



**SYAMA PRASAD
MOOKERJEE PORT,
KOLKATA**

HALDIA DOCK COMPLEX



**AN ISO-9001: 2015
ORGANISATION**

Office of General Manager
(Engineering)
Jawahar Tower Complex,
P.O.Haldia Township, Dist. Purba
Medinipur, West Bengal, Pin: 721 607

No. SDM(P&E)/92 MR/ENQ/ 01 /2024-25

Dated 24.05.2024

'REQUEST FOR SUBMISSION OF BUDGETARY OFFER'

Subject: Enquiry for obtaining budgetary quotation for “Biennial Rate Contract for Repairing & rewinding of defective / faulty Vertical Hollow Shaft with Non-reversible Ratchet (NRR) type Screen Protected Drip Proof (SPDP), Squirrel Cage Induction LT Motors for Bore Well Pumps at different locations of Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata”.

Haldia Dock Complex (HDC), Syama Prasad Mookerjee Port Kolkata (SMPK) [erstwhile Kolkata Port Trust] intends to enter into a biennial Rate Contract for “**Repairing & rewinding of defective / faulty Vertical Hollow Shaft with Non-reversible Ratchet (NRR) type Screen Protected Drip Proof (SPDP), Squirrel Cage Induction LT Motors for Bore Well Pumps at different locations of Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata**”.

The Technical Specification & Scope of Work (**Annexure -I**), Special Terms & Conditions (**Annexure -II**) & Bill of Quantities (**Annexure -III**) for the subject project work, are enclosed herewith for ready reference please.

Budgetary offers (as per the enclosed Bill of Quantities/Price schedule), along with comments / suggestions (if any), are invited from experienced / reputed firms, for the subject work, within 10.06.2024.

Enclo: As stated

Division	P&E
Enquiry no.	SDM(P&E)/92 MR/ENQ/ 01 /2024-25 Dt 24.05.2024
Description	Enquiry for obtaining budgetary quotation for <i>“Biennial Rate Contract for Repairing & rewinding of defective / faulty Vertical Hollow Shaft with Non-reversible Ratchet (NRR) type Screen Protected Drip Proof (SPDP), Squirrel Cage Induction LT Motors for Bore Well Pumps at different locations of Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata.”.</i>
Submission date & time	10.06.2024 up to 14.00 hours

Opening Date & time	10.06.2024 up to 14.30 hours
Remarks, if any	To be submitted to
Contact Person	Sri R. N. Roy, Sr. Dy. Manager (P&E) Mobile no. : + 91 94340 74411 e- mail : rnroy.hdc@kolkataporttrust.gov.in
	Sri S. Roshan, Asst. Manager (P&E) Mobile no. : + 91 82929 60899 e- mail : sroshan.hdc@ kolkataporttrust.gov.in

Sr. Dy. Manager (P&E)
Haldia Dock Complex
Syama Prasad Mukherjee Port, Kolkata

TECHNICAL SPECIFICATION & SCOPE OF WORK

No. SDM(P&E)/92 MR/ENQ/ 01 /2024-25

Dated 24.05.2024

General:

1. Rate Contract for Repairing & rewinding of defective / faulty **KIRLOSKAR/ JYOTI** Make, having Vertical Hollow Shaft with Non-reversible Ratchet (NRR) type Screen Protected Drip Proof (SPDP), (Squirrel Cage Induction LT Motors) for Bore Well Pumps at different locations of Haldia Dock Complex, having following specification;
 - a.) 37kW/ 50HP, 415 Volts, Amp- 64.3 A, RPM- 1470, 3 Phase, 50 Hz, Insulation Class-F, Rating- Continuous, Ambient Temperature- 45°C, Mounting- Vertical, Shaft-Hollow, Connection- Delta, continuously rated (S1 duty) as per IS:325
N.D.E – 7220 B/ 7317 B
D. E. – 6311 C3/ 6313 C3
 - b.) 33.5kW/ 45HP, 415 Volts, Amp- 58 A, RPM- 1470, 3 Phase, 50 Hz, Insulation Class-F, Rating- Continuous, Ambient Temperature- 45°C, Mounting- Vertical, Shaft-Hollow, Connection- Delta, continuously rated (S1 duty) as per IS:325
N.D.E – 7220 B
D. E. – 6311 C3
2. The scope of work includes but not limited to
 - A. Decoupling and dismantling of Motors from Pumps situated at various locations, viz. Residential, Industrial & Dock Zone. Necessary gate pass if required [for both manpower and vehicle] for entering into the Dock Zone will be provided on chargeable basis.
 - B. Loading and unloading including packing, forwarding, handling, carrying to any lead, stacking, transportation, permits etc. necessary for the complete services either at HDC site or at Contractor Works, shall be carried by the contractor at their own risk, cost and arrangement, charge incurred will be borne by the Contractor.
 - C. Post Rewinding/ Repairing work for defective / faulty Squirrel Cage Induction Motor, the complete installation (including coupling with pump, electrical connections, phase sequence matching, Lugging, ferruling, etc.) and commissioning of the repaired motors at site shall be under the scope of Contractor.
 - D. After dismantling of the damaged coils, old, scrap copper conductors are to be retained by the contractor.
3. **Scope of Rewinding/ Repairing work for defective / faulty Squirrel Cage Induction Motor:**

- A. **Re-Winding of Motors:** - Stripping out of all the old damaged coils from the Stator without damaging Stator Core, etc. After dismantling of the damaged coils, Core laminations will have to be opened and cleaning of the Core Laminations of both sides will have to be done to remove dirt, oxide, rust, etc. on the surface of the core laminations. After cleaning of the core laminations with solvent, drying will have to be done. Suitable grade of core plate varnish should be applied and then dried. Varnished laminations are to be kept in Heat Chamber (Baking oven) for baking. Additional coating of air-drying varnish is to be provided as subject motors are required to operate under very high humid atmosphere. Re-staggering of Core Laminations (if required) and laminated Cores will have to be re-fitted and balance to achieve uniform result. The locking ring to be placed properly after providing suitable grade of insulation. Each and every slot and teeth portion should be fitted properly so that no sharp point is left

anywhere in the core. Thorough cleaning of Stator Slots should be done by suitable cleaning agents.

- B. Stator winding should be of Polyester Super Enamelled copper wires conforming to IS:13730, Part-III. Class 'F' insulating materials with temperature rise limited to 'B' are used as insulation to provide electrical, thermal and mechanical strength to the windings. The temperature rise is limited to 75°C over the ambient temperature of 45°C.
- C. After completion of the above work, Full Flux Loop Test is to be carried out to check any HOT SPOT (temperature should not be more than 10% of ambient) by recording maximum- minimum temperature of all slots for 15 minutes interval. Stator coils should be fixed up if no HOT SPOT is found in any of the core slot.
- D. Manufacturing of new coils are to be done with copper winding wires. The full rewinding of stator is to be done using Class 'F' or higher grade of insulation.
- E. The net guards for air ventilation of the Motors are to be repaired/ replaced with new one, as per requirement.
- F. Servicing of the Rotor: Dynamic balancing test of the rotor is to be carried out. Dynamic balance test result to be submitted during final stage of inspection. The rotor should be properly cleaned and heating is to be done in baking oven. The rotor should be painted with OXFORD BLUE Paint.
- G. Servicing and Overhauling of Motor Terminal Boxes: All gaskets of the motor terminal boxes should be replaced with suitable size and thickness of Neoprene Rubber Gasket. Fixing nuts, bolts and washers are to be replaced by new hot deep G.I. nuts, bolts and washers.
- H. Bearing housing and journal of the bearing, if required, metalizing is to be done by metal spraying by the contractor. Bearings of all the motors [Driving End Bearing (D.E.) & Non-Driving End Bearing (NDE)] are to be replaced by the contractor with new bearings of SKF/FAG make only. Ball bearings are to be greased with lithium base grease grade-3 having a drop point of more than 160°C. Old bearings are to be returned back to HDC with proper documentation.
- I. Painting: Existing paint, dirt, rust, etc. on the Motor Body is to be thoroughly cleaned and is to be spray painted with 02 (two) coats of Red Oxide Zinc chromate Primer and 02 (two) coats of Synthetic Enamel Paint (preferably Siemens Grey shed) marine grade.

4. Inspection & Testing:

The contractor has to arrange inspection and testing as per following procedure at his own risk, cost & arrangement. Inspection and Testing will be carried out at the premises of contractor/ at site as applicable at the discretion of Sr. Dy. Manager (P&E) and will be witnessed by authorized representative of Sr. Dy. Manager (P&E), HDC. At least 7 (seven) days advance notice is to be given by the contractor for inspection.

If Inspection is carried out at contractor's premises, inspection of three (3) stages will be carried out as per following, in presence of authorized representative of Sr. Dy. Manager (P&E), HDC;

a) 1st Stage:

- i) Physical checking of removed old coils from the core.
- ii) Physical checking of newly formed stator coils.
- iii) Stator core will have to be tested for full Flux Loop Test before carrying out winding work to detect any HOT SPOT.

b) 2nd Stage Inspection:

Physical inspection of all inter connections joints will be carried out after placement of the insulated coils in the core slots and before insulation and varnish of the inter connections of the coils in the overhang portion of the windings.

c) 3rd stage and Final Inspection:

- i) Power frequency High Voltage test is to be done on stator windings as per IS.
- ii) Testing of insulation resistance will have to be carried out by Insulation Tester for 01 (one) minute before and after HV test.
- iii) % value of winding resistance and Inductance are to be checked by Electric Motor Checker. Value of the variations of the above results will not be more than 3 %.
- iv) Polarization Index [PI] measurement will have to be done. PI value should not be less than 2.0.
- v) One hour trial run by giving 415 Volts, 3 phase, 50 Hz supply to observe any physical abnormalities.
- vi) Current measurement of all the three phases will be taken during the above trial run.

NOTE: If HDC do not depute any representative during stage inspection of the motors, the contractor will be liable to provide / furnish tests results, photos taken / captured by the contractor during carrying out above stage inspections of the motors, at the risk, cost and arrangements of the contractor.

5. Testing/trial run of the motors at site:

After receipt of the repaired motors at site, Insulation Resistance (IR) test and necessary trial run/ test will be carried out by HDC at site by injecting 415 Volts, 3 Phase, 50 HZ at motor terminals. During the above test, measurement of current of three phases and RPM of the motors will be taken.

- (a) It is to be noted that the above inspection and subsequent dispatch clearance, will not relieve the contractor from his responsibility for maintaining quality of the materials for guaranteed performance.
- (b) If any operational and repairing defect found in any assembly/sub-assemblies / materials during the performance guarantee period, repair/replacement of the same will have to be done by the contractor at his own cost, risk and arrangement.
- (c) The contractor must afford all facilities for inspection of the materials to the representative of Plant & Equipment Division of HDC at his own cost, risk and arrangement at his premises. During inspection at works before delivery or at site store after delivery, the following certificates should be furnished: -
 - (i) Internal inspection report/ Test report of the materials.
 - (ii) Guarantee Certificate for the repaired motors.

SPECIAL CONDITIONS OF CONTRACT (SCC)

No. SDM(P&E)/92 MR/ENQ/ 01 /2024-25

Dated 24.05.2024

The following **Special Conditions of Contract (SCC)** shall supplement the **General Conditions of Contract (GCC)**. Whenever there is a conflict, the provisions herein shall prevail over those in the **GCC**.

Clause No. 7.1 **Clause No. 7.1.1**

**Instructions of
the Engineer or
Engineer's
Representative**

The Contractor shall maintain a Site Order Book at their site office and all orders and instructions issued to them from time to time by the 'Engineer' or his representative will be recorded in the Site Order Book. The authorized representative of the Contractor shall promptly sign each entry as token of having received such orders.

Clause No. 7.2 **Clause No. 7.2.1**

**Performance
Guarantee /
Security Deposit**

Within **28 (twenty-eight) days** of issuance of "Letter of Acceptance (LOA)", the Contractor shall have to provide an irrevocable and unconditional Bank Guarantee, from a Nationalized Bank / Scheduled Bank in India, in the amount, **10 %** of the contract value excluding GST.

This Security Deposit / Performance Bank Guarantee should be kept valid and enforceable till a date, covering **at least 3 (three) months** beyond the date of expiry of the Defect Liability Period of the Contract job [for the materials, installations & workmanship, with respect to the instant work, as a whole] (as specified in **SCC Clause No. 7.2.1**). In case the actual duration of the aforesaid Defect Liability Period is required to be extended, the validity of this Bank Guarantee shall have to be extended till a date, covering at least 3 (three) months beyond the date of expiry of such extended duration of the Defect Liability Period.

Failure of the Contractor to submit the aforesaid Performance Bank Guarantee and in the manner stated above shall constitute sufficient grounds for termination of the contract and forfeiting the Earnest Money Deposit.

Clause No. 7.2.2

The procedure of release / refund of Performance Guarantee / Security Deposit would be as follows:

On successful completion of the 'Defect liability period' (considering extension, if any) of the Contract job [for the materials, installations & workmanship, with respect to the instant work, as a whole] (as specified in **SCC Clause No. 7.2.1**), the Contractor may apply for release / refund of his Performance Guarantee/Security Deposit [as stated in **SCC Clause No. 7.2.1**] by submitting to the Engineer an application, along with "No Claim Certificate", as per the form furnished in Section-XI, whereupon the Engineer

shall issue “Certificate of Final Completion” [as per the form furnished in Section-XI]. The Engineer shall also issue necessary recommendation for release of the said Performance Guarantee/Security Deposit or refund the balance due against the Performance Guarantee/Security Deposit to the Contractor, after making deduction therefrom in respect of any sum due to the Trustees from the Contractor.

Clause No. 7.3

Clause No. 7.3.1

**Supply of water
and Electricity**

Supply of water:

Drinking water supply at the **Contractor’s site office, store, workshop, assembly/erection yard, etc.** will be given on **chargeable basis**. For this, the Contractor shall have to make **all arrangements, including installation of Water Meter and laying of pipelines from the source(s) identified by SMP, Kolkata, at their cost**. The Contractor will be responsible for maintenance and calibration of such water meter also.

Billing against supply of water will be done on the basis of actual consumption recorded through water meter at the rate **INR 38.65 (including overhead charges @ 19.25%) per KL of Fresh Water** [As directed by **TAMP (Tariff Authority for Major Ports)**], **with escalation @ 5% per annum**.

The **water consumption charges** [based on the prevalent rates of SMP, Kolkata, as may be amended from time to time] shall have to be paid by the Contractor immediately, on receipt of the bill from the office of the Finance Division, Haldia Dock Complex. All payment on this account should be updated, otherwise the pending bill amount, along with late payment surcharge, will be recovered from the Contractor’s bill(s).

Clause No. 7.3.2

Supply of Electricity:

Supply of Electricity at the **Contractor’s site office, store, workshop, assembly / erection yard, etc.** will be on **chargeable basis**. The Contractor shall have to make all arrangements, including **installation of Energy Meter and laying of Cables from the source(s) identified by SMP, Kolkata, at their cost**. The Contractor will be responsible for maintenance and calibration of such Energy Meter also.

Electricity charges will be determined on the basis of **Chargeable Unit (kWh)** [actual **Unit (kWh) consumed** (recorded through Energy Meter) **plus 3%** on actual Unit consumed] and applicable rate of **West Bengal State Electricity Distribution Company Limited (WBSEDCL)**. Billing will be done on the basis of **Electricity charges** and overhead charges @ 19.25% [on the aforesaid **Electricity charges**] as per the notifications of **Tariff Authority of Major Ports (TAMP)**.

The **Electricity consumption charges** [based on the prevalent rates of **WBSEDCL**, as may be amended from time to time] shall have to be paid by the Contractor immediately, on receipt of the bill from the office of Finance Division, Haldia Dock Complex. All payment on this account should be updated, otherwise the pending bill amount, along with late payment surcharge, will be recovered from the Contractor's bill(s).

Clause No. 7.4

Inspection and testing

Clause No. 7.4.1

All the materials, which would be supplied by the Contractor and would be utilised in the instant work, will be inspected / tested jointly by the authorized representative of HDC, SMP, Kolkata and the Contractor, based on the "Technical Specification", either at Contractor's premises or at work site. Such materials will be under the custody of the Contractor till installation / commissioning & handing over to HDC.

All the work will be inspected / tested during execution [different stages], as well as after completion, jointly by the authorized representative of HDC, SMP, Kolkata and the Contractor, based on the "Technical Specification".

The Contractor will have to provide all facilities for different stages of inspection / testing of the materials, work under execution and executed work, at their own risk, cost & arrangement.

The materials supplied & utilised by the Contractor, in the instant work, should strictly conform to the laid down specification in the contract.

Samples from the supplies may be drawn for testing at Government approved Test House. If the sample is found to be inferior to the laid down specification of the contract, the materials will be rejected in whole or in part. The Contractor shall be debited with the cost of test. Moreover, rejected materials shall have to be replaced by the Contractor at their own cost, risk & arrangement.

After completion of the work, on satisfactory testing & commissioning, as applicable, measurement of executed work will be certified by the representative of the 'Engineer', from time to time. All measurements shall have to be entered in a 'Work Measurement Book', to be maintained by the Contractor and the same should be signed by the representative of the Contractor & representative of the 'Engineer'. Based on the entry in the 'Work Measurement Book', Work Done Certificates will be issued against the executed work.

Inspection & testing of the work by the authorized representative of HDC, SMP, Kolkata shall not relieve the Contractor from his obligation for conforming to the quality, workmanship, guaranteeing the performance, etc. as per the contract.

Clause No. 7.5

Completion Period

Clause No. 7.5.1

Contract Period:

The contract shall remain valid for a period of 02 years (24 months) from the date of placement of Work Order / LOI.

However, this period may be extended for a further period of 06 months, subject to satisfactory performance of the Successful Bidder, under the same rate, terms & conditions.

All the work, for which part order would be communicated (verbal or written instruction or through e-mail) within the aforesaid Contract Period (including extension, if any), should be executed by the Contractor.

The accepted unit rates, based on the quoted percentage, should accordingly remain valid & applicable for the executed work, for which part order was communicated within the aforesaid Contract Period (including extension, if any).

Clause No. 7.5.2

The work is urgent in nature and must be commenced immediately on receipt of part order (verbal or written instruction through letter / e-mail). All the part order should be entered into a register [Site Order Book] and to be authenticated by the representative of Sr. Dy. Manager (P&E). The authorized representative of the Contractor shall promptly sign each entry as token of having received such orders.

All the jobs are to be completed in all respects within the stipulated periods, mentioned hereunder:

A.) For Item Sl. No. 1 & 2

- i) 1st stage of physical checking of removing of all the old coils from the core, newly formed stator coils. Stator core full Flux Loop Test before carrying out winding work.: - **14 days**, from the date of handing over of Motor from HDC site to Contractor.
- ii) 2nd stage of physical inspection of all inter-connections joints after placement of the insulated coils in the core slots and before insulation and varnish of the inter connections of the coils in the overhang portion of the windings. : - **21 days**, from the 1st stage of inspection.
- iii) 3rd stage for electrical Power frequency High Voltage test, insulation resistance test, Polarization Index [PI] measurement, pre-dispatch Trial run etc.: - **14 days**, from the 2nd stage of inspection.
- iv) 4th & Final stage of Installation, Testing & Commissioning at respective Pump house: - **14 days**, from the 3rd stage of inspection.

All the jobs are to be completed in all respects within the stipulated periods, mentioned hereunder:

B.) For Item Sl. No. 3 to 6

- i) Replacement of wear out bearings with new bearing, job includes removal of existing bearing, Installation of new bearing, (includes, greasing, metal lining if required) and other allied activities at respective Pump house.: - **3 days**, from the date of formal communication.

All the jobs are to be completed in all respects within the stipulated periods, mentioned hereunder:

C.) For Item Sl. No. 7 & 8

- i) Varnishing and conditioning of Motors, job includes Varnishing, baking and Additional coating of air-drying varnish of motors.: - **28 days**, from the date of handing over of Motor from HDC site to Contractor.
- ii) Installation, Testing & Commissioning at respective Pump house: - **7 days**, from the 2nd stage of inspection

Clause No. 7.6

Clause No. 7.6.1

“Defect Liability Period” of the Contract job:

Defect Liability Period (DLP)	<p>The materials supplied and work executed by the Contractor will be guaranteed for a period of 12 (twelve) months from the latest date of 4th & Final stage of Installation, Testing & Commissioning at respective Motor/ Pump House, as per the Work Done Certificates, to be issued from time to time, as per SCC Clause no. 7.5.2.</p> <p>“Defect Liability Period” of the Contract job [for the materials, installations & workmanship, with respect to the instant work, as a whole] shall mean the Guarantee Period, as mentioned above.</p>
Clause No. 7.7	<u>Clause No. 7.7.1</u>
Defects after taking over	<p>After issuing the Work Done Certificate, if the same cannot be used (for the purpose for which it is intended), during any period, by the reason of a defect or damage, the Defect Liability Period shall be extended accordingly. If only a portion of the executed work is affected, the Defect Liability Period shall be extended [in case the defects are not rectified or defective materials are not replaced within 03 days of its occurrence] only for that portion, provided the other portions of the executed work remains in order, fulfilling contract conditions. In neither case shall the Defect Liability Period be extended beyond 18 (eighteen) months [from the last date of execution of the work, as per the Work Done Certificates] for the materials, installations & workmanship, with respect to the instant job, as a whole.</p>
Clause No. 7.8	<u>Clause No. 7.8.1</u>
<u>Liquidated Damage:</u>	<p><u>Liquidated Damage:</u></p> <p>If the Contractor fails to complete the work within the stipulated dates [as per SCC Clause No. 7.5 (Completion period)] or such extension thereof, as communicated by the Engineer, in writing, the Contractor shall pay as compensation (Liquidated Damage) to the Trustees and not as a penalty, as per the following:</p> <p>In case of delay in completion of the works, related to part orders, Liquidated Damage @ ½% of the value of the executed work (related to the specific part order, based on the accepted rates) [excluding GST], for every week or part thereof, beyond the scheduled date of completion, will be deducted from the Contractor’s bill. Provided always the amount of such compensation shall not exceed 10 % of the value of the such executed work (related to the specific part order) [excluding GST].</p>
Clause No. 7.9	<u>Clause No. 7.9.1</u>
<u>Indemnity Bond</u>	<p>To be submitted by the successful bidder under SMP,K proforma, through Notary Public, Govt. of West Bengal, before taking out any material from HDC’s site/store, for repairing/ Replacement at their workshop etc.</p>
Clause No. 7.10	<u>Clause No. 7.10.1</u>
<u>Non-assignability</u>	<p>No part of the contract or any share of interest therein shall in any manner or degree be transferred or assigned or sublet by the Contractor directly or indirectly to any person, firm or company whatsoever.</p>

Clause No 7.11

Clause No. 7.11.1

***Terms of
payment***

The quantities given in the “PRICE SCHEDULE” are indicative only [which may vary (both upward & downward) during execution] and are given to provide a common base for tendering and evaluation. However, the payment will be made on the exact quantity to be executed by the Successful Bidder.

On account payments (maximum eight parts) will be made (at the accepted rates) within 30 days from the date of submission of clear & unambiguous bill, along with Work Done Certificate against the completed work, on the basis of measurement of completed work.

Bills should be submitted, **in triplicate**, to **Office of the Sr. Dy. Manager, Plant & Equipment Division, Chiranjibpur Operational Building, Haldia Dock Complex** along with required certification / inspection report from the concerned sections viz, TSEM, Lock Entrance, GC Berth Eqpt. Section, Power House etc.

Payment will be made in Indian Rupees through the banker of the Contractor (i.e. through **ECS**). During submission of bill(s), the following information must be submitted by the Contractor regarding their banker:

- a) Bank Account number.
- b) Name of the bank.
- c) Name of the branch.
- d) Address of the branch.
- e) MICR code of the branch.

PRICE SCHEDULE**No. SDM(P&E)/92 MR/ENQ/ 01 /2024-25****Dated 24.05.2024**

[To be filled up and uploaded, duly signed & stamped]

Sl. No.	Item Description	Unit	Qty.	Estimated (Without GST) (in Rs.)	
				Rate per unit	Amount
1.	Thorough overhauling (including replacement of bearings, windings etc.) of 37kW/ 50HP , 415 Volts, Amp- 64.3 A, RPM- 1470, 3 Phase, 50 Hz, Insulation Class- F, Rating- Continuous, Ambient Temperature- 45°C, Mounting- Vertical, Shaft-Hollow, Connection- Delta, continuously rated (S1 duty) as per IS:325 N.D.E - 7220 B/ 7317 B D. E. – 6311 C3/ 6313 C3	Nos.	08		
2.	Thorough overhauling (including replacement of bearings, windings etc.) of 33.5kW/ 45HP , 415 Volts, Amp- 58 A, RPM- 1470, 3 Phase, 50 Hz, Insulation Class- F, Rating- Continuous, Ambient Temperature- 45°C, Mounting- Vertical, Shaft-Hollow, Connection- Delta, continuously rated (S1 duty) as per IS:325 N.D.E - 7220 B D. E. – 6311 C3	No.	06		
3.	Complete replacement of only Non-Drive End Bearing Set for N.D.E - 7220 B	No.	06		
4.	Complete replacement of only Non-Drive End Bearing Set for N.D.E - 7317 B	No.	06		
5.	Complete replacement of only Drive End Bearing Set for N.D.E - 6311 C3	No.	03		
6.	Complete replacement of only Drive End Bearing Set for N.D.E - 6313 C3	No.	03		
7.	Varnishing and conditioning of 37kW/ 50HP , 415 Volts, Amp- 64.3 A, RPM- 1470, 3 Phase, 50 Hz, Insulation Class- F.	No.	02		
8.	Varnishing and conditioning of 33.5kW/ 45HP , 415 Volts, Amp- 58 A, RPM- 1470, 3 Phase, 50 Hz, Insulation Class- F.	No.	01		
	Total Amount: -				