shall be made against delivery of the motor from bidders works.  
ii) 20% after receipt of motor within 60 days and successful trial run of the motor at our site.
- 4) **Inspection:** The motor will be inspected during or after re-insulation job of the rotor as and when required by us.  
**After removing of all copper bars from the rotor and cleaning of slots, bidder shall inform UCIL for inspection of the rotor.**  
The motor after complete re-insulation of rotor and stator and re-assembling by you at your site will be tested for satisfactory trial run.
- 5) **Transportation:** To and fro up to a distance of 25 kms shall be arranged by UCIL. Safe unloading and loading for the motor at your site will have to be arranged by you. The repaired and rewounded motor shall be properly packed and loaded on vehicle by you for safe transportation to UCIL site. Any damage to the motor during transportation to UCIL shall be assessed in your account.
- 6) **Guarantee:** The motor shall be guaranteed for a period of 270 days (two hundred and seventy days) from the date of delivery to UCIL or for 180 days (one hundred eighty days) from successful trail run on load at our site whichever is earlier. **This shall be treated as defect liability period of the contract.**
- 7) **Test Certificates:** Dynamic balancing of rotor shall have to be done for satisfactory performance of motor and the test certificate for this test shall be submitted along with the motor.

**General terms and conditions:**



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- 1) Motor as a whole shall be delivered at your site.
- 2) Materials to be used shall be of reputed make.
- 3) NIL
- 4) **Completion time** – 03 (Three) months
- 5) **Liquidated Damages (LD) shall be imposed if job is not completed within completion period stipulated in Work Order.** Liquidated Damages shall be levied where reasons are attributable to contractors for delays in execution of order/ contract. LD shall be levied @0.5% per week or part thereof on the value of unfinished supply/work order for each week of delay subject to a maximum of 5% of the total value of contract (excluding Taxes and Duties).

## 6) SECURITY DEPOSIT & RETENTION MONEY

### 6.1 SECURITY DEPOSIT

- A. Security deposit (SD) shall be uniformly levied @ 3% of contract value towards satisfactory completion of the order/works as under.
- B. SD should be submitted in the form of Demand Draft/ Bankers' Cheque/ BG within 30 days of receipt of Letter of Acceptance or commencement of work at site whichever is earlier to materials department/ IEC/ OIC.

### 6.2 RETENTION MONEY

1.5% of the bill value is to be retained at the time of making payment towards rectification/defective work/supply made as retention money and be treated as Security Deposit. Therefore, the extent of Security Deposit shall be up to 3% of contract value.

### 6.3 REFUND OF SECURITY DEPOSIT & RETENTION MONEY

EIC/OIC shall recommend release of SD and retention money after compliance by the contractor towards guarantee/warranty/performance guarantee & other related clauses as stipulated in the purchase/work order and on submission of formal claim by supplier/contractor.

### 6.4 FORFEITURE OF SD & RETENTION MONEY

The SD & retention money shall stand forfeited in favour of UCIL, without any further notice to the contractor in the following circumstances:

- A. In case of any failure whatsoever on the part of the contractor at any time during performance of his part of the contract including the extended periods of contract, where notice is given and time for rectification allowed.



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B. If the contractor indulges at any time in any subletting/ sub-contracting of any portion of the work without approval of UCIL.

- 7) Bidders may visit our site to inspect the motor on their own cost before submitting their offer.
- 8) The quoted rates shall be inclusive of miscellaneous overheads and other taxes and duties as applicable but exclusive of G.S.T. G.S.T. shall be paid extra on submission of valid G.S.T. deposit challan along with G.S.T Invoice/Bill.
- 9) G.S.T. shall be paid only on submission of documentary proof of payment of G.S.T. to the corporation.
- 10) Quoted prices shall be firm and No escalation on any account whatsoever shall be paid against this work.
- 11) The bidders shall submit their offers duly signed and stamped on each and every page including Price Schedule.

Offers shall be sent by post or in person to the undersigned on or before **07/01/2022, 5.00 PM.**

For Uranium Corporation of India Ltd.

*J. Roy*  
01/01/2022

J. Roy  
Supdt. (Elect), Turamdih Mill

Enclosure: Schedule – A (Price Schedule of items) containing 1 page

**Schedule of items for Complete replacement of damaged rotor shaft of 220 KW 6600 V, 3 Phase, 50 Hz. Squirrel Cage induction motor including rewinding of stator etc**

Sl. No.	Item Description	Qty.	Unit Rate (in Rs.)		Amount (in Rs.)
			in figures	in words	
1	Complete Rewinding of Stator core and Replacement of Rotor Shaft of 220KW, 1481 RPM, 6600V, 3Phase, Frame: SCX355F.SPL, Kirloskar Make Squirrel Cage Induction Motor as per Scope of jobs mentioned in our enquiry and below:				
1.1	<b>For Stator:</b>				
A.	Dismantling of motor	1 Lot			
B.	Removal of all coils from stator				
C.	Repairing of all the damaged slots and lamination in the affected portion				
D.	Ring Flux test of Stator core to identify any hot spot				
E.	Repairing or remoulding all the damaged stator coils				
F.	Replacement of all wedges				
G.	Rewinding of Stator				
H.	Hi-Pot test of individual coils as well as stator				
1.2	<b>For Rotor:</b>				
I.	Disassembling of all bearings from rotor	1 Lot			
J.	Removal of existing Rotor shaft by machining				
K.	New shaft making as per existing shaft material, grade and dimensions				
L.	Refixing of Bearings in the Rotor shaft (Note: Only bearings shall be provided by UCIL.)				
M.	Assembly of new shaft with Rotor				
N.	Dynamic balancing of the rotor.				
O.	Assembly of Motor				
			Total (in Rs.) =		
			Add: GST @ _____ % (in Rs.) =		
			Grand Total (in Rs.) =		

Note: The above rates shall be inclusive of labour cost, material cost, rebate for damaged copper, misc. overhead expenses excluding G.S.T. (Only single rate shall be quoted against all the jobs for each items mentioned in this Schedule)

Grand Total (in Words):