

Ref No : PUR/IMP/GT/SK/ADITYA-ISRO/012/2013-14.

September 16, 2013.

Dear Sir/s,

The Director, Indian Institute of Astrophysics, Bangalore, invites Sealed Tenders Two bid system (Technical bid & Commercial bid) for the Import of **“Class 10 (fed std) Clean Room – Softwall Structure & Associated Electrical Accessories for Scatrometer set up - 1 No”** as per our specifications Annexed. The terms and conditions may be noted from IIA Website and if you are in a position to quote for the supply in accordance with the requirements, please submit your quotation. The Tender documents and other details are available on IIA web site www.iiap.res.in/tenders.htm

The Tender bids must be in Foreign currency quote. Your completed Tender bids both Technical and Commercial bid (**2 Bid system**) must reach our office on or before 11/10/2013 by 15 00 hrs. The bids must be in a separate Sealed envelopes duly superscribed with the name of the supply and Due Date and all the envelopes kept in a big envelopes mentioning the supply must reach this Office within the Due Date and time. The Technical bids (a) will be opened in the presence of bidders or their authorized representative of the Company by 15.30 hrs on 11/10/2013. The commercial bids will be opened only for those vendors quotes qualify in Technical evaluation, The opening of commercial bids date will be intimated later. Incomplete Bids are liable for rejection.

For any Technical clarifications you may contact during Office hours Sri.S.Kathiravan (Phone No.2254 1403) and for any commercial clarifications can contact Shri Y.K.Raja Iyengar, Purchase Officer (Phone No.2254 1244).

Thanking you,

Yours faithfully,

Y.K.Raja Iyengar
Stores & Purchase Officer

GLOBAL TENDER DOCUMENT No : PUR/IMP/GT/SK/ADITYA-ISRO/012/2013-2014.

DT : 16/09/2013.

TENDER FORM

FROM:

TO

THE DIRECTOR
Indian Institute of Astrophysics,
Bangalore - 560 034.

Sir,

I/We hereby offer to supply the Items/Equipment indicated below at the price hereunder quoted and agree to hold this office open till . I/We shall be bound to supply the items/Equipment hereby offered upon the issue of the Purchase Order communicating to the acceptance thereof on or before the expiry of the last mentioned date. You are at liberty to accept any one or more of the items such Items/Equipment. I/We not withstanding that the offer in this tender has not been accepted in whole, shall be bound to supply such items and such portion or portions of one or more of the items as may be specified in the said Purchase order communicating the acceptance.

-

S No.	Description of the item(s)	Qty.	Unit	Rate	Dely. Period
-------	----------------------------	------	------	------	--------------

-

1. Class 10 (fed std) Clean room – Softwall structure & Associated Electrical Accessories for Scatrometer set up as per our Specifications Annexed . - 1 No.

(Two bid system, both Technical bid and commercial / price bid should be submitted separately)

Tender bids should be in Foreign currency quote.

-

Place at which the Delivery is required : Indian Institute of Astrophysics, Bangalore
-34

Date by which the supplies are required : 4 weeks from the date of order.

I/We have understood the items of the tender annexed to the invitation to the Tender and have thoroughly examined the specifications/drawing and / or pattern quoted or referred to herein and / are fully aware of the nature of the items/ Equipment required and my / our offer is to supply the items/ Equipment strictly in accordance with the requirements subject to the terms

and conditions contained in the Purchase order communicating the acceptance of this tender either in whole or in part.

Date :

Signature and Seal of Supplier

Annexure - A

INSTRUCTIONS TO SUPPLIERS

1. Tenders should be sent in a sealed and superscribe with both Technical bid and commercial bid in separate envelopes with mention of Tender Number date and date of opening. Only one Tender should be sent in each envelope. Tender bids must reach our Office on or before :11/10/10/2013 by 15: 00 hrs. The bids must be in a separate sealed envelopes duly superscribed with the name of the supply and Due Date and both envelopes kept in a envelope mentioning the supply. The Technical bids (a) will be opened in the presence of bidders or their authorized representative of the Company by 15.30 hrs on 11/10/2013. The commercial bids will be opened only for those vendors quotes qualify in Technical evaluation. The opening of commercial bids date will be intimated later. Incomplete Bids are liable for rejection.
2. Late and Delayed tender will not considered at all.
3. Duties, Taxes where legally leviable and intended to be claimed should distinctly shown separately in the Tender.
4. a) Your quotation should be valid for 90-120 days from the date of opening of Tender.
b) Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the Tender from, relationship between the two sets of units must be furnished.
5. a) All available Technical Literature(s), Catalogue(s) and other data in support of the specifications and details of the item(s) should be furnished along with the offer.
b) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should indicated in your offer.
c) Air freight/sea freight charges up to IIA, Bangalore/ Bangalore Airport may be sent along with the offer.

d) Specifications:

Items / Equipment offered should strictly conform to our specifications. Deviation, if any should be clearly indicated by the Supplier in their quotation. The supplier should also indicate the Make / type No. of the stores offered and provide catalogue(s), Technical literature(s) and sample(s), wherever necessary along with the quotations. Test certificates wherever necessary should be forwarded along with the supplies. Whenever

options are called for in our specifications, the Supplier should address all such options. Wherever specifically mentioned by us, the Supplier could suggest changes to specifications with appropriate response for the same.

1. Corrections, if any, must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.
2. The supplier should supply along with the tender, the Banking information for payment or any other purpose.
3. A complete set of instruction and operation manual should be supplied.
4. Final performance should be guaranteed.

TERMS AND CONDITONS OF CONTRACT

1. DEFINITIONS:

—

- a) The terms 'Purchaser' shall mean the Director, Indian Institute of Astrophysics, Bangalore - 560 034.
- b) The term 'Supplier' shall mean, the person, firm or company with whom or with which the order for the supply of Items / Equipment is placed.
- c) The terms 'Purchase Order' shall mean the communication signed on behalf of the Purchaser by an officer duly authorized intimating the acceptance on behalf the Purchaser on the terms and conditions mentioned or referred to in the said communications accepting the tender or offer of the supplier for supply of Items/Equipment.

2. PRICES:

The price may please be indicated on unit basis only.

Duty Exemption:

Please note that we may issue "Customs duty Exemption Certificate & Excise duty exemption certificate" under the Govt. of India notification No.51/96 & No.10/97 valid till 2016.

3. **GUARANTEE AND REPLACEMENT:**

The Supplier shall guarantee that the Items/Equipment supplied shall comply fully with the specifications laid down, for material workmanship and performance. The Guarantee should be for a period of one year minimum from the date of supply.

4. **PACKING, FORWARDING AND INSURANCE:**

The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by air / Sea to withstand transit hazards ensure safe arrival at the destination. The packing and marking of packing shall be done by and at the expenses of the contractor. The Purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the supplier and the Purchase shall pay only for such Items/Equipment as are actually received in good condition, in accordance with contract.

5. **TEST CERTIFICATE:**

Wherever required Test Certificate should be sent before dispatch of the items.

6. **ACCEPTANCE OF ITEMS / EQUIPMENT:**

a)It is expressly agreed that the acceptance of Items/Equipment, is subject to final approval by the Purchase, whose decision shall be final.

7. **DELIVERY PERIOD:**

Delivery is the essence of the contract. The supplier should adhered to delivery schedule as indicated in the Purchase order.

8. **EXTENTION OF DELIVERY TIME:**

As soon as it is apparent that Supplier dates cannot be adhered to, an application shall be sent by the Supplier to the Purchaser. If failure, on the part of the Supplier to deliver the Items/Equipment in proper time shall have arisen from any cause which the Purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final he may allow such additional time as he considers it to be justified by the circumstances of the case). In case of Letter of Credit the banking charge for the LOC amendment will be on suppliers account.

9. **PAYMENT:**

Preference will be given to the supplier whose payment terms is on Site Draft or Credit basis.

10. **SECURITY FOR PAYMENT:**

Successful Supplier will have to furnish in the form of a Bank Guarantee or any other form as called for by the Purchase towards any payments before supply of items/equipment. In case of payment through Letter of Credit the Banking charges outside India and inside India will be on suppliers account.

11. IIA reserves the right to reject any or all the Tenders without assigning any reason.

Purchase Officer
IIA, Bangalore - 34.

**RFP for Prof.MGK Menon Space Science Lab Clean room
class 10 (Fed Std) Softwall Structure & Associated Electrical
Accessories**

PLACE: DETAILS OF REQUIREMENT OF CLASS 10 (Fed Std) CLEAN ROOM STRUCTURE FOR SCATROMETER SET UP OF VELC PROJECT ON ADITYA-1 AT PROF. M.G.K.MENON LABORATORY FOR SPACE SCIENCES AT **CREST** CAMPUS OF INDIAN INSTITUTE OF ASTROPHYSICS (IIAP).

USE: THE PROPOSED CLASS 10 CLEAN ROOM SOFTWALL STRUTURE WILL BE SET UP INSIDE THE CLASS 1 LAKH(FED STD) CLEAN ROOM FACILITY FOR SCATROMETER SET UP.

Technical Specifications:

Internal Dimensions of the proposed class 10 softwall clean room : 12 x10 x 8 (H) Feet

Softwall Cleanroom Support Frame

The support frame shall be fabricated of interlocking stainless steel (304/316 grade)square steel uprights, cross sections, and ceiling members. Ceiling members are connected to stainless steel T-bars, forming the 2' x 4' bays that support filters and lights. Corner reinforcement gussets shall ensure a rigid structure. Heavy-duty casters shall be provided to allow easy repositioning after installation. Internal height measured from filter face to floor shall be 8 feet.

The structure shall include a control panel for operation of filter/fan units, lights, and other selected options.

Softwall Cleanroom Panels & Strip Shields

Softwall panels/curtain shall be fabricated from heavy-duty, blur-free 40 mil material—double the industry standard—ensuring enhanced tear resistance and eliminating the need for unsightly sewn sash weights.

Panels/curtain and strips shall be clear appearance.

Panels shall be made from inherently static-dissipative polyurethane (Polysim) that provides permanent, humidity-independent ESD protection for sensitive assembly conditions. Polyurethane contains should not have any plasticizer, making it virtually non-outgassing.

Softwall cleanroom panels and strip shields shall be attached to the support frame by means of non-contaminating Grip-Trac mounting system that eliminates cracks and seams where germs or particles can collect.

Softwall cleanroom panels shall be notched to ensure a snug fit at all corners.

If panels/curtain are supplied in standard lengths, Seaming/Snap Tite clips shall be provided to secure two panels/curtains together to form the required dimensions..

T-Grid Mounting System to be provided to suspend the curtains or strip shields from existing cleanroom T-grids.

Gap between Panel or Strip Shields and Floor

All softwall cleanrooms require some gap between the panel and the floor to allow air to escape. If this gap is too small to accommodate the flow of air generated by the ceiling filter

fans, then panels and strips will billow outward. If it is too large, the cleanroom will not maintain adequate positive pressure. Gap shall be 2 feet from the floor to maintain the conditions.

Softwall Cleanroom Strip Shield Doors

4 feet wide Polyurethane strip shield door (Polysim) shall be provided for access for the proposed softwall cleanroom. Access shall be provided by two sides.

Softwall Cleanroom Filter Fan Configurations (Not in the scope – information purpose only)

1. Dimension of the FFU : 605 X 1215 X 330 MM
2. Weight is approximately 35 kg (each)
3. Total number of FFU's = 15
4. Efficiency is [99.999995@0.12um\(7N5\)-U-17](#)
5. Resistance is 90Pa±10%@0.45m/s
6. Gasket is on both sides, EPDM Grey Faceguard shall be air leaving side
7. Power: 220V-50Hz – Single phase
8. Housing and finishing is stainless steel
9. Filters are replaceable type. Shall be assembled at the bottom of the FFU module and sits over the T-Grid
10. To be placed on the T-grid structure
11. FFU has 5 speed control & a separate on – off control.
12. FFU has the provision for BMS Integration.

Cleanroom Lighting

Here applications require total FFU ceiling coverage, LED fixtures/teardrop/flow-through lighting modules are essential. These lights shall be mounted to the ceiling grid below the FFU. Their design & mounting shall not interfere with the laminar airflow.

Light intensity shall be 400 foot candles at work surface which is 850mm from the floor level. No of light fittings shall be decided based on this factor.

Power : 220V-50Hz- single phase

Ionizing Bar

The Ionising bar shall generate a balanced stream of positive and negative ions to neutralize surface static charges, protecting sensitive parts against ESD and eliminating surface attractions that make cleaning difficult. It shall be ceiling suspended type and shall take support from ceiling T-grid. Size shall be 2 feet x 4 feet with 220V-50Hz-single phase power input. If transformer required for step down it shall be included in the offer.

Ionising bar shall enhance cleanliness by neutralizing charges that attract and hold particles on wall, tabletops and other surfaces.

Ionising bar shall be Attached to cleanroom ceiling T-grid without disrupting the laminar flow in the cleanroom. Ion bar shall be supplied with mounting kit that includes mounting clips, power cable and power supply

Cleanroom Casters

Stainless steel swivel casters shall be of non shedding polyurethane wheels. Capacity shall be more than 130 kg each. one castor per vertical post shall be considered.

Control Panels and Power Distribution Modules:

Control panel shall provide the connection of ceiling lights and FFU's and shall allow the operation from a single panel.

Energy saver FFU control system:

This control system shall include an Energy Saver Module that should control power to all FFUs in a single Power Distribution Module , allowing to ramp fan speed up and down to attain the precise air flow and velocity levels for required application. This variable control shall be for incremental adjustments required in final cleanroom air balancing and validation, and it should eliminate the need to breach the ceiling panels in order to adjust FFUs manually. It also shall allow the compensation for clogging filters.

