

ITI LIMITED

BangalorePlant

(A Govt. of India Undertaking)

Dooravaninagar. P.O. Bengaluru – 560 016

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**ITI LIMITED, BANGALORE PLANT INVITES BID THROUGH
GEM FOR“PCB PLANT WETPROCESS -17 Machines (NON-
COMPREHENSIVE-LABOUR ONLY).”**

[Single Bid System]

ANNEXURE -I

List of CAPEX Wet Processing Machines for AMC in the PCB Plant

S.NO	P.O NO	P.O.DATE	DESCRIPTION
1	B824H002	17-03-2015	Post Hot Air Leveling Cleaning Machine
2	B824I004	17-03-2015	Chemical Precleaning & Mechanical Scrubbing Machine for PISM process
3	B824G006	14-03-2015	Dry film stripping machine
4	B824G007	14-03-2015	Dry film developing machine
5	B824G008	12-03-2015	Liquid PISM developing machine
6	B824H001	14-03-2015	Manual De Smearing Line
7	B825J002	21-04-2016	PLC Controlled Transporter to Manual Desmearing Line in PCB Plant
8	B824G005	14-03-2015	Chemical Precleaning& Mechanical Scrubbing Machine
9	B825C001	05-10-2015	Acid etch System for Multi Layer PCB
10	B825B002	11-07-2017	Lead Free HAL M/c For PCB Manufacturing
11	B825C002	11-11-2015	Dry Film laminator
12	B825E001	31-05-2016	Vacuum Packing Machine
13	B824H004	17-03-2015	Auto Sawing Machine
14	B824I002	25-06-2016	Mechanical Screen Stretching System
15	B825H001	26-04-2016	The Auto Stacker Machine For PCB's Application
16	B824H003	11-06-2015	Automatic Double side Pinning and Depinning Machine
17	B826B003	28-05-2016	CNC Jump Scoring

ANNEXURE -II

SCOPE OF WORK

ANNUAL MAINTENANCE CONTRACT (NON-COMPREHENSIVE) FOR CAPEX PCB MANUFACTURING MACHINES (WITH RELATED SYSTEMS) AT PCB PLANT, ITI LTD, BANGALORE COMPLEX.

1. PURPOSE

- 1.1 To carry out Preventive maintenance of Capex PCB manufacturing machines given in Annexure – I as per the respective machines maintenance manual. Periodical maintenance shall be carried out for each machine at regular intervals.
- 1.2 To carry out Breakdown Maintenance as and when required.
- 1.3 Periodic Validation of all machines in a staggered manner. Periodicity of validation of each machine will be once in a year.

2. SCOPE OF THE WORK FOR WET PROCESSING MACHINES FROM SL.NO-01 TO 09.

- 2.1. The scope of work includes Maintenance of Electrical & mechanical aspects such as Spray Pumps, Auto Dosing System, Conveyor Systems, Drier modules, Temperature Sensors, Pressure gauges, PLC systems, PLC controlled Transporter, Temperature Controllers, Vibrators, Electrical motors, Inter Lock systems etc.,
- 2.2. The Preventive maintenance to be carried out for all the machines such as cleaning of Spray Nozzles, Filters, Spray Chambers and Rinse Modules etc.,

3. SCOPE OF THE WORK FOR HOT AIR LEVELLING MACHINE COMPRISING OF PRE CLEANING & FLUXING SYSTEM SL. No-10

- 3.1 The scope of work includes Maintenance of Electrical & mechanical aspects such as Solder Pot heater, Air Heaters, Temperature Sensor for Solder Tank, Temperature Sensors for Air Heaters, Air Knives (Front & Rear), Air Knives adjustment, Pneumatics, Electrical circuits and Inter Lock systems etc.,
- 3.2 To check the Temperature Controller, Pinch clamp to hold the PCBs, Up/Down and Forward/ Backward movements operated by Pneumatic system, Dwell Time and Blow Off Time etc.,
- 3.3 The Preventive maintenance to be carried out for the Hot Air Leveling Solder Pot and Cleaning of Nozzles of Pre Cleaning & Fluxing system is as mentioned in equipment manuals.

4. SCOPE OF THE WORK FOR DRY FILM LAMINATOR SL.NO- 11

- 4.1 The scope of work includes Maintenance of Electrical & mechanical aspects such as Temperature Sensor, Heaters, Laminator Rollers, Pressure gauge, Conveyor etc.,
- 4.2 The Preventive maintenance to be carried out for the Dry Film Laminator.

5. SCOPE OF THE WORK FOR MACHINE SL.NO -12,14,15

- 5.1 The scope of work includes Maintenance of Electrical & mechanical aspects such as Heaters, Blower, Temperature Controller and Gear Motors.
- 5.2 Cleaning of the entire machines.

6. SCOPE OF THE WORK FOR AUTO SAWING MACHINE SL.NO -13

- 6.1 The scope of work includes Maintenance of Electrical & mechanical aspects such as Adjustment, Calibration.
- 6.2 Cleaning of the entire machine, oiling of the base tools and belts.
- 6.3 Lubrication and greasing.
- 6.4 Replacement of any defective/worn-out parts.
- 6.5 Checking all battery for required power, software malfunctioning.
- 6.6 Check the dust collector and ensure the smooth functioning of dust collector.

7. SCOPE OF THE WORK FOR AUTOMATIC DOUBLE SIDE PINNING AND DEPINNING MACHINE SL.NO -16

- 7.1 Cleaning the entire equipment.
- 7.2 Check the cylinder for any blockages of Pins.
- 7.3 Oiling for the Cylinder.

8. SCOPE OF THE WORK FOR CNC JUMP SCORING MACHINE SL.NO -17

The scope of work includes Maintenance of Electrical & mechanical aspects such as

- 8.1 Adjustment and Calibration.
- 8.2 Cleaning of the entire machine, the base tools, the gripper, clips, Air spindle, guide rods and Air filters.
- 8.3 Lubrication and greasing of axes' screws, Gripper guide rods and linear guides.
- 8.4 Replacement of any defective/worn-out parts, Air filters, if required.
- 8.5 Checking for any software malfunctioning.

8.6 Check the dust collector and ensure the smooth functioning of dust collector.

9. Any PVC / CPVC / PP welding required should be carried out where it is required. The Welding Torch and required tools to be arranged by the vendor.
10. The vendor should also verify for proper exhaust from each equipments so as to prevent fumes in the work area.
11. The Vendor should maintain all the necessary Manuals, Drawings, CDs, Software etc., pertaining to individual machines in order.
12. The Vendor should foresee the spares requirement and to co-ordinate with the concerned area Engineer-in-charge to procure the same.
13. The vendor should able to modify / alter the subsystem of the equipments in case of non availability of original spares / parts.

14. EXPERTISE REQUIRED:

- 14.1 The vendor should have very vast / wide experience in repair / maintenance of PCB wet processing equipments (References to be enclosed).
- 14.2 The Vendor should have thorough knowledge in Electrical & Mechanical aspects of the systems for effective maintenance.
- 14.3 The Vendor should have all the necessary tools & jigs require to carryout maintenance of wet processing systems.
- 14.4 The vendor should deploy minimum one personnel in ITI Ltd with electro-mechanical background to carry out the AMC without affecting the schedules.

15. CONTRACTUAL OBLIGATIONS:

- 15.1 This contract is valid for only one year from the date of placing purchase order.
- 15.2 Department reserve rights to terminate the contract any time with out giving any reasons.
- 15.3 The vendor should carry out preventive maintenance of all the listed machines strictly as per the schedule drawn by the Shop Manager.
- 15.4 The vendor should handle all the systems with care and should not damage / spoil the parts of the equipment during Preventive & Breakdown maintenance.
- 15.5 The vendor should ensure the intactness of all the listed machines without affecting the Quality of the product and affecting the production activities.
- 15.6 The vendor should ensure availability of the services through out the year during the working hours and if required during holidays also.
- 15.7 The vendor should attend to the Breakdown maintenance within 24 hrs as and when called for with out affecting the PCB production.

- 15.8 The vendor should observe all safety precautions while executing maintenance works.
- 15.9 After carrying out the Preventive maintenance / Breakdown maintenance the vendor should demonstrate the proper working of the system to the concerned area Engineer-in-charge / manager and get the certification for the same. The related records should be maintained as per procedure laid by the department.
- 15.10 The vendor should take care of all the needs of the personnel deployed with necessary, Uniforms, ESI and Provident fund as per the government service contract terms and conditions.

16. PAYMENT TERMS & CONDITIONS:

- 16.1 The payment will be made once in three months on satisfactory completion of Preventive Maintenance, attending to break down calls. The bill has to be certified by the user department.
- 16.2 The quote should be lump sum (for the complete systems per annum) and the amount will be divided by four which, will be paid once in three months as specified.
- 16.3 In case of Service Engineer Absent for 3 days and above, the AMC contract Period will be extended for the period of Absenteeism and the Supplier to provide AMC services at free of cost during that Period.

17. OTHER TERMS AND CONDITIONS:

- 17.1 The offer should specify the details of the personnel deployed.
- 17.2 The personnel deployed should make their own transport arrangements.
- 17.3 The Personnel deployed should make their own arrangements for Morning breakfast, Lunch and tea / coffee.
- 17.4 The offer should comply to all the terms and condition mentioned in the contractual obligations.
- 17.5 Personnel deployed should compulsory wear Acid, Alkaline, and Solvent resistant shoes in the work area without which they will not be allowed to enter the office premises.
- 17.6 The Personnel deployed should know the local language (Kannada) and English (any other languages are an added advantage).
- 17.7 The Personnel deployed should follow strictly all safety precaution / rules while carrying out Maintenance of Systems / Processing equipments.
- 17.8 The personnel deployed should observe all the safety regulations as per the process and equipments details.
- 17.9 PCB Plant of ITI Ltd. is carrying out all the works as per ISO-9001: 2015, EMS 14001: 2015. The Personnel deployed are required to follow the relevant Documents and to fill up necessary formats as part of works completion.

17.10 The working hours of the facility are from 8:00 AM to 4:00 PM on all regular working days Monday to Saturday. During contingencies the personnel deployed may have to work in the extended hours on regular working days and on holidays.

Annexure-III - TERMS & CONDITIONS FOR SERVICING

1. This contract for PCB PLANT WETPROCESS -17 Machines (NON-COMPREHENSIVE-LABOUR ONLY) will be for a period of 1 year from 1st April 2025 to 31st March 2026.
2. AMC has to be done for the list of CAPEX Wet Processing Machines for AMC in the PCB Plant given at **Annexure-I** as per scope of work as mentioned at **Annexure II** of this RFP.
3. After completing AMC, Service certificates have to be provided.
4. Disputes if any will be within the Jurisdiction of Bangalore, Karnataka State, India.
5. Terms of price: DAP, ITI Ltd Bangalore.
6. **Payment Terms:** The payment will be made once in three months within 3 months on receipt of Tax Invoice upon satisfactory completion of Preventive Maintenance, attending to break down calls. The bill has to be certified by the user department.
7. **As no PBG is applied for this tender, M/s ITI will withhold the amount equal to BG i.e 3% of total contract value on prorata basis & pay the retained amount at the end of AMC period. This 3% amount will be deducted from the 1st quarter of AMC Bill.**
8. Duties & Taxes: if any may be indicated.
9. AMC should be as per our Scope only.
10. MSME certificate shall be submitted if applicable.
11. All offers should be complete with specification /catalogue (English only).
12. Validity: Quotations should be valid for a period of 180 days from the due date of tender. Once quotation is accepted and order is confirmed, the price must remain same till the completion of the order.
13. We reserve the right to accept or reject any or all offers and order part or full quantity, without assigning any reason.
14. Please specify your income tax account number and Name of I.T circle.
15. Liquidated Damages and risk purchase clauses: Time is the essence of contract and the materials against the order arising out of this enquiry must be delivered by the supplier according to the delivery schedule indicated in the purchase order. In case of any change, the supplier should inform us in advance and obtain approval to the revised delivery schedule should the supplier fail to deliver the material in full/ part thereof, we shall be entitled at our option either to recover from the supplier as agreed the liquidated damages and not as penalty, a sum equivalent to half percent of the contract price of the item per week of such delay or part thereof subject to maximum of 5% of the contract price of the item

delayed or to terminate the contract in respect of balance quantity so delayed and purchase material elsewhere at the risk of supplier.

16. For Indigenous offers only:

- a. Prices should always be quoted on FOR ITI Limited, Bangalore basis including suitable packing and unloading of materials at M/s ITI Limited, Bangalore.
- b. Specify GST and other charges if any. In absence of these, the prices shall be treated as inclusive of all such taxes and other charges & no subsequent claims will be entertained.

17. Any clarifications regarding the tender can be obtained from

M-PCB & F

ITI Limited, Bangalore Plant

Bangalore 560016, Karnataka, India

Email: renudwivedi_bgp@itilttd.co.in, Mob. 9483009096

18. **Special Terms as per the user department:**

" This AMC is proposed to carry out from a user approved vendor. Hence the mentioned supplier/vendor is the only source to participate in this tender. The source is:

GeM Seller Id : LOLM210002461216

Business Entity Name : FIBRE ABRASIVE MACHINERIES PRIVATE LIMITED

Any other bidders participated in the tender will be rejected. "

Note:

- 1. Clause-wise Compliance to the Annexure-I, II and III from the Bidder on Letter Head is mandatory to be submitted along with the bid documents.**
- 2. All pages of tender should have Company Seal and signed by Competent Authority.**