

BOKARO POWER SUPPLY CO. (P) LTD.

**HALL NO:- M-01, OLD ADMINISTRATIVE BUILDING,
ISPAT BHAVAN, BOKARO STEEL CITY – 827001**

**TENDER NOTICE NO. BPSCL/CEO/P&C/11-12/PUR-276/NIT-282/499
Dated 19.01.2012**

TENDER DOCUMENT

SUBJECT: PROCUREMENT OF 6.6KV, 600KW, ID FAN MOTORS

**COST: Rs. 4000/-
(Rupees Four Thousand Only)**

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Bokaro Power Supply Company (P) Limited
(A Joint Venture of SAIL & DVC)
Hall No. M-01, Old Administrative Building
Ispat Bhawan, Bokaro Steel City 827 001

NOTICE INVITING TENDER

NIT No. BPSCL/CEO/P&C/11-12/ PUR-276/NIT-282/499

Date: 19.01.2012

For and on behalf of BOKARO POWER SUPPLY COMPANY (P) LTD (BPSCL), sealed tenders in duplicate in four parts, i.e. Cost of Tender Document along with proof of qualifying requirements (Part A), EMD (Part B), Techno-commercial bid (Part-C) and Price bid (Part D) are invited by the undersigned from reputed manufacturers or their authorised representative for supply of “6.6KV, 600KW, ID Fan Motors” as per the details given in **Description of Material (Section-IV)**.

Material Details:	
Item	6.6KV, 600KW, ID FAN MOTORS
Quantity	AS GIVEN IN DESCRIPTION OF MATERIAL (Section-IV)
Material Specification	AS PER SECTION-IV.
Qualifying requirements: -	
<p>i) The bidder must submit a self attested copy of recent Purchase Order (P.O.) (s), (issued within last five years) as proof of supply of HT Motors, supplied to a PSU, Central / State Government Organization, or, Joint Venture / Regulated Company thereof. The Value of such Purchase Order (s) should be not less than:-</p> <p>a) The Rs. 1,64,00,000.00 (Rupees One Crore Sixty Four Lakh only, excluding taxes) for a single PO. OR</p> <p>b) Rs. 82, 00,000.00 (Rupees Eighty Two Lakh only, excluding taxes) for each of two or more PO's.</p> <p>ii) The bidder shall be either of the following:-</p> <p>a) An original Equipment Manufacturer (OEM) of HT Motors. OR</p> <p>b) An authorized representative of the Original Equipment Manufacturer or OEM of HT Motors. Proof of the same (together with certificates of authorization from OEM, in case of authorized representative) must be submitted along with the bid.</p> <p>iii) The bidder (or its principal company, in case the bidder being authorized representative of the same) should be manufacturers of the subject items having valid ISO-9001 certification for manufacturing of HT Motors, duly issued by competent authority. Proof of the same should be submitted.</p> <p>iv) a) The average annual turnover of the bidder during last three financial years should not be less than Rupees (INR) Two Crore Fifty Five Lakh (Rs. 2.55 Crore). b) The bidder shall submit self attested copies of audited balance sheet, profit & loss account for last three (03) consecutive financial years.</p> <p>v) The bidder shall furnish up to date IT return.</p> <p>vi) The bidder will have to submit authenticated (signature with seal of the company) copy of documentary evidence of Sl. No. (i) to (v) along with the tender, failing which the bid will be summarily rejected.</p> <p>vii) The bidder shall submit a declaration (duly signed by the representative of the company with seal) that he/it/they is/are not debarred by any Central / State Government agencies or by any PSU company under any sort of blacklist / holiday-list.</p>	
Other information: -	
Cost of Tender Paper (non refundable)	Rs. 4000.00 (Rupees Four Thousand only)
Last date & time for submission of tender	20.02.2012 up to 15.00 Hours
Bid Opening date & time (Part – A, B & C)	20.02.2012 at 15.30 Hours

General Terms & Conditions:

- i) Tenderers should obtain the tender documents from Company's website www.bpscl.in and submit the duly filled documents along with the cost of tender documents of **Rs. 4000/=** by way of demand draft drawn on any nationalized bank/scheduled commercial bank, drawn in favour of Bokaro Power Supply Co (P) Ltd, payable at Bokaro Steel City, in the office of the undersigned on any working day during office hours. However Govt. organization, small scale industries registered with NSIC, need not submit the cost of tender document subject to production of the documentary evidence like valid Registration Certificate of the same item or group of item from appropriate Govt. Authority.
- ii) Tender shall be enclosed with **EMD of Rs. 4,09,500.00 (Rupees Four Lakh Nine Thousand Five Hundred) only** in shape of DD drawn on any Nationalized Bank / Scheduled Commercial Bank except Co-operative bank in favour of Bokaro Power Supply Company (P) Ltd., payable at Bokaro Steel City. However EMD exemption, wherever applicable, may be availed of by Government organizations / Small Scale Industries registered with NSIC against proper entitlement documents.
- iii) The undersigned reserves the right to either reject any / all tenders without assigning any reason thereof and also reserve the right to alter the qualifying requirements.
- iv) **Any corrigendum/addendum/extension of bid opening date will be published through our website www.bpscl.in only and not through news paper.**

For and on behalf
Bokaro Power Supply Co (P) Ltd.
Sd/-
(J.M. Prasad)
DGM (P&C)

Section – I

1.00 Conditions & Rules to be observed in submitting Tenders

1.01 Manner of Submission of the Tender

The tender shall be divided into 04 parts as follows:-

- a) **Part A:** This part Comprises Proof of Qualifying Requirements along with an authenticated copy of latest Income Tax return Certificate and latest Sales Tax return Certificate, copy of purchase orders, marked with (Part-A) ‘Qualifying Requirements’, NIT No. & date.
- b) **Part B:** This part comprises the Earnest Money Deposit in the manner as stated in the tender which shall be in one envelope marked with (Part-B) ‘EMD’, NIT No. & date.
- c) **Part C:** This part Comprises Technical and Commercial details executed, consent on General terms & conditions framed under Section – II etc. marked with (Part-C) Techno-Commercial Bid, NIT No. & Date.
- d) **Part D:** This part shall contain only the price schedule comprising the rates filled in figures and words as per the instruction given elsewhere in this tender. This should be kept in a sealed cover marked Price Bid (Part -D), NIT No. and Date.

1.01.1 Each part should be sealed in separate envelopes, clearly superscribing on the top of each envelope the relevant part number and description along with NIT reference and date of opening and submit all the parts simultaneously in another sealed envelope clearly superscribing NIT reference and date of opening.

1.02 Tender Validity Period

The tender shall be valid atleast for **120 (One Hundred Twenty)** days from the date of opening.

1.03 General

- i) The bidder shall complete the Bid Proposal in all respect by inserting correct applicable ‘data’ in the ‘blank box’ against each item/Sl. No. positively.
- ii) The tender rates shall be written in English, in ink both words and figures. In the case of any discrepancy between the words & figures of the rates quoted, the rates expressed in words shall be taken as correct. In the case of discrepancy in the Unit Rate and Amount, Unit Rate will govern. Erasures, changes, and corrections of whatever type/nature shall be attested by the tenderer. The rates amount shall be written in Rupees and Paise only. The rates in words shall be written in one single line only without admitting any interpolations.
- iii) **All pages of the copies of documents submitted as credentials should be duly signed / self attested (with seal of the company) by representative of the bidder.**
- iv) If the intending tenderer is a Firm or Company, then they shall, in the forwarding letter, mention the number and names of all the partners shall sign before submitting the same unless the Power of Attorney holder has specifically been authorized in this respect.
- v) If any tenderer withdraws his tender before its acceptance or refuses within a reasonable time without giving any satisfactory and acceptable explanation thereof, the tenderer shall be disqualified for making any tender of the BPSCL for a minimum period of one year and the Earnest Money will be forfeited.

- vi) Proprietary Article Certificate (PAC) and Price Reasonable Certificate (PRC) stating that the prices charged are reasonable and the same being charged to all the Govt./Semi govt. organisations/ PSUs including D.G.S.& D. where applicable. Where agent commission is involved, the same in percentage invariably be indicated.
- vii) **Handling of Earnest Money:**
 - a) Earnest Money will be refunded to the un-successful tenderer after finalisation of tender and no interest will be paid for the same.
 - b) The amount of Earnest money will be refunded after submission of Security Deposit only in case of successful Tenderer.
- viii) In case the date of tender opening happens to be holiday, the tender will be opened on the next working day at same time.
- ix) **Any conditional offer or offer having deviations from our specification & instruction sheets is liable to be rejected.**
- x) BPSCL reserves the right either to reject any/all the tenders without assigning any reason thereof.

2.00 General Terms and Conditions

- 2.01 Specification, quantity, unit rate, taxes, duties, freight, insurance, packaging, forwarding etc. should be mentioned separately and clearly.
- 2.02 Offer is to either type written or by handwritten and in no case partly type written and partly hand written. No corrections, overtyping shall be permitted. If so, the same shall be summarily rejected.
- 2.03 The Tenderer shall quote the unit rate in figures as well as in words. The rates quoted shall be inclusive of, in all cases, costs, taxes etc. It should be in the format given in PART 'D'
- 2.04 Tenders shall be accompanied by a copy of latest IT Return submitted, Sales Tax Registration no. of the Individual/Party/Firm submitting the tender.
- 2.05 Bank details mentioning account number, bank name, city, branch name and branch code should be mentioned in the offer.
- 2.06 Tenderer shall furnish materials test certificate from **Govt. Test House** along with supply.
- 2.07 Paying authority – In-charge (F&A), BPSCL but bill in triplicate duly receipted on the revenue stamp with a copy of TC, GC & Packing list etc. be submitted to Consignee: In-Charge (Stores), Power Plant, Bokaro Power Supply Company (P) Limited for processing of the same.
- 2.08 Tenderers shall quote their firm rates and no negotiations will be held except with the lowest tenderer, if required.
- 2.09 Supplies must be strictly in accordance with material specifications. Suppliers will be responsible for deviation whatsoever.
- 2.10
 - a) The supplier will be held responsible for the stores not being sufficiently and properly packed at his expenses for the transport by rail, road and sea; so as to ensure them being free from loss or injury at their destination. This will apply Ex-Godown office also.
 - b) Each bale or package delivered under our order shall at the expense of the supplier be distinctly marked with description and quantity of contents with the consignee's name and address with gross weight with the name of supplier and with a distinctive number or mark which is also to be shown for the purpose of identification of the suppliers packing account.
 - c) Each bale or package shall contain a packing note quoting the number and date of our order showing its contents in detail.
- 2.11 In accepting the order you are understood to accept to all responsibilities for and infringement in registered design, trademark, patent rights etc.
- 2.12 **Arrangements for insurance wherever is necessary will be made by BPSCL in our open general policy.**
- 2.13 Where a claim of Sales Tax is preferred and admitted, the supplier must satisfy that he is a registered dealer under Sales Tax Act and Possesses a Certificate of Registration in the firms name in which the supply is made and shall in proof thereof, while submitting bills for payment, furnish the number date and other particulars of such Certificate.

- 2.14 **Security Deposit :** The successful tenderer will have to deposit as security, for satisfactory execution of the order, an amount of **Rs. 7, 50,000.00** in any form - Bank Guarantee (as per BPSCL format), Bank Draft/ Bankers Cheque in Favour of Bokaro Power Supply Company (P) Ltd., B.S. City.

The expression satisfactory execution of the order shall mean fulfillment of all obligation arising out of and the guarantees stipulated in the contract. In default at satisfactory execution of the order the security deposit shall be forfeited to the BPSCL.

Any penalty for which the successful tenderer shall be found liable or any liquidated damages which shall be payable to the BPSCL in terms of the Purchase Order/ Contract, shall also be recoverable by the BPSCL from the Security deposit. If such security deposit will not be adequate for the purpose of liquidating the amount of penalty and/or damages as contemplated, the amount in excess thereof shall be deducted from any sum or sums which may be due or may become due to the successful tenderer from the BPSCL on any account whatsoever.

Notwithstanding what has been stated above if the successful tenderer shall have duly performed all his obligation under and the guarantees stipulated in the purchase order / contract and observe all the terms and conditions thereof and no penalty shall have been recoverable from him and / or the BPSCL shall not have suffered any damages whatsoever, then security deposit shall be refunded, on receipt of a certificate from the consignee that there is no claim against the Successful tenderer under the Purchase Order / Contract.

- i) The Parties should clearly indicate their prices firm in all respects till execution of the order and on door delivery basis by Bank approved road transport to BPSCL Stores.
- ii) In case of asking any variation on any account whether raw materials or sales tax or excise duty or transportation etc. will not be treated as firm price on that account and hence parties should state everything clearly.

- 2.15 **Delivery Required:** Within **eight (08) months** after placement of purchase order. However earliest possible delivery date may please be quoted.

Note : Without any specific mention regarding Excise duty, Sales Tax, Freight & Insurance, packing and forwarding charges, they would be taken as included in the quoted prices and no claim for these would be entertained latter.

Maker's name brand, if any and Country of Origin should be quoted, otherwise tender will be rejected.

Special Instruction: Tenders must signify their willingness to submit security deposit. Tender will be opened **20.02.2012 at 03.30 PM**. If it is declared a holiday by BPSCL then in the next working day in the presence of Tenderer's Authorized Representatives, who wish to be present.

3.00 Instruction Sheet

- 3.01 Properly authenticated test certificates with all technical details of similar items previously manufactured and tested by a government certified laboratory should be provided along with the bids. The test data should be in conformance with i.e. safety norms and is norms.
- 3.02 Properly authenticated test certificates of each of the items by a government certified laboratory should be provided at the time of delivery of the subject items. The test data should be in conformance with IEC safety norms and is norms.
- 3.03 Test certificates should clearly out-line the actual material composition of “**6.6KV, 600KW, ID Fan Motors**” as well as other relevant parameters (please refer the specification given in description of material **Section – IV**).

3.04 The Original documents are to be produced on demand.

- 3.05 Properly authenticated Guarantee certificates should be provided with all the items.
- 3.06 The guarantee period should be at least twelve (12) months from the date of commissioning or eighteen (18) months after delivery of the material, whichever is earlier.
- 3.07 Each of the items should be complete in all respects, including connecting leads, clamps, etc. For connecting the items to the over-head conductors, if applicable.
- 3.08 For any manufacturing defect discovered during the guarantee period under normal operation, the defective items must be replaced free of costs.
- 3.09 Tenderer must agree with despatch of materials after duly stamped by inspecting authority.
- 3.10 Each castings/forgings shall bear your identification mark and our mark “BPSCL”.
- 3.11 Acceptance of materials is subject to testing / inspection and fitment in our existing systems.
- 3.12 Tenderer must agree with Price Basis as **F.O.R. BPSCL Stores**.
- 3.13 Tenderer must agree with Payment terms of **100% against GRN**. In case of payment to be made through dispatch documents all Bank Charges shall be borne by Supplier.
- 3.14 **Delivery:-**
 - a) Timely delivery is the essence of the contract.
 - b) In the event of supply not being effected within the contractual delivery schedule given in the order, liquidated damages @ ½ % of the value of the materials with taxes and duties, per week of delay or part thereof, subject to a maximum of 05% is recoverable from the supplier without prejudice to the right of BPSCL to procure the balance material at the risk & cost of the supplier.
 - c) In the event of failure to supply the goods, or part thereof, within the scheduled delivery period, BPSCL reserves the right to cancel the contract part thereof, and if so desired, to purchase the goods from alternate source at the risk and cost of the defaulting supplier.

4.0 Description of Material

Sl. No.	ITEM DESCRIPTION	QUANTITY
DESIGN, MANUFACTURING AND SUPPLY OF NEW I.D.FAN MOTORS WITH HIGHER OUTPUT POWER: 600 KW (APPROX.) & HIGHER SPEED: 750 RPM (APPROX.) AND EXACTLY ONE TO ONE REPLACEMENT OF USSR MAKE MOTORS 400KW, 600RPM, 6.6KV.		
1.	CAT. NO.: 72000022500 600KW, 750RPM, 6.6KV, I.D. FAN MOTOR WITH RESIN RICH STATOR WINDINGS & WITH ANTI-FRICTION SUPPORT BEARINGS, AS A ONE-TO-ONE REPLACEMENT OF THE EXISTING RUSSIAN MAKE 400KW, 600RPM, 6.6KV I. D. FAN MOTOR OF TPP BOILERS.	04 Nos.

NOTE:

1. THE SCOPE OF SUPPLY OF THE SUBJECT ITEMS (MOTORS) DOES NOT INVOLVE ONLY DELIVERY OF THE SAME, BUT ALSO ENVISAGES PRIOR DESIGN, MANUFACTURE, SUPPLY, & MONITORING OF TRIAL RUN AFTER ITS COMMISSIONING.
2. THE BROAD TECHNICALITIES OF THE SUBJECT MOTOR ARE GIVEN IN THE SPECIFICATION SHEET ATTACHED HERewith, BUT TECHNICAL DETAILS AND THE RELEVANT ENGINEERING DRAWINGS OF THE SUBJECT MOTOR ARE ALL TO BE WORKED OUT BY THE BIDDER & DULY APPROVED BY THE ENGINEER-IN-CHARGE OF BPSCL BEFORE ITS ACTUAL MANUFACTURING.
3. THE MOTOR SHOULD BE EXACTLY REPLACING THE EXISTING RUSSIAN MAKE I.D. FAN MOTOR TYPE DAZO 1708 10T, SO FAR AS FOUNDATION & ALIGNMENT COMPATIBILITY WITH THE EXISTING DRIVE ARE CONCERNED WITHOUT ANY CHANGE ANYWHERE IN THE EXISTING DRIVE OR THE MOTOR FOUNDATION.
4. THE MOTOR (600KW, 750RPM) IS TO BE ENERGY-EFFICIENT & SHOULD REPLACE THE EXISTING RUSSIAN MAKE MOTOR (400KW, 600RPM), SO AS TO ADEQUATELY TAKE UP THE FULL LOAD OF THE EXISTING CONNECTED DRIVE WITH FULL DAMPER OPENING.
5. THE MOTOR WILL BE HAVING ANTI-FRICTION SUPPORT BEARINGS, SO THAT IT CAN REPLACE THE EXISTING MOTOR HAVING BABBIT BEARINGS (PEDESTAL MOUNTED BEARINGS), WITH THE EXISTING FOUNDATIONS UN-ALTERED.
6. THE FOUNDATION FRAME SIZE OF NEW I.D. FAN SUPPLIED MOTORS MUST EXACTLY MATCH WITH THAT OF THE FOUNDATION FRAME SIZE OF EXISTING MOTORS WITHOUT THE USE OF ANY BASEPLATE, EITHER INTRINSIC OR EXTERNAL.
7. A GUARANTEE / WARRANTY COVERING MANUFACTURING DEFECTS SHOULD BE PROVIDED FOR TROUBLE-FREE OPERATION OF THE MOTORS & THEIR SPARES FOR A PERIOD OF TWELVE MONTHS (OR MORE) FROM DATE OF COMMISSIONING OR EIGHTEEN (18) MONTHS (OR MORE) FROM DATE OF SUPPLY WHICHEVER IS EARLIER. IN CASE OF ANY MANUFACTURING DEFECTS DISCOVERED WITHIN THE GUARANTEE PERIOD OF NORMAL OPERATION, THE SAME ARE TO BE RECTIFIED AND / OR THE DEFECTIVE PARTS REPLACED BY THE BIDDER FREE OF COST.

8. FOR ANY MANUFACTURING DEFECT DISCOVERED DURING THE GUARANTEE PERIOD UNDER NORMAL OPERATION, THE DEFECTIVE ITEM MUST BE REPAIRED OR REPLACED FREE OF COST.
9. THE AGENCY WILL HAVE TO SUBMIT THE DIMENSIONAL DRAWINGS ALONG WITH THE TECHNICAL DATA OF RESIN RICH STATOR COILS, ETC. OF THE ABOVE ITEMS AND GET THEM APPROVED BY ENGINEER-IN-CHARGE, BPSCL.
10. THE AGENCY WILL HAVE TO SUBMIT THE DIMENSIONAL DRAWINGS (GA DRAWING), ETC. OF THE ABOVE ITEMS AND GET THEM APPROVED BY ENGINEER-IN-CHARGE, BPSCL.
11. ALL THE MATERIALS USED IN THE MOTORS SHOULD BE AS PER IS- NORMS.
12. AFTER COMMISSIONING OF THE SUBJECT ITEMS (MOTORS), TRIAL RUN OF THE SAME WILL HAVE TO BE MONITORED BY THE BIDDING AGENCY, AND THE FINAL PAYMENT WILL ONLY BE RELEASED AFTER TROUBLE-FREE CONTINUOUS TRIAL-RUN OF THE SUBJECT MOTOR FOR MINIMUM THREE (03) DAYS.
13. BEFORE STARTING MANUFACTURE OF THE MOTORS, THE AGENCY WILL HAVE TO SUBMIT AUTHENTICATED COPIES OF FOLLOWING DOCUMENTS & GET THEM APPROVED BY ENGINEER-IN-CHARGE OF BPSCL:
 - i. MOTOR DATA SHEET;
 - ii. TORQUE VS SPEED CURVE;
 - iii. THERMAL WITHSTAND CURVE;
 - iv. CURRENT VS % TIME CURVE;
 - v. GA DRAWING & OTHER DIMENSIONAL DRAWINGS;
 - vi. NEUTRAL POINT TB DRAWING;
 - vii. ASSEMBLY DRAWING OF PSTB;
 - viii. SECTIONAL ASSEMBLY FOR RTD/BTD ARRANGEMENT DRAWING;
 - ix. HEATER TB ASSEMBLY & CONNECTION DIAGRAM, ETC.
14. THE ORDERED QUANTITY MAY INCREASE /DECREASE DEPENDING UPON THE REQUIREMENT AT THE TIME OF ORDER.

Bokaro Power Supply Company (Pvt.) Limited

(A Joint Venture of SAIL & DVC)

PART 'C'

TECHNO-COMMERCIAL BID

NIT No. BPSCL/CEO/P&C/11-12/ PUR-276/NIT-282/499

Date: 19.01.2012

Sl. No.	ITEM DESCRIPTION	QUANTITY
DESIGN, MANUFACTURING AND SUPPLY OF NEW I.D.FAN MOTORS WITH HIGHER OUTPUT POWER: 600 KW (APPROX.) & HIGHER SPEED: 750 RPM (APPROX.) AND EXACTLY ONE TO ONE REPLACEMENT OF USSR MAKE MOTORS 400KW, 600RPM, 6.6KV.		
1.	CAT. NO.: 72000022500 600KW, 750RPM, 6.6KV, I.D. FAN MOTOR WITH RESIN RICH STATOR WINDINGS & WITH ANTI-FRICTION SUPPORT BEARINGS, AS A ONE-TO-ONE REPLACEMENT OF THE EXISTING RUSSIAN MAKE 400KW, 600RPM, 6.6KV I. D. FAN MOTOR OF TPP BOILERS.	04 Nos.

Commercial Terms & Conditions:

Manufacturer/ Make of the item(s):

1. Price Basis:
2. Packing & Forwarding:
3. Excise Duty:
4. Sales Tax/VAT:
5. Freight:
6. Insurance:
7. Delivery Schedule:
8. Payment Terms:
9. Consignee: Stores In-charge, Power Plant, Bokaro Power Supply Co (P) Ltd, B S City
10. Inspection: Final inspection will be done at our stores after receipt of material.
11. Material Test & Guarantee Certificate must be supplied along with the material.
12. Registered with
('01' NSIC/ '02' SSI/ '03' NSIC & SSI/ '04' DGS&D/ '05' None)
Proof for '01' to '04' attached: YES / NO
13. To be furnished
 - (a) Drawing within days of date of the P.O.
 - (b) Sample within days of date of the P.O.
14. Testing: At
('01' Consignee's Site / '2' Works / '03' Govt. Test House/ '04' Govt. Approved Test House/ '5' Specify if any other)

15 Guaranteed Period:

a) months from date of dispatch **OR**

..... months from the date of commissioning whichever is earlier

b) of running hours.

16 Security Deposit: Rs. 7, 50,000.00 in the form of

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(‘01’ BG ‘02’ Bank Draft / ‘03’ Bankers Cheque)

18 Liquidated Damage: 1/2 % per week subject to maximum 05% of undelivered value.

19 Validity of offer up to: Day Month Year

(Minimum for a period of **120 days** from the date of opening)

Bokaro Power Supply Company (Pvt.) Limited
(A Joint Venture of SAIL & DVC)
PART 'D'

PRICE BID

NIT No. BPSCL/CEO/P&C/11-12/ PUR-276/NIT-282/499

Date: 19.01.2012

Price:

Sl. No.	Item Description	Qty.	Rate/ Unit (Rs.)	Excise Duty	Sales / Service Tax	Amount after Rebate/ Discount (Rs.)
DESIGN, MANUFACTURING AND SUPPLY OF NEW I.D.FAN MOTORS WITH HIGHER OUTPUT POWER: 600 KW (APPROX.) & HIGHER SPEED: 750 RPM (APPROX.) AND EXACTLY ONE TO ONE REPLACEMENT OF USSR MAKE MOTORS 400KW, 600RPM, 6.6KV.						
1.	CAT. NO.: 72000022500 600KW, 750RPM, 6.6KV, I.D. FAN MOTOR WITH RESIN RICH STATOR WINDINGS & WITH ANTI-FRICTION SUPPORT BEARINGS, AS A ONE-TO-ONE REPLACEMENT OF THE EXISTING RUSSIAN MAKE 400KW, 600RPM, 6.6KV I. D. FAN MOTOR OF TPP BOILERS.	04 Nos.				

SPECIFICATION SHEET

600KW (APPROX.), 750RPM (APPROX.), 6.6KV, USSR MAKE I. D. FAN MOTOR WITH ANTI-FRICTION SUPPORT BEARING.

1. Motor should correspond with present technical specification and standards of Russia.
2. Rated data:

- Output	KW	600 (approx.)
- Voltage	V	6600
- Electric current frequency	Hz	50
- Synchronous rotation speed	rpm	750 (approx.)
- Stator current	A	50 (approx)
- Efficiency	%	94.3
- Power factor		0.83 (approx)
- Mmax / Mnom		2.4
- Ms(s=1) / Mnom		1.0
- Iki / Inom		6.0
- Operating mode-continious		S1
- The most bearable flywheel Moment of the mechanism	Kg. m.sq.	6000

3. Protection grade IP55
4. Cooling method ICO161
5. Details of the connected drive
 - GD^2 of the I. D. Fan drive Kg. m.sq 6000
 - Original power requirement 400kw at 600rpm
 - Method of coupling pin bush type
6. Ambient surroundings non-flammable, inexplosive, containing aggressive gas and steam in concentration corresponding with atmosphere type II according to GOST 15150-69.
7. Embodiment 1M1101
Connection scheme of stator winding--star.
Disposition of Phase Separated Terminal Box (PSTB) is on both the sides of the motor, if looked from operating end of the shaft, and complete interchangeability of connections for either side is to be ensured. This means there will be two (2) PSTB's (one each on either side of the motor), any one of which will be turned into a Star Point by means of external connection.
8. Motors should allow direct-on-line start from switching on both into circuit from full load current and with lowering of circuit voltage to 0.8 Unom.
Motor should allow 2 starts one by one from cold condition or one start after continuous operating of the motor under load.
9. Insulation materials of stator winding-class F.
10. Motor should be with anti-friction support bearings.
11. The original motor (400KW, 600RPM,) is to be replaced by the proposed motor (600KW approx, 750RPM (approx.), other details as given above), so that the proposed motor will adequately take up the full load of the connected drive with full damper opening.
12. The motor should be bi-directional.
13. The general arrangement drawing of the existing Russian make motor will be provided.
14. The foundation frame size of new ID Fan supplied motors must exactly math with that of the foundation frame size of existing motors without the use of any base plate, either intrinsic or external.

Specification of existing ID FAN motor of 400 KW, 10 Pole, 6.6 KV, Russian make with pedestal mounted bearings :

Russian motor frame	:	DAZO 1708 10T
Output	:	400 KW
Voltage	:	6600 V
Frequency	:	50 Hz
Speed	:	600 RPM
Stator current	:	44 A
Efficiency	:	94.3%
Power factor	:	0.83
M max / M nom	:	2.4
M s / M nom	:	1.0
I ki / I nom	:	6.0
Duty	:	S1
The most bearable flywheel moment of mechanism	:	6000 Kg M Sq.
Protection	:	IP54
Cooling	:	IC0161
Direction of Rotation	:	The motor should be bi-directional.
Embodiment	:	1M1101
Connection scheme of stator winding	:	Star
Disposition of terminal box is on the right side of motor, if looked from operating end of the shaft.		