

FAN MANUFACTURERS CLUSTER FOUNDATION OF KOLKATA
Govt. Regd. No. U31103WB2010NPL142931 2009-2010
264, H. L. Sarkar Road (Farm), Bansdrone, Kolkata - 700 070

TENDER DOCUMENTS

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF THE MACHINERY AND
EQUIPMENT**

FOR

**COMMON FACILITY CENTRE(CFC) OF FAN MANUFACTURING CLUSTER AT BANSDRONI,
KOLKATA**

Consultant

WEBCON CONSULTING (INDIA) LIMITED

Arya Mansion, 6A, Raja SubodhMullick Square, 3rd floor, Kolkata – 700 013.

NIT No. CFC / FMCFK / 2013-14 / 04 dated 7.12.2013

December, 2013

FAN MANUFACTURERS CLUSTER FOUNDATION OF KOLKATA
Govt. Regd. No. U31103WB2010NPL142931 2009-2010
264, H. L. Sarkar Road (Farm), Bansdrone, Kolkata – 700 070

CONTENTS

- 1. TENDER NOTICE**
- 2. INSTRUCTION TO TENDERERS**
- 3. TERMS AND CONDITIONS OF CONTRACT**
- 4. SPECIAL CONDITIONS OF CONTRACT (SCC)**
- 5. LIST OF MACHINERY FOR CFC OF FAN MANUFACTURING CLUSTER(ANNEXURE-A)**
- 6. FORMS OF SECURITIES**
- 7. *FORM OF TENDER*(ANNEXURE-B)**
- 8. ARTICLES OF AGREEMENT(ANNEXURE-C)**
- 9. LETTER OF ACCEPTANCE(ANNEXURE-D)**
- 10. ISSUE OF NOTICE TO PROCEED WITH THE WORK(ANNEXURE E)**
- 11. FORMAT OF BANK GUARANTEE FOR SECURITY DEPOSIT (ANNEXURE-F)**

NOTICE INVITING TENDER

NIT No. CFC / FMCFK / 2013-14 / 04 dated 03.12.2013

Sealed tenders are invited by the Director, Fan Manufacturers Cluster Foundation of Kolkata(FMCFK) from bonafide OEM/ Authorised Dealers for “Supply, Installation, Testing and Commissioning of the machinery and equipment for Common Facility Centre(CFC) of Fan Manufacturing Cluster at 264, H. L. Sarkar Road (Farm), Bansdroni, Kolkata – 700 070,”(hereinafter termed as ‘Purchaser’), as per specification given in the Annexure annexed to the Tender hereto. The Tender Document may be purchased from the Office of the General Manager, District Industries Centre, 11A & B Esplanade East, Kolkata-700 069 in between 7.12.2013 and 30.12.2013. Tender document and other details may also be downloaded from the websites www.mssewb.org or www.wbseps.com

The salient features of the tender are furnished below:

Earnest Money Deposit: 2% (Two Percent) of Bid Value.

Time Period for Supply : Two (2) months.

Cost of tender document: Rs.500.00 (Rupees Five Hundred Only),

Sale of tender document: From 7.12.2013 to 30.12.2013 (during office hours). Sale will be closed on
30.12.2013 at 2.00pm

Tender submission date & time : upto 30.12.2013 at 3pm

Tender purchase & submission place : Office of The General Manager, District Industries Centre, 11A & B Esplanade East, Kolkata-700 069.

Other relevant data/information will be available in the tender document. Tender documents may be downloaded from the websites www.mssewb.org or www.wbseps.com during the said period by the interested tenderers on payment of said amount towards the cost of tender document in the form of an A/c Payee Demand Draft payable in favour of “Fan Manufacturers Cluster Foundation of Kolkata” and payable at “Kolkata” on or before the date of submission of tender. Conditions of tendering shall be available in the tender document. The Purchaser reserves the right to reject any or all the tenders and split the work among the bidders without assigning any reason whatsoever. The Purchaser also does not bind itself to accept the lowest offer. All other details may be had from the office of District Industries Centre, Kolkata or WEBCON, Arya Mansion, 6A Raja Subodh Mullick Square(3rd. Fl.), Kolkata-700 013.

Director
Fan Manufacturers Cluster Foundation of Kolkata
Bansdroni, Kolkata.

TENDER BRIEF

FAN MANUFACTURERS CLUSTER FOUNDATION OF KOLKATA (FMCFK)

Govt. Regd. No. U31103WB2010NPL142931 2009-2010

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF THE MACHINERY AND EQUIPMENT

FOR

**COMMON FACILITY CENTRE(CFC) OF FAN MANUFACTURING CLUSTER AT BANSDRONI,
KOLKATA**

SCOPE OF WORK	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF THE MACHINERY AND EQUIPMENT FOR COMMON FACILITY CENTRE(CFC) OF FAN MANUFACTURING CLUSTER AT BANSDRONI, KOLKATA.
PERIOD OF SALE OF TENDER DOCUMENT	From 7.12.2013 to 30.12.2013 (during office hours) at the Office of District Industries Centre(DIC), 11A & B Esplanade East , Kolkata- 700 069. Sale will be closed on 30.12.2013 at 2.00pm
LAST DATE AND TIME FOR SUBMISSION OF TENDER	30.12.2013 upto 3 pm at the Office of The General Manager, District Industries Centre, 11A & B, Esplanade East, Kolkata- 700 069(Ph: 033 22486343)
DATE AND TIME FOR OPENING OF TENDER	30.12.2013 at 4 pm at the Office of The General Manager, District Industries Centre, 11A & B, Esplanade East, Kolkata- 700 069(Ph: 033 22486343)
PLACE OF SUBMISSION & OPENING OF TENDER	Office of The General Manager, District Industries Centre, 11A & B, Esplanade East, Kolkata- 700 069 (Ph: 033 22486343)
REQUIREMENT OF THE VARIOUS ITEMS	Given in Annexure A

A. INSTRUCTIONS TO TENDERERS

1. The bidders are requested to read the tender document carefully and ensure compliance with all instructions herein. Non-compliance with instructions in this document will disqualify the bidders from the tender process.

B. GENERAL TERMS AND CONDITIONS:

Bidder must provide the following information alongwith the Technical Bid:

- a) Technical capability to manufacture/supply such machinery & equipment/ instruments as mentioned in Annexure-I within a period of 60 days. A copy confirming the terms of supply should be included.
 - b) Proof of supply of similar items in the last three years.
 - c) Copies of Sales Tax, VAT, ST registration, PAN Card and other statutory clearances for the last 3 (three) years.
 - d) Manufacturer's technical leaflet, catalogue, operation and maintenance manual wherever applicable, should invariably be enclosed.
 - e). Copy of ISO 9001:2008, 14001 Certificates, if any.
 - f) Up-to-date Sales Tax/VAT Clearance Certificate.
 - g) Audited Balance Sheet for last three years.
 - h) Details and nature of maximum warranty period offered by the vendor.
 - i) Certificate from OEMs on the offered products in case the vendor is a dealer
2. The concerned authority reserves the right to verify information submitted and inspect the manufacturer's facilities, if required, to confirm their capabilities.
 3. The concerned authority reserves the right to change the quantity (upward/downward) to be tendered and vendor must have the ability to supply additional quantity, if any, within the validity of the quotation period.
 4. Decision of the Purchase Committee as constituted by the competent authority of the Directorate of M&SSE, Govt. of West Bengal on any matter regarding short listing of vendors shall be final and any applicant shall not enter into any correspondence with the SPV. No Bid/enquiry on telephone will be entertained. However, the hard copy of the Bid paper with necessary documents should reach the Purchaser within stipulated date.
 5. Vendor would be qualified based on data and documents provided by them and also based on information available with the Purchaser with regard to vendor's credential.

6. Unless otherwise specifically mentioned in this tender document, the general terms and conditions of the Purchaser for submission of quotation for supply of stores will be applicable.
7. The price bids of only those vendors shall be opened whose technical bids are found qualified.
8. THIS IS AN OPEN-BID SYSTEM. BIDDERS/VENDORS ARE PERMITTED TO ATTEND THE TECHNICAL BID/PRICE BID MEETING SUBJECT TO PRODUCTIONS/SUBMISSION OF LETTER OF AUTHORITY. NO SEPARATE LETTER WILL BE ISSUED IN THIS RESPECT. NO TA/DA WOULD BE ADMISSIBLE.
9. In case of dispute, the matter shall be settled mutually, failing which the decision of the Purchaser shall be final and binding.

C. SPECIAL CONDITIONS

1. No payment shall be made for any damage caused by rain, flood, earthquake or any other natural causes or any force majeure conditions whatsoever during the execution of work. The damages to the items supplied will be made good by the Manufacturer at his own cost and no claim on this account shall be entertained.
2. The Manufacturer shall at his own cost arrange for necessary licenses/permissions/clearances, etc. required to import, if any, the material for completion of work within stipulated period.
3. If the material or finished work is not found acceptable, the Manufacturer/supplier shall arrange for the replacement of material required for re-executing the work as per contract.
4. The rate quoted shall be inclusive of all taxes and duties, import levies, freight forwarding, insurance and loading / unloading charges / expenditure on the requisite approvals/quality assurance tests/certification/freight and insurance and installation & commissioning of the machinery to be carried at the CFC location.
5. The warranty period will be 12(twelve) months from the date of installation, commissioning or 18(Eighteen) months from the date of despatch, whichever is earlier and recording of completion certificate by Purchaser. During warranty period any defects, if found, in the items supplied / installed, it will be the responsibility of the Manufacturer/supplier/dealer to rectify the same as per the requirement at his own cost.
6. All work must conform to standard specification.

7. The delivery of each equipment/instrument should accompany a test certificate from the OEM.
8. Inspection/testing of the machinery will be held at the CFC premises.
9. All civil/structural works pertaining to installation of the machine (like construction of machine foundation/base, pedestal, foundation bolts, base plates , grouting etc.) will be done by the supplier. The quoted price should be inclusive of such works.

D. TENDER SUBMISSION

The tender papers following two –Bid System (Technical Bid-A and Financial Bid-B)can be submitted on all working days (except holidays) during office hours either by Speed Post/Registered Post addressed to the Office of the General Manager, District Industries Centre, 11A & B Esplanade East, Kolkata-700 069 or by dropping those in the Tender box within the stipulated period as would be kept in the above mentioned office address. In the event of this day being declared as a holiday, the tender papers can be submitted up to the above-mentioned time on the next working day.

The envelope should be super-scribed with ‘TENDER FOR MACHINERY & EQUIPMENT FOR THE COMMON FACILITY CENTRE’ of Fan Manufactures Clusters Foundation of Kolkata, Kolkata, West Bengal” The tender should be submitted in a proper manner with index for easy identification.

GUIDELINES FOR SUBMISSION OF TENDER PAPERS

Envelope with superscription as Envelope-A should contain the Technical Bid and Tender Fee (if downloaded from the website). (If purchased, to enclose the original receipt of the Tender purchase fee). Tender Fee or the receipt copy should not be enclosed in Envelope-B.

Envelope with superscription as Envelope-B should contain the Price Bid and the EMD. No EMD should be enclosed in the Envelope-A with Technical Bid.

Both the Envelopes A& B are to be put together in a bigger envelope and to be super-scribed with “TENDER FOR MCHINERY& EQUIPMENT FOR COMMON FACILITY CENTRE of Fan Manufactures Cluster Foundation of Kolkata. No other form will be accepted.

Earnest Money Deposit (EMD) – Along with their bids the Bidders are required to submit an EMD amounting to 2% (Two Percent) of the Bid value in the form of an A/c Payee Demand Draft or pay order or banker’s cheque drawn in favour of “Fan Manufactures Cluster Foundation of Kolkata”, and payable at any nationalized bank at Kolkata. Any tender without demand draft for EMD will be **DISQUALIFIED** and **REJECTED** and **price bid will not be** considered. Photo/Fax copies of the demand draft will not be accepted.

In case the bidder/s are registered with the Central Purchase Organisation, National Small Industries Corporation(NSIC), the EMD may be exempted as per Govt. norms. In that case the bidder has to submit copy of valid registration copy along with the Technical Bid.

The EMD normally remains valid for a period of forty five days beyond the final bid validity period.

Return of EMD

- The earnest money of unsuccessful bidders will be returned to them without any interest within thirty (30)days after awarding the contract and on receipt of written request from the bidders.

Forfeiture of EMD

After receiving the Purchase Order, if the OEM/Authorised Distributors is unable to execute it satisfactorily, the EMD will be forfeited and Fan Manufactures Clusters Foundation of Kolkata,will be constrained to take necessary action against the agency. The EMD is to be submitted alongwith the Technical Bid. Bid without EMD shall be disqualified and summarily rejected.

Security Deposit

The successful bidder of the contract will have to deposit a security deposit of 5% (Five Percent) of the total Bid Value in the form of Account Payee Demand Draft, drawn in favour of "Fan Manufactures Cluster Foundation of Kolkata", or in the form of a Bank Guarantee on or before the day of allotment.

Performance security should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations.

The bid security deposit will be refunded without interest to the successful bidder on receipt of Performance Security.

Performance security will be forfeited in the event of breach of contractual obligations by the supplier.

Opening of the Tender

The offer/bid will be opened by a Committee as constituted by the Competent authority of Directorate of MSSE, Govt. of West Bengal for the purpose at the pre-defined place, time and date in the presence of such Bidder(s) and/or their authorized representatives. The bigger envelope (containing the Technical Bid and Price Bid)will be opened first.

In the event of the following, the Technical Bids will summarily be rejected.

- a) EMD is found invalid and unacceptable after opening of the Price Bid, and/or
- b) EMD amount is mentioned anywhere in the Technical Bid.

The Committee will examine the Technical Bids and decide the suitability as per the specification and requirements and also fulfillment of qualification criteria.

Qualification Criteria of the Bidder

- The bidders are to enclose list of similar supplies.
- The bidders having own manufacturing units/infrastructure should have executed/completed the works of similar nature. Supporting documents must be attached with the Technical Bid.
- The bidders must not be blacklisted anywhere in India or abroad by any organization whatsoever. A certificate or undertaking to this effect must be submitted with the Technical Bid.
- The average annual turnover of the bidder during the last three years should not be less than 10(Ten) times of the quoted values of the equipment/ machinery quoted.
- The firm should provide Solvency Certificate from any nationalized Bank to the extent of 2(Two) times the value of the Quoted amount.
- The firm should not have incurred any loss in more than two years during last three years ending as on 31st March, 2013.
- Each tenderer shall submit only one tender. A tenderer who submits or participates in more than one tender will cause all the proposals with the Tenderer's participation to be disqualified.
- The job should not be subletted without prior approval of the Purchaser.

Late Offer

The Bids/Tenders received after the due date and time will not be considered and the same will be returned unopened to the address of the Bidder.

Completion Period

Supply of all the machineries and equipment (as per tender document) and subsequent commissioning and installation of the same is to be done at the site of the concerned CFC within 60days from the date of issue of Purchase Order.

Validity period of Offer

The Technical Bid and the Price Bid validity should be for a minimum period of 120 days. The Bidders should be ready to extend the validity, if required.

Price :The price should be quoted in Indian Rupees only.

Taxes and duties: If applicable, to be clearly mentioned.

Note: The Purchaser will not provide any C or D Form.

Freight &Insurance: The quoted price of all the items should be inclusive of freight and insurance charges to be delivered at the site of the CFC of the cluster.

Failure of Order Execution: If a successful bidder after receiving the order fails to execute the order within the stipulated period or does not fulfill any of the terms and conditions in any respect, the Purchaser reserves the right to cancel the order unilaterally.

Warranty Declaration:

- Bidders must give the comprehensive on-site **one year** warranty from the date of installation of all items against any manufacturing defects and also give the warranty declaration that everything to be supplied by them hereunder shall be free from all defects and faults in materials, workmanship and shall be of the highest quality and materials of the type ordered, shall be in full conformity with the specification.
- Any item with deviation in the material and the specifications from the accepted terms may be liable to be rejected and the bidder need to supply all the goods in the specified form to the satisfaction/specifications specified in the order/contract and demonstrate at their own cost. The payments shall be made only after receiving the materials in the required format and quality to the satisfaction of the concerned authorities.

Payment terms

Payment will be made within 45(Forty Five) days from the date of successful installation/commissioning of the machinery and related items as quoted in tenders.

Ordinarily payments for the supplies made will be released only after the supplies have been made. However, efforts will be made to make advance payment, not exceeding 30% of bid value against equivalent amount of Bank Guarantee from any scheduled-A bank.

Right of the Purchaser

The Purchaser, Fan Manufactures Clusters Foundation of Kolkata, Kolkata, West Bengal” reserves the right to suspend the Tender process or part of the process, to accept or reject any or all the tenders at any stage of the process and/or to modify the process or any part thereof at any time without assigning any reasons thereto is reserved by the concerned authorities without any obligation or liability whatsoever.

The Purchase Committee reserves the right to make negotiation, if required any, and to work out splitting of the job amongst the successful interested Bidders with a view to completion of the job within the time limit.

Disputes and Jurisdiction

Any legal disputes arising out of any breach of contract pertaining to the whole process of this Tender shall be settled in the Court of Competent Jurisdiction in Kolkata in the State of West Bengal.

LIST OF MACHINERY FOR CFC OF FAN MANUFACTURING CLUSTER

Sl. No.	Item	Specifications	Scope	Qty (No)
Air Delivery testing				
1	Design , fabrication & Installation of Air Delivery Chamber, for ceiling fan Table fan, Wall fan Pedestal fan & Railway Carriage fan including Accessories/raw materials under air delivery chamber of Ceiling Fan	As per Is 374: 1979&As per IS 555 &IS 6680 under the same air delivery chamber(TPW fan)	Air delivery testing of ceiling fan, table fan, Pedestal fan, wall fan cabin fan and railway carriage fan	1 set
2	Design & Installation of various types of Duct required for Propeller Fan	As per IS 2312 from sweep of 230mm,300mm,380mm,450mm and 600mm	Air delivery testing of ventilating/exhaust fan	5 set
3	Rail & Carriage for Testing of Other Type of Fans	As per IS 2997: 1964,for air circulator As per IS 6272:1987 for industrial cooling fan	Air delivery testing of air circulator & industrial cooling fan	1 set
4	Barometer with accessories		Measuring Atmos. pressure	1 set
Testing of service wires, regulators, moistures, mechanical strength of down rods etc.				
5	Cord Grip Tester for Table Fans	As per IS 555:1979	For ensuring rigidity connection of service chord/wire	1 set
6	Accessibility Test Probes for Resistance to Electric Shock Test (consisting of Flexible Test Finger, Rigid Test Finger, Test Pin and Low Voltage Panel)	As per IS 374 As per IS 555:1979 As per IS 302	To measure and protect electric shock from live accessories	1 set
7	Humidity Chamber for Moisture Resistance Test, with heating, size: 45cm x 45cm x 45cm	As per IS 374: 1978and IS 555: 1979 IS 2312: 1967	To check the moisture	1 set
8	Mechanical Endurance Tester for Push Button type switch(Speed Regulators)	IS 555: 1979	Mechanical Endurance test of TPW switch	1 set
9	Mechanical Endurance Tester for Rotary type Speed Regulators	As per IS 374: 1979 IS 6680: 1992 IS 2312: 1967	Mechanical Endurance test of ceiling/ railway ventilating fan switch	1 set
10	Pendulum Impact Tester (for Mechanical Strength Test)	As per IS 374: 1979	To check mechanical strength of regulator	1 set
11	Tensile Tester for Suspension Rods of Ceiling Fan-Digital Electric Operated Model	As per IS 374: 1979 Capa: 2000kg	To check tensile strength of down rod	1 set

Sl. No.	Item	Specifications	Scope	Qty (No)
12	Torsion Tester for Suspension Rods of Ceiling Fan - Digital Electric Operated Model	As per IS 374: 1979 Capa: 500kg	To check torsion of down rod	1 set
13	Dynamic Balancing & Instrumentation		Balance Checking	1 no.
Testing of Insulation resistance, leakage current, high voltage etc of wound stator				
14	Insulation Resistance Tester	As per IS 374: 1979, 6272 IS 555: 1979, IS 6680: 1992 IS 2312: 1967	To measure insulation resistance	1 set
15	Test Bench for single phase(power analyser) for fan motor	Single phase integrated tri vector meter	performance parameter checking	1 set
16	Test bench for 3 phase(power analyser) fan motor Panel	3 phase integrated tri vector meter	performance parameter checking	
17	Leakage Current Tester	As per IS 374: 1979,6272 IS 555: 1979, IS 6680: 1992 IS 2312: 1967	Leakage current testing	1 set
18	AC High Voltage Test Set 0-5 KV	As per IS 374: 1979 ,6272, IS 555: 1979, IS 6680: 1992 and IS 2312: 1967	High voltage testing	1 set
19	Sequential Analyser	Resistance check Winding resistance range(0-1999 ohm) DC insulation resistance check Test voltage : 500V DC Insulation Resistance: 0-200M Ohms High voltage Flash Test Test voltage: 0-2.5KV AC Over Trip Leakage Current: 0.1mA -10mA	Checking of wound stator parameters	1 set
20	Surge Tester	Test Voltage : 0-3KV Pulse Currentb 180Amp.(Max.) Pulse Energy: 0.36J (Max.) Display For Wave pattern: Cathode Ray Tube Screen size: 100mm X80mm CRT 375Vd/iv and 750V/div Operating Voltage: 230V+/-10% at 50Hz.	Comparison of wave pattern of wound stator	1 set
21	Test Jig Fixture with a dust free rack enclosure	A test jig fixture with double work station facility as an accessory with sequential analyser housed in dust free rack mounted enclosure. Suggested Dimension: 550(Width)X 1700(Height)X 650(Depth)(Approx.)	Supporting tools of wound stator	
Common processing				
22	CNC Programmable Fully Automatic Dual Head Ceiling Fan Stator Winding Machine	Stator OD: 120mm- 160mm Stack height: 10.00mm-25mm No. of Poles: 8-18 poles Winding speed: 3600RPM(Max.)	Ceiling fan Stator winding of bottom and top slot(Main & aux.) winding	1 Set

Sl. No.	Item	Specifications	Scope	Qty (No)
23	Paper Insertion (Slot Insertion) Machine for CNC Programmable Fully Automatic Dual Head Ceiling Fan Stator Winding Machine	Stator OD: 120mm- 160mm Stack height: 10.00mm-40mm No. of Slot : 8-18 slots	Insertion of polyester paper inside the stator slot (bottom and top slot(Main & aux.)winding	1 Set
24	Paper Insertion (Wedge Insertion) Machine for CNC Programmable Fully Automatic Dual Head Ceiling Fan Stator Winding Machine	Stator OD: 120mm- 160mm Stack height: 10.00mm-40mm No. of Slot : 8-18 slots	Insertion of polyester wedge inside the stator slot(bottom and top slot(Main & aux.)winding	1 Set
25	CNC Turning Center including attachments & accessories	Capacity: Swing over bed – 500mm min. Admit between Centres-400mm min Turning Dia-300mm min Chuck Dia 200mm min Chuck with suitable cylinder to be supplied as hollow Spindle: Type-A2-6 Bar capacity -42 mm min. Motor Power 7/10.5 KW Spindle Speed- 3500rpm Feed System : (i) X & Z axis 30,000/min. Guideways Linear Motion Stroke : (i) X axis-180mm min (ii) Z axis 370mm min Turret: Actuation-Hydraulic Indexing system- Bi directional hydraulic No. of stations-8 nos. Tool Shank Size- 25X25 mm Boring Capa- 32mm min. Tailstock: Quil Bore MT 4 Controller: Siemens 828D or Fanuc Oi Mate MD Accuracy: (JIS) standard-10 microns min (Essential accessory: 1 no. of servo controlled stabilizer suitable for above)	Machining of components like covers of ceiling fan, rotor of ceiling and Table, pedestal and wall fan	1 no.
26	Fully Automatic Table Fan Coil Winding Machine	Winding of coil for Table , Wall mounted, Pedestal Fan	Winding of coil	1 set
27	Fully Automatic Insulation Paper Inserting Machine	Paper insertion for Table , Wall mounted, Pedestal Fan	Paper insertion	1 set
28	Automatic Coil Inserting Machine (with 1 Set Tooling)	Coil insertion for Table , Wall mounted, Pedestal Fan	Coil insertion	1 set
29	Coil Pre-Shaping Machine	Pre-Shaping for Table , Wall mounted, Pedestal Fan	Pre-Shaping	1 set
30	Coil Final Shaping Machine	Final Shaping for Table , Wall mounted, Pedestal Fan	Final Shaping	1 set

Sl. No.	Item	Specifications	Scope	Qty (No)
Testing of Capacitance, current, temperature, speed, frequency, resistance voltage, power factor, air velocity etc. (As per IS: 555:1979, IS 374:1979, IS 2312: 1967 and IS6272:1987)				
31	Digital Capacitance Meter	Range- 0-20mF, Accuracy:+-0.5%	Capacitance value	1 no.
32	Digital Clamp Tester	Clamp jaw size: 30mm,Dc/AC 0-400m voltage accuracy-, AC current accuracy 0-40A, continuity: $\leq 70\Omega$	Diode & continuity test	1 no.
33	Digital Thermometer	Range:-40 ⁰ C to 250 ⁰ C	Ambient Temp.	1 no.
34	Digital Infrared Thermometer	Range: -30 ⁰ C to + 260 ⁰ C	Temperature of fan body	1 no.
35	Digital Thermo / Hygro Meter	-50 ⁰ C to + 70 ⁰ C & 20% to 99% RH	Measuring humidity	1 no.
36	Digital Sound Level Meter	Range 30 to 130dB	Measuring Sound level	1 no.
37	Digital Tachometer	RPM: 2 to 99,9999	Speed measurement	1 no.
38	Analog Tachometer	RPM: 0 to 10,000	Speed measurement	1 no.
39	Digital Vibration Meter	0.1 to 99.9 mm/s RMS	Vibration of motor	1 no.
40	Digital Panel Mounting Voltmeter	0-500V,AC,	Voltage measuring	1 no.
41	Digital Panel Mounting Ammeter	0-2 Amp & 0-5 Amp	Current measuring	1 no.
42	Digital Frequency Meter	Upto 99.99Hz, 48x96mm	Frequency measuring	1 no.
43	Digital Voltmeter	0-500V,AC, 48mmx96mm	Capacitance VC Measuring	1 no.
44	Digital Ammeter	0-1 Amp & 0-5 Amps, 96mmx96mm	Current measuring	1 no.
45	Digital Power Factor Meter	Single Phase 5Amp/230V, 0.1 lag,1.01lead, 48mmx96mm,	Power factor measuring	1 no.
46	Digital Wattmeter	Single phase 1amp, 30V	Power measuring	2 nos.
47	Earthing Connection tester		Measuring resistance value	1 no.
48	Digital Anemometer with non metal vane	70mm dia	Air Velocity measuring	1 no.
49	Analog Anemometer with metal vane	100mm dia	Air Velocity measuring	1 no.
Material composition analysis for copper, aluminum, stampings etc.				
50	Atomic Absorption Spectrophotometer with integrated Flame and Graphite Furnace and Auto Sampler including Microwave Digestion System	Grating lines with1800 lines/nm Variable slit 0.1nm – 2.0nm Wavelength range: 190-900nm Reciprocal linear dispersion less than 1.6nm/mm	Material composition analysis	1 nos.
Dimension checking of components			Dimension checking of components	
51	Digimatic caliper	0-200mm		1set
52	Height Guage	0-300mm		1set
53	Vernier caliper	0-200mm		1set
54	Vernier caliper	0-300mm		1set
55	Outside micrometer	0-25 mm LC: 0.001		1set
56	Digimatic Outside micrometer	0-25 mm LC: 0.001		1set
57	Outside micrometer	25-50mm LC : 0.001		1set

Sl. No.	Item	Specifications	Scope	Qty (No)
58	Outside micrometer	50-75mm LC : 0.001	Dimension checking of components	1set
59	Outside micrometer	75-100 mm LC : 0.001		1set
60	Outside micrometer	125-150 mm LC : 0.001		1set
61	Outside micrometer	150mm-175mm LC: 0.001		1set
62	Bore Guage set	10-18.5 mm – 0.001mm		1set
63	Bevel protector			1set
64	Dial indicator with stand	0.001mm		1set
65	Slip Guage set	0 grade - 112		1set
Testing devices of super enameled copper wire				
66	Elongation tester	IS: 13730 Pt. 0 Section I -1993	Elongation testing of copper wire	1set
67	Springiness Tester	IS: 13730 Pt. 0 Section I -1993	Springiness of wire	1set
68	Pin hole tester	IS 13730 Pt 0 Section 1 1993	Continuity of Covering	1set
69	Cut through testing machine	IS 13778 Pt 6 1993	Cut through	1set
70	Motor driven twisting machine		Twisting of wire for BDV test	1set
Testing of paints				
71	B ford cup	No.4	Viscosity measure of paints / vernishes	1set
72	Cross cut roller		Checking of paints' adhesive strength	1set
73	Digital pH Meter	Range:0.00 to14.00, resolution 0.01 relative accuracy(+/-)0.01	pH value of water and pretreatment chemicals	1set
Air gauges, slip rings etc.				
74	Dial type C Jet air Guage	LC: 0.001mm ; total range +/- 0.040 nm	Journal dia of ceiling fan shaft 6202 size	1set
75	2 Jets corner jets air ring	Size: 15mm- 0.008mm/ 0.015	To check an OD	1set
76	Double ended setting plug		For air ring	1set
77	Dial type C Jet air Guage	LC: 0.001mm ; total range +/- 0.040 nm	Journal dia of ceiling fan shaft 6201 size	1set
78	2 Jets corner jets air ring	Size: 12mm- 0.008mm/ 0.015	To check an OD	1set
79	Double ended setting plug		For above air ring	1set
80	Dial Type C-Jet Air Gauge Unit	Least count: 0.001mm, Total range: ±0.040mm	Housing, cf cover-112	1set
81	2 jets Air Plug	Size: 32 mm +0.003mm / - 0.013mm (Depth of gauging: 11mm approx)	To check an id	1set
82	Hi & Low Setting Rings		For air plug	1set
83	Dial Type C-Jet Air Gauge	Least count: 0.001mm, Total range: ±0.040mm	Housing, cf cover-115	1set
84	2 jets Air Plug	Size: 32 mm +0.003mm / - 0.013mm (Depth of gauging: 11mm approx)	To check an id	1set

Sl. No.	Item	Specifications	Scope	Qty (No)
85	Hi & Low Setting Rings		For air plug	1set
86	Dial Type C-Jet Air Gauge	Least count: 0.001mm, Total range: ±0.040mm	Table fan shaft	1set
87	Air ring 3 Jets, Middle Jets	9.522mm Ø to 9.512mm Ø	To check an od:	1set
88	Double ended setting plug		For above air ring.	1set
89	Air compressor	4-10Kg	To operate air gauge & pneumatic device	1set
Break down voltage, current power factor, frequency measuring				
90	Single Phase high Voltage Break down Tester	Single phase, , 50Hz., Input-230V ,Output- 0-2.5 to 5KV, Output Current 50mAmp	Measurement of BDV, current, Voltage, power factor, frequency etc of fan to comply standard parameters	1set
91	Servo controlled automatic Voltage Stabiliser	Single phase, 50Hz. Input 160-260V Output 2230V +/- 1%, Capacity1KVA		1set
92	Portable Precision Grade Dynamometer type AC Voltmeter	Accuracy class +/- 0.5% of FSD, Range 0-150-300V		1set
93	Portable Precision Grade Dynamometer type AC Ammeter	Accuracy class +/- 0.5% of FSD, Range 0-0.5/1Amp		1set
94	Portable Precision Grade Dynamometer type AC Ammeter	Accuracy class +/- 0.5% of FSD, Range 0.0-1/5Amp		1set
95	Portable Precision Grade Dynamometer type single phase Wattmeter	Accuracy class +/- 0.5% of FSD, Range 0.5-1 Amp		1set
96	Portable Precision Grade Dynamometer type single phase Wattmeter	Accuracy class +/- 0.5% of FSD, Range 2.5/5Amp		1set
97	Portable Moving Coil Pointer type Frequency meter	Accuracy class +/- 0.5% of FSD, Input 230V		1set
98	Portable single phase power factor meter	Accuracy class +/- 2degree of FSD, Current 1Amp, 300V		1set
For meter calibration				
99	Multifunction Calibrators	(5.5 digit) Input power-230V, 50Hz. DC Voltage Range 200mV,2V,20V,200V,1000V AC Voltage Range (45 Hz. To 1000Hz.) DC Current Range: 2mA, 20mA,200mA,2A, 10A; Accuracy: DC Voltage: 0.10%, AC Voltage: 0.15%, DC Current 0.10 0.10%, AC Current 0.15%	For meter calibration	1 set

Sl. No.	Item	Specifications	Scope	Qty (No)
100	Decade Resistance Box	Decades of 1Ohm, 10Ohm, 100Ohm, 1kOhm, 10kOhm, 100kOhm, 1Mohm, 10MOhm, 100MOhm, Accuracy 1.0% for decades of 1Ohm and 100MOhms 0.25% for decades of 10Ohm, 10MOhm 0.1% for decades of 100Ohm, 1Kohm, 10kOhm, 100kOhm and 1MOhms	For meter calibration	1 no
101	Decade Capacitance Box	Decades of 1nF, 10nF, 100nF, 1MicroF, 10MicroF, Accuracy 2.50%		1 no
102	Decade Inductance Box	Decades of 10micro H to 1H, Accuracy 2.50%		1 no
103	AC/DC High Voltage Probe	Power 230V AC, 50Hz. Range 0to20KV AC and DC Attenuation Ratio: 1KV, 10mV Input Impedance > 100MOhms Accuracy KV: 1.0% of FS		1 no
104	6.5 Digit Precision Multimeter			1 no
Others				
105	Constant Voltage Constant Frequency Device	Input -230V , Output- 230V, 50Hz. + - 0.5% of rating of output voltage/freq.	For sourcing sourcing CV-CF	1 no
106	Watt Calibrators	Upto 10KW		1 no
107	Isolation Transformer	5KVA	For making 0 voltage	1 no

N.B.: 1. Supply of all the above items should be complete with all accessories and drive systems, if necessary.

2. Supply of all instruments should be accompanied with up-to-date calibration certificate from any NABL accredited laboratory/ institute.

FORMS OF SECURITIES

Annexure B

FORM OF TENDER

To

Sub: Supply, installation, testing and commissioning of the machines for CFC of Fan Manufacturing Cluster at Bansdroni, Kolkata.

Dear Sirs,

With reference to the tender invited, I / We have examined the Invitation Notice for Tender, Terms and Conditions, Articles of Agreement, Technical Specifications, List of machinery etc. for the above work, I/We hereby offer to supply, install, test and commission, the machine in conformity with the said work Invitation for Tender, Articles of Agreement, Technical Specifications, List of Machinery for the sum of Rs. ----- (Rupees -----).
-----).

I / We undertake to supply, install, test and commission, the machine for the above work comprised in the Contract within ----- calendar months from the date of issuing the LOI.

I/We have deposited towards earnest money a sum of Rs.----- (Rupees -----) which is not to bear any interest and I / We do hereby agree that the sum shall be forfeited by "Fan Manufacturers Cluster Foundation of Kolkata" in the event of our Tender is accepted, and I / We fail to execute the agreement when called upon to do so.

I / We hereby agree that unless and until the formal agreement is prepared and executed in accordance with the articles of agreement, this tender together with your written Letter of Intent thereof, shall constitute a binding Contract between us.

I / We hereby understand that you are not bound to accept the lowest or any tender you may receive and work may be divided into more than one tenderer at the discretion of the competent authority.

Yours faithfully

Signature:

Address:

Date:

Place:

ARTICLES OF AGREEMENT

PURCHASER : FAN MANUFACTURERS CLUSTER FOUNDATION OF KOLKATA
(Govt. Regd. No. U31103WB2010NPL142931 2009-2010)
264, H. L. Sarkar Road (Farm), Bansdrone, Kolkata – 700 070

PROJECT: Supply, install, test and commission the machines for CFC of Fan Cluster at Bansdrone,
Kolkata

TITLE OF CONTRACT: Supply, install, test and commission the machine and equipment for Fan
Manufacturing Cluster, Kolkata

This agreement, made the _____ day of _____ 2012 BETWEEN
Fan Manufacturers Cluster Foundation of Kolkata, (Govt. Regd. No. U31103WB2010NPL142931 2009-
2010)264, H. L. Sarkar Road (Farm), Bansdrone, Kolkata – 700 070 (hereinafter called the “Purchaser”
which term shall unless excluded by and repugnant to the context hereof include its executors,
administrators, successors and permitted assigns) of the **ONE PART** and M/s -----
----- having Registered Office at -----
-----and its local office at -----
----- (hereinafter referred to as
the “SUPPLIER/ CONTRACTOR” which term shall unless excluded by and repugnant to the context shall
mean and include its executors, administrators, successors and permitted assigns and heirs) of the
OTHER PART.

WHEREAS The Purchaser is desirous that certain WORK should be EXECUTED, viz. the “Supply,
installation, testing and commissioning the machine and equipment for Fan Manufacturing Cluster” in
connection with the Proposed work and has accepted a tender by the SUPPLIER/CONTRACTOR for the
supply/ installation and completion of such work, maintenance of such work till handing over to the
Purchaser (and/or till the end of the defect liability period)

AND WHEREAS the Purchaser by a Letter of Intent bearing no. ----- dated -----
----- advised the Supplier/Contractor of its intention to award supply, installation, testing and
commissioning of machinery/ equipment for CFC of Fan Cluster at Bansdrone, Kolkata for a sum of
Rs.----- (Rupees -----) only or
such other sum or sums as may be determined in accordance with the CONTRACT.

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this agreement, words and expression shall have the same meanings as are respectively assigned to them in the General and Special Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this agreement.

2. The following documents shall be deemed to form and be read and construed as part of this agreement, viz:

- a) Notice Inviting Tender (NIT) ,
- b) Instruction to Tenderers
- c) General Conditions of Contract (GCC)
- d) Special Conditions of Contract (SCC)
- e) Form of Tender
- f) Technical Specifications, etc.

3. In consideration of the payments to be made by the Purchaser to the Contractor for the supply and installation of the equipment and machinery to be executed by him, the Contractor hereby covenants with the Purchaser to execute and complete the WORK and maintain the WORKS in conformity in all respects with the provisions of the CONTRACT.

4. The Purchaser hereby covenants to pay Contractor in consideration of the execution and completion of the WORKS and maintenance of the WORKS in conformity and in all respects with the provisions of the CONTRACT, the CONTRACT Price at the times and in the manner prescribed by the CONTRACT.

IN WITNESS whereof the Parties have executed these presents on the day and the year first above written.

Signed, Sealed and Delivered
for and on behalf of the Purchaser

Signed, Sealed and Delivered
for and on behalf of the Contractor

Designation:

Designation:

Date:

Date:

Place:

Place:

In presence of

In presence of

(WITNESS)

(WITNESS)

1.

1.

2.

2.

Letter of Acceptance

(Letterhead paper of the Purchaser)

Ref. No.

Date:

To

(Name & Address of the Contractor)

Dear Sirs,

This is to notify you that your tender datedfor execution for supply, installation, testing and commissioning of machinery/ equipment for CFC of Fan Manufacturing Cluster at Bansdroni, Kolkata against NIT No. for the Contract Price of Rs.

..... (Rupees ----- only), is hereby accepted by us.

You are hereby requested to furnish Initial Security Deposit as per Conditions of Contract in the form of Bank Guarantee for an amount of Rs.(Rupees) within 15 (fifteen) days of receipt of this letter of acceptance and to sign the contract agreement, failing which action as stated vide clause no. ----- of Instructions to Tenderers will be taken.

Yours faithfully,

Authorized Signature

Name and Title of Signatory

Name of Corporation

Issue of Notice to proceed with the work

(letter head paper of the Purchaser)

Ref. No.

Date:

To

(Name & Address of the Contractor)

Dear Sirs,

Pursuant to your furnishing the requisite Initial Security Deposit as stipulated clause of Conditions of Contract and signing of the Contract Agreement for the execution of supply, installation, testing and commissioning of machinery/ equipment for CFC of Fan Manufacturing Cluster at Bansdroni, Kolkata against NIT No. @ a tender price Rs.----- (Rupees -----) , you are hereby instructed to proceed with the execution/ supply, installation, testing and commissioning of machinery/ equipment for CFC of Fan Manufacturing Cluster at Bansdroni, Kolkata in accordance with the contract documents.

Yours faithfully,

(Signature, Name and Title of
The Authorized Signatory to sign
On behalf of Purchaser)

FORMAT OF BANK GUARANTEE FOR SECURITY DEPOSIT

1. We ----- (hereinafter referred to as the Bank) at the request of ----- and address -----

hereinafter called the Contractor do hereby undertake to (hereinafter called the Purchaser) an amount not exceeding Rs. ----- (Rupees -----) only for any breach in successful completion of supply, install, testing and commissioning of machinery/ equipment for CFC of Fan Manufacturing Cluster at Bansdroni, Kolkata as per the agreement to be executed between the Purchaser and the Contractor.

2. We ----- (indicate name of Bank) do hereby undertake to pay the amount payable under this Guarantee without any demur, merely on a demand from the Purchaser stating that the amount claimed is due by way of loss or damage caused to or would do caused to or suffered by the Purchaser by reason of breach by the said contractor(s) of any of the terms and conditions contained in the said agreement relating to supply, install, testing and commissioning of machinery/ equipment for CFC of Fan Manufacturing Cluster at Bansdroni, Kolkata for any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. ----- (Rupees -----) only).

3. We undertake to pay to the Purchaser any money so demanded notwithstanding any dispute(s) raised by the Supplier(s)/Contractor(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be as valid discharge of our liability for payment thereunder the contractor(s) / supplier(s) shall have no claim against us for making such payment.

4. We, ----- further agree that the (indicate name of the Bank) Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Purchaser only relating to the work of supply, installation, testing and commissioning of machinery/ equipment for CFC of Fan Manufacturing Cluster at Bansdroni, Kolkata tender/offer under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged.

Unless a demand or claim under this guarantee is made on us in writing on or before -----, we shall be discharged from all liability under this guarantee thereafter.

4. We ----- (indicate name of the Bank) further agree with the Purchaser that the Purchaser shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by ----- the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Purchaser against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reasons of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the Purchaser or any indulgence by the Purchaser to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision have effect or so relieving us.
5. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s) / Supplier(s).
6. We ----- (Name of the Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Purchaser in writing.
7. This bank guarantee will remain valid for a period of 7 (seven) months, including 1 month of claim period, if arising out of any conditions mentioned herewith in this document.