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INDIAN INSTITUTE OF ASTROPHYSICS

IIND BLOCK, KORAMANGALA, BANGALORE- 560034

PUBLIC TENDER NOTICE NO: PR/PT/VAC-C/CAP/300 DT: 23RD NOVEMBER 2007

The Director, Indian Institute of Astrophysics invites Quotations/Bids from reputed firms for Up-gradation of the 1.5M Vacuum Coating Plant, at VBO, Kavalur. The firm(s) interested in offering bids should have executed similar items / works

Sl.No.	Description In Brief	Quantity	E.M.D (refundable) Rs.	Tender Fee (non-refundable) Rs.
01.	Up-gradation of the 1.5M Vacuum Coating Plant at Vainu Bappu Observatory near Tamilnadu. (as per details mentioned in the Annexure II)		30,000/-	250/-

Note: (1) The Tender documents with Specification details are available on IIA website www.iiap.res.in/tenders.htm. Hence the interested tenderers may at their option download the same from our website (as no hard copies of Tender documents is/are provided from this office) and submit their offers along with EMD (refundable) & Tender fee (non-refundable) prescribed therein, only in the form of Demand Draft drawn in favour of Director, IIA). However, your offers (both Technical & Commercial/price bids) should be superscribed in separate envelopes mentioning the tender notice no., Date of opening, and submit both the Bids in a sealed envelopes addressed in favour of Director, Indian Institute of Astrophysics, Bangalore – 560 034.

2. The firms who fulfill the following requirements shall be eligible to submit their Bids. Joint ventures are not acceptable.

(a) Tendering Company shall be professionally managed and equipped with facility for fabrication and machining of large components, and should have the necessary inspection facility.

(b) Tendering Company should have adequate shop floor space with overhead crane, material handling facility to carryout shop assembly and test.

(c) Tenderer should have completed, in the last 3 financial years (i.e., current year and two previous financial years) atleast one similar single work for a minimum value of Rs.15 lacs.

(d)The total contract amount received during the last 3 financial years, and the current financial year should be a minimum of above mentioned value. The tenderer should submit Audited Balance Sheet duly certified by the Chartered Accountant to this effect. They should also submit Bankers Solvency Certificate to a minimum value of Rs.15 lacs.

(e) The Private Body Contractor shall be required to produce the TDS Certificate indicating the Income Tax deducted by the client for the extension of similar items, completed individually of value not less than Rs.15 Lacs.

3. Both Technical/Commercial/price Bids supported by the above information should be submitted in Sealed envelope duly superscribed with the name of work. The completed Bids will be received by this office **upto 1500 Hrs. on 19th December 2007.**

4. If any information furnished by the tenderers is found incorrect at a later stage, the firm shall be liable to be debarred from tendering and taking up of work in IIA. The Institute reserves the right to verify the particulars furnished by the tenderers.

5.Tenderers may contact Mr.J.P.Lancelot, Principal Scientific Officer, at the earliest for any technical discussion / clarifications before submitting bids. The details of drawings appeared on website also may be clarified with this officer to avoid delay.

6.The firms should submit both Technical and Commercial/Price bids separately superscribed along with EMD/Tender fee of prescribed amount **upto 1500 Hrs. Latest by 19th Decemebr 2007** The Technical Bids will be opened in presence of the bidders or their authorized representatives.

7.Incomplete Technical Bids are liable for rejection. Commercial/price bids will be considered, for opening of Qualified Technical Bidders being recommended by the technical evaluation committee.

8.Late & / delayed offer will not be considered.

9.IIA is not responsible for any delay / loss of documents in transit.

10.The Commercial/Price Bids will be opened on 9th January 2008 at **1530 Hrs.** of those firms technically qualified / recommended in the presence of such bidders or their nominated representatives.

11.IIA reserves the right to reject any or all tenders without assigning any reasons.

**Administrative Officer
IIA, Bangalore-34.**

Annexure-I

IMPORTANT: TWO PART TENDER INSTRUCTIONS

1. It is proposed to have a two cover system for this tender.

Part I: (a) Technical part (without price) is one cover.

Part II: (b) Commercial /Price part alone is another cover.

2. TECHNICAL PART:

Technical part should clearly indicate the technical details. A compliance

Statement indicating whether the specifications are met is to be submitted with reasons for deviations if any. Complete with Drawings, in relevant to the offer are also to be enclosed to the technical part.

2. COMMERCIAL PART (without price)

Commercial part should indicate commercial terms like, delivery period, place of delivery, payment terms, validity, warranty/guarantee etc. and should be sent along with the price part. The Technical part should be kept in one cover along with EMD & Tender Fees superscribing tender number and due date and should be sealed.

3. COMMERCIAL AND PRICE PART alone should be kept in a separate cover superscribing tender number and due date.

5. The technical part in one cover and **Commercial and Price part** in another cover should be put in one large cover, and should be superscribed with the tender number, due date and time of opening.

4. The cover should be sent to the following address:- **THE DIRECTOR, INDIAN INSTITUTE OF ASTROPHYSICS., IIND BLOCK, KORAMANGALA, BANGALORE – 560 034.**

6. The offer should be valid for a minimum period of 120 days from the due Date.

7. Offer shall be submitted in sealed cover only as said above.

8. No conditional discounts will be allowed.

9. EMD & Tender fee of prescribed value shall be sent along with the Technical Bids) tenders in the form of demand draft only in favour of “The Director, Indian Institute of Astrophysics., Bangalore” drawn from any Indian Nationalised /reputed banks.

10. Tender shall be submitted as above without fail.

Phone: 25530672-676
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Grams: ASTRON

INDIAN INSTITUTE OF ASTROPHYSICS
IInd Block, Koramangala, Bangalore-560 034

No.PR/LN2/CAP/305

Dt: November 2007

M/s.

Dear Sirs,

The Director, Indian Institute of Astrophysics, Bangalore invites Sealed Tenders for the supply of Stores detailed in the Tender Form hereto annexed. The Tender Terms enclosed are also may be noted carefully. If you are in a position to quote for the supply in accordance with the requirement, please submit your quotation in the attached Tender Form also.

Your Tender (Technical, Commercial & price Bids) must reach this office on or before the date and time indicated in the Tender Schedule.

Thanking you,

Yours faithfully,

Encl: as above.

(AJ Raghupathy)
Admn. Officer
For Director

INDIAN INSTITUTE OF ASTROPHYSICS
BANGALORE-560 034

PUBLIC TENDER DOCUMENT NO:PR/LN2/CAP/305

DT: _____, 2007

TENDER FORM

FROM:

TO

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

Sir,

I/We hereby offer to supply the stores indicated below at the price hereunder quoted and agree to hold this offer open till _____. I/We shall be bound to supply the store 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 of such stores. I/We notwithstanding 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.

Sl.No.	Description of the item(s)	Quantity	Unit	Rate	Dely. Period
01.	Up-gradation of the 1.5M Vacuum Coating Plant at VBO, near Tamilnadu (as per details mentioned in the Annexure II)				

Place at which the Delivery is required : At Vainu Bappu Obseratory, Kavalur,
Tamilnadu

Date by which the supplies are required : 04 weeks FDO.

2. I/We have understood the items of the tender annexed to the invitation to this Public 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 stores required and my/our offer is to supply the stores strictly in accordance with the requirements subject to the terms and conditions contained in the Purchase Order, if communicated on the acceptance of this tender either in whole or in part.

Date:

Signature and seal of Tenderer

ANNEXURE II

**Up-gradation of the 1.5M Vacuum Coating Plant,
VBO, Kavalur**

Request for Proposal

(RFP)

J.P.Lancelot
Principal Scientific Officer
Photonics Division
Indian Institute of Astrophysics
Bangalore

1.5M Vacuum Coating Plant

General Description of the Coating Plant:

The 1.5M vacuum coating plant (Fig.1) at VBO, Kavalur was installed in the year 1978 and is operational for about 30 years without any major problems. The 60 inch aluminizing plant mainly consists of a high vacuum chamber (Fig.2) of diameter 1.52M and length 2.54M. the vacuum chamber is cylindrical in shape with dished ends and constructed in stainless steel. The axis of the symmetry of the chamber is horizontal. One of the dished ends is welded to the cylindrical shell while the other end is movable in a trolley. The movable dish can house mirrors up to 50 inches in diameter, the maximum weight being nearly 700 Kg.

Three 150 mm dia openings are provided on the cylindrical portion of the chamber for high voltage lead-in, rotary seal for the shutter and mounting of thermocouple, ionization gauge and air admittance valve. The end dish has a 300 mm dia opening at the center for mounting high end current feed through. 12 nos. of high vacuum feed through are mounted on this flange. The filaments are mounted on two stainless steel rings using specially made copper studs and insulators.

The filaments are properly grouped (Fig.3) and connected to the twelve main feed through using flexible copper rope.. the main chamber also houses the ion cleaning set up. The high vacuum pumping system consists of two oil diffusion pumps which are backed by rotary mechanical pump. Three numbers of electro pneumatically operated gate valves are incorporated in the backing lines. Three thermocouple gauges and one discharge gauge are located at different locations in the chamber for the measurement of vacuum in the region 10^{-3} torr to 10^{-6} torr. Electrically operated water flow switches are provided in the cooling water lines of two diffusion pumps and the rotary pump.

Electrical System

The three phase four –wire 410 volts main power to the control cabinet is given through 60 amps

HRC fuses and main contactor. The supply to the rotary pump is given through a 30 amps HRC fuse, overload relay and contactor. Each diffusion pump has three 230V 2KW heaters connected in star with the star point connected to the neutral of the three phase 410V four wire system.

The electrical system has a high tension unit for ion cleaning and a low tension unit for evaporation. The low tension power circuit is provided for evaporation of aluminium. A manual as well as auto mode are provided. These are mounted in one control cabinet. The second control cabinet houses all the controls for the mechanical pumps, diffusion pumps, thermocouple gauges, discharge gauges and gate valves. Panel mounted meters indicate the rough vacuum and high vacuum.

Description of the Ion Cleaning Power Supply

It consists of a step-up mains transformer, the output of which is continuously variable from 0-5KV AC. The maximum current capacity is 500 mA. The output voltage and current are indicated by a voltmeter and an ammeter respectively. These meters are calibrated in terms of voltage and current and over current trip relay switches off the power supply whenever the output current exceeds the set value of the overload current. The power supply can be switched on again after reducing the output voltage and resetting with the reset switch provided on the panel. (Fig.4)

Low Tension Unit:

There are 24 filaments on the outer ring and 12 filaments on the inner ring. The filaments are electrically connected to form four groups. The filaments are connected in a series parallel combination. The 24 filaments on the outer ring are divided into 4 groups each having 6 filaments (Fig.5). Two terminal from each branch is connected to 2 feed throughs on the chamber feed through mounting flange at the back. All the eight terminals are connected to feed throughs 1,2,3,4,6,7,8 and 9. For the inner ring the terminals are connected to 5, 10, 11, and 12. Further the following terminals on the feed through flange are shorted 3 & 8; 4&9; 1&6; 2&7. This arrangement ensures the firing of 24 filaments on the outer ring in two groups each group having 12 filaments. The firing of the filaments on the inner ring is carried out again in two groups, each group having 6 filaments. Thus the entire sequence of firing the 36 filaments is completed in 4 operations.

Each group in the outer ring is excited by a variable 0 – 6 V, 250 A. AC source while each group in the inner ring is excited by a variable 0 – 6 V, 125 A – AC source. The control cabinet houses 4 step down transformers for providing filament excitation. The desired group of filaments is selected by the panel band switch. The variable excitation voltage to the filament is obtained by controlling the primary voltage of the transformer by a triac connected in series. The power to the filaments can be varied smoothly by a power control knob on the panel in the manual position. The power in the auto mode is

controlled by the program set in the timer circuit. The delay phase control trigger pulses are derived from U.J.T circuit and isolation pulse transformer.

Evaporation Timer circuit:

The timer circuit can be actuated for programmed firing of the filaments in the auto mode only. The circuit consists of (1) a slow power increase ramp generating circuit, (2) a pre-heat level control relay, (3) adjustable pre-heat timer and (4) evaporation adjustable timer.

The automatic cycle is started by initiating the start switch. This releases the timing capacitor which in turn slowly increases the power to the filaments. When the power reaches the pre set value (pre-heat level adjustment variable from 40% to 60% of maximum power) the pre-heat relay trips and actuates the pre-heat timer. This is indicated on the panel by a neon bulb. During this time power to the filaments is held to the set pre-heat level. After the completion of the pre-heat time the ramp generator condenser is released so that power begins to increase until it reaches the maximum level (this level can be adjusted from 80% to 100% of the total power) which actuates the evaporation timer. This is again indicated on the panel by a neon bulb. During this time filaments are provided with sufficient power for complete evaporation of aluminium. After completion of the pre-set time duration for the timer the power is switched off automatically. The same procedure is repeated for other filament batches.

Present Status:

The plant is frequently used for providing aluminium coating for the 1M telescope primary mirror periodically (once in every two years) and other smaller mirrors of the institute since its inception. A provision has been made to provide gold coating on glass substrates up to a diameter of 0.5 meter using a separate mechanical attachment. Using the facility gold coating has been provided to the Synchrotron Radiation Beam Line optics. Recently we manage to run the plant for the coating of about 50 nos. of the Gamma ray mirrors over a period of three months. These mirrors were transported to Hanle for the HAGAR project.

The stainless steel cylindrical chamber was cleaned in-situ completely by scrapping of the residual aluminium deposition on the sides using acetone and potassium hydroxide. The copper studs and the insulators, where the filaments are mounted, are scrapped, cleaned and replaced. The broken insulators were replaced with new porcelain insulators. The windows and the feed through ports were dismantled, cleaned and replaced with new O rings.

New thermocouple gauges and penning gauges have been procured and needs to be installed as the old gauges have become faulty. The incoming power lines to the plant room alone were changed.

One of the major problems we noticed during the above run is frequent failure of the electrical system which led to frequent shut down of the system. As the coating plant has been in frequent use, many of the electrical components and the control units of the plant have worn out and outlived their performance. Existing relays cannot be replaced due to its non availability and become obsolete. The console cables and wires have become fragile and started disintegrating and have to be replaced with new wiring. It is hazardous to operate the plant in this condition.

Scope of Work:

- The electrical re-wiring for the three phase four –wire 410 volts main power to the control cabinet
- The Electrical power supply lines to the rotary pump and the diffusion pump incorporating latest technology
- The up-gradation of the electrical system for the discharge cleaning unit and evaporation unit with provision of manual and auto control with appropriate calibration.
- The power feed through provided at the backside of the vacuum chamber has to be replaced with new seals. (12 Nos.)
- The electrical system of the refrigeration unit has to be changed and controls provided to the console.
- The console cubicles have be incorporated with latest gadgets using modern technology
- Computer controlled console incorporating logic controller and pid controller with appropriate software for on line monitoring of the process.
- Change of the old ammeters and voltmeters
- Change of 0 – 6 V AC 125 amps and 0 – 5 KV 500 mA transformers.

- Replacement of the actuators.
- Replacement of switches, indication lamps etc.

Budget

The total cost of the system may be approximately rupees 12 lakhs and the same has already been projected in the budgetary provision.

J.P.Lancelot

PSO

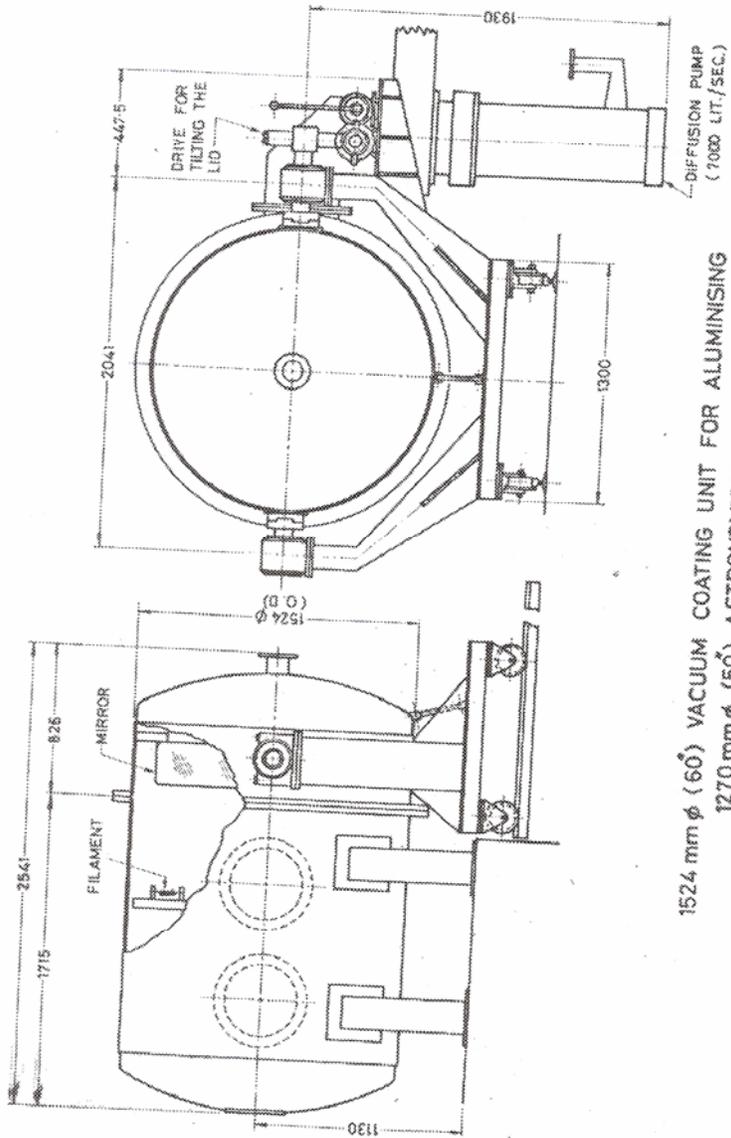
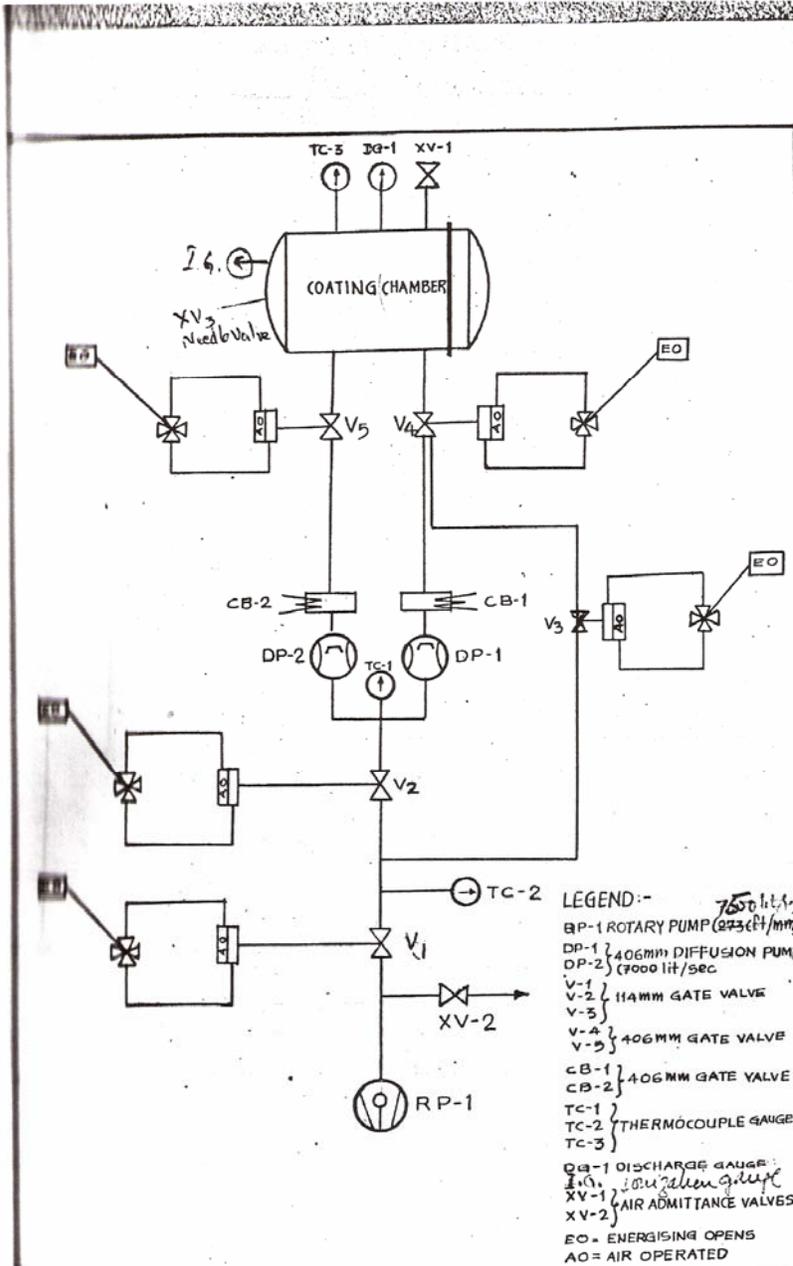


FIG-1

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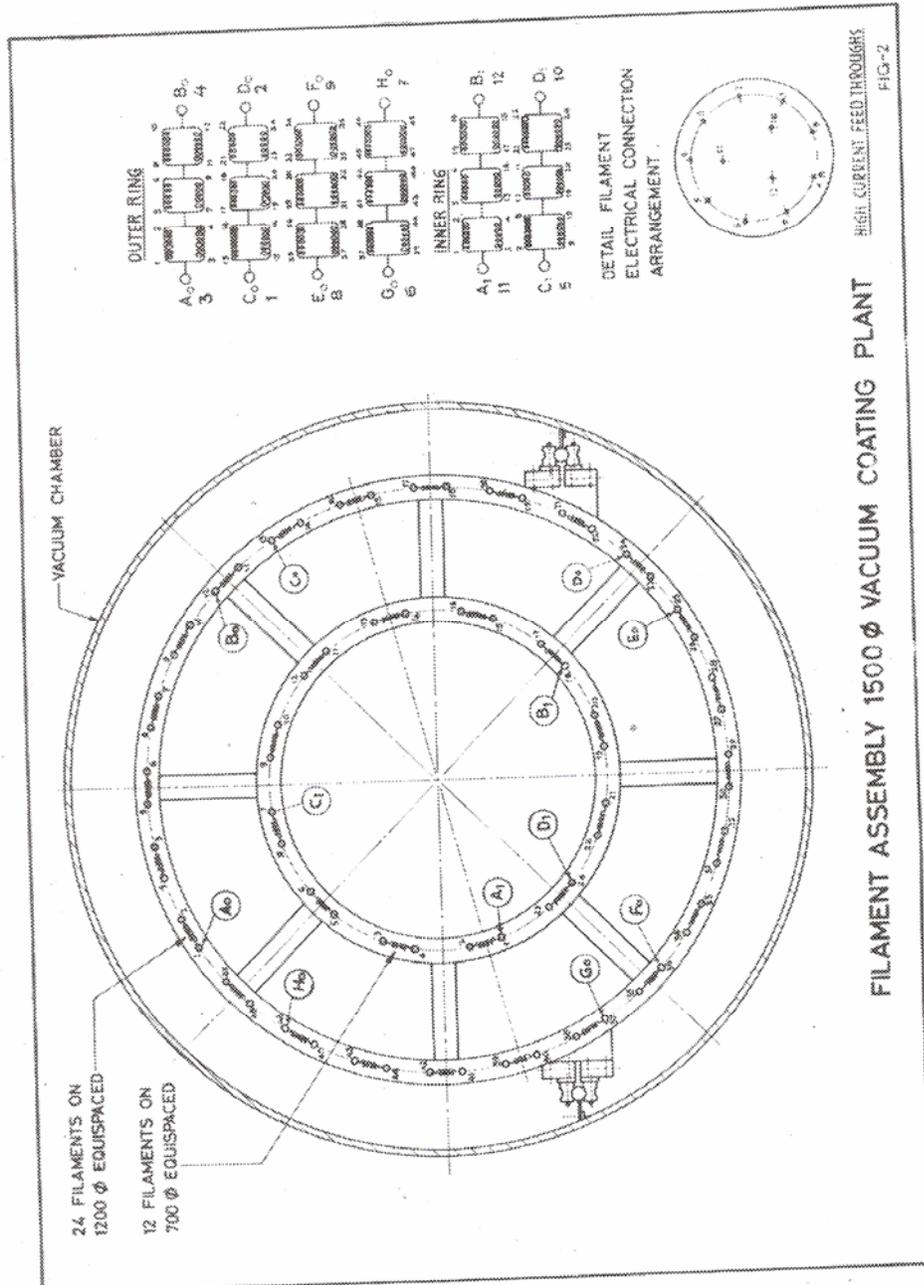


BHA ATOMIC
 RESEARCH
 BUREAU

VACUUM SYSTEM SCHEMATIC
1524mm ϕ (60") VACUUM COATING PLANT

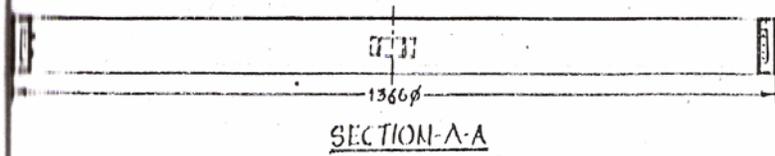
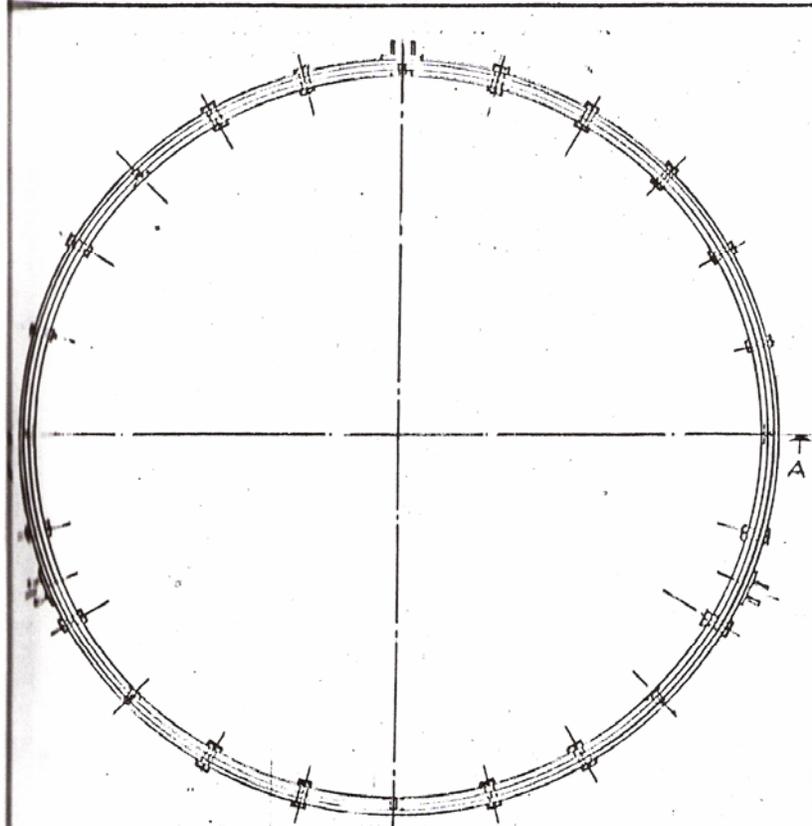
FIG-5

23



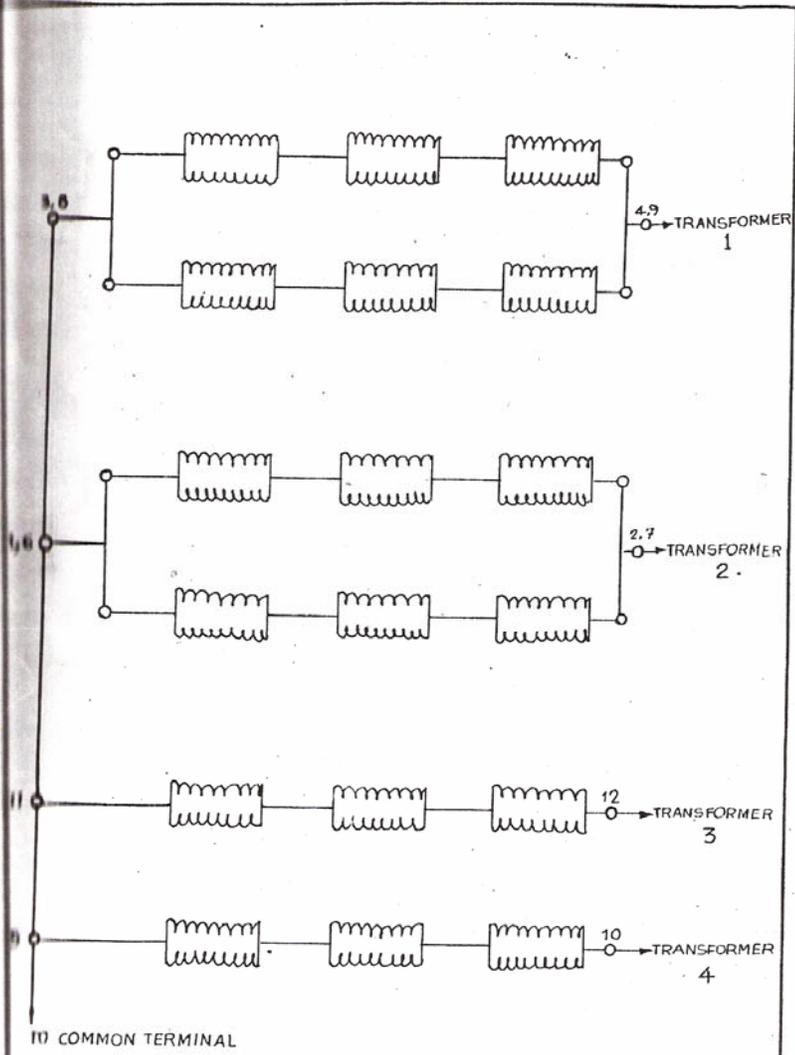
FILAMENT ASSEMBLY 1500 Ø VACUUM COATING PLANT

HIGH CURRENT FEED THROUGHS



PHA ATOMIC RESEARCH CENTRAL	ION CLEANING RING	Fig. 4
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Fig -
22



IA ATOMIC
ARCH
FILE

L. T. ELECTRICAL SCHEMATIC

FIG-5

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Annexure – III

INSTRUCTIONS TO TENDERERS

1. Tenders should be sent in sealed and superscribed envelopes with mention of Tender No. date and date of opening.
2. Late and Delayed Tender will not be considered at all.
3. Duties, Taxes where legally leviable and intended to be claimed should be distinctly shown separately in the Tender.
4. As a Govt. of India Department, this office is exempted from the payment of Octroi Duty and similar local levies (but not providing any C or D forms). Tenderers shall ensure that necessary exemption certificates are obtained from the officer concerned to avoid any payment of such levies.
5. a) Your quotation should be valid for 120 days from the date of opening of tender.
b) Prices are required to be quoted accordingly to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
6. Preference will be given to those tenders offering supplies from ready stocks and on the basis of F.O.R Destination/Free door delivery at Site.
7. 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) Samples, if any, called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer shall have to remove the samples at his own expense.
c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should be indicated in your offer.

d) SPECIFICATIONS:

Stores offered should strictly conform to our specifications. Deviation, if any should be clearly indicated by the tenderer in their quotation. The tenderer 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 tenderer should address all such options. Wherever specifically mentioned by us the tenderer could suggest changes to specifications with appropriate response for the same.

1. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the tenderers shall supply the same at the rates quoted.
2. 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.
3. The Tenderer should supply along with the tender, the name of his bankers as well as the latest Income Tax Clearance Certificate duly countersigned by the Income Tax Officer of the circle concerned under the seal of his office.
4. The Purchaser reserves the right to place order on the successful tenderers for additional quantity upto 25% of the quantity offered by them at the rates quoted.
5. The authority of the person signing the tender, if called should be produced.
6. Complete system configuration and sub-system design details should have approval of the purchaser before actual fabrication or procurement process.
7. A complete set of instruction and operation manual should be supplied at the time of installation.
8. Final performance should be guaranteed at the site.

TERMS AND CONDITIONS OF CONTRACT

1. DEFINITIONS:

- a). The terms 'Purchaser' shall mean the Director, Indian Institute of Astrophysics, Bangalore-560 034.
- b). The term 'Contractor' shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractor's successors, representative, heirs, executors and administrators unless excluded by the contract.
- c). The 'Stores' shall mean that contractor agrees to supply under the contract as specified in the Purchase Order including erection of Plants and machinery and subsequent testing, should such a condition be included in the Purchase Order.
- d). 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 contractor for supply of stores or plant, machinery or equipment or part thereof.

2. PRICES:

Tenders, offering firm prices will be preferred, where a price variation clause is insisted upon by a tenderer, quotations with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variations.

3. DUTY EXEMPTION

- (a) Any essential Equipment/part of the equipment can be imported for which "Duty Exemption Certificate" will be provided by IIA as an actual user basis.
- (b) Excise duty exemption certificate will be provided if considered against the categories of items tendered, under the Govt. of India Notification No. 10/97 valid till 2011.

4. SECURITY DEPOSIT:

On acceptance of Tender, the Contractor shall, at the option of the Purchaser and within the period specified by him deposit with him in cash or any other form as the Purchaser may determine, Security deposit not exceeding ten percent of the value of the contract as the Purchaser shall specify. If the contractor is called upon by the purchaser to deposit 'Security' and the contractor fails to provide the security within the period specified, such failure shall constitute a breach of the contract and purchase shall be entitled to make other arrangements for the re-purchase of the stores contracted for at the risk of contractor in terms of sub-clause (ii) and (iii) of clause 10 (b) hereof and/or to recover from the contractor damages arising from such cancellation.

5. GUARANTEE AND REPLACEMENT:

- a) The contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material workmanship and performance.
- b) For a period of (12) twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use arising from faulty stores, design or workmanship, contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the store or any part thereof are faulty.
- c) If in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser provided the notice informing the contractor of the defect is given by the purchaser in this regard within the said 14 months from the date of acceptance thereof.
- d) Should the contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the contractor the whole or any portion of the defective stores.
- e) The decision of the purchaser, notwithstanding any prior approval of acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the contractor are defective or any defects has developed within the said period of 12 months or as to whether the nature of the defectives required renewal or replacement shall be final, conclusive and binding on the contractor

f) To fulfill guarantee conditions outlined in Clause 5(a) to (d) above, the contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 10% of the value of the contract along with first shipment documents. On the performance and completion of the contract in all respects, the Bank Guarantee will be returned to the contractor without any interest.

g) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of stores at Purchaser's site.

h) Even while the 12 months guarantee applied to all stores in case where a greater period is called forth by our specifications then such a specification shall apply; in such cases the period of 14 months referred to in Para 5(b) and (c) shall be 'asked for' guarantee period plus two months.

6. PACKING, FORWARDING AND INSURANCE:

The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air, to withstand transit hazards and 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 contractor and the Purchaser shall pay only for such stores as are actually received in good condition, in accordance with contract.

7. TEST CERTIFICATE:

Wherever required Test Certificate should be sent along with the relevant dispatch documents.

8. ACCEPTANCE OF STORES:

- a) The Stores shall be tendered by the contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expenses and cost.
- b) It is expressly agreed that the acceptance of stores, contracted for is subject to final approval by the Purchaser, whose decision shall be final.
- c) If, in the opinion of the Purchaser all or any of the stores that do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at the price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the contractor.
- d) If the whole or any part of the store supplied are rejected in accordance with Clause No.8 (c) above, the Purchaser shall be at the liberty, with or without notice to the Contractor, to purchase in the open market at the expenses of the Contractor, stores meeting the necessary performance and quality contracted for in place of these rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

9. REJECTION OF STORES:

Rejected Stores will remain at the destination at the Contractor's risk and responsibility, if instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice or rejection, the Purchaser or his representative has, at his discretion the right to scrap or seal or consign the rejected stores to the Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

10. DELIVERY PERIOD:

- a) The delivery period of the stores stipulated in the Purchase order shall be deemed to be the essence of the Contract, and delivery must be completed on or before the specified dates/period.
- b) Should the Contractor fails to deliver the stores or any consignment thereof within the period prescribed for such delivery, the Purchaser shall be entitled at his option either.
 - i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 2% of the price of any stores which the contractor has failed to deliver as aforesaid for each month or part of a month, during which the delivery of such stores may in arrears, or
 - ii) to purchase elsewhere, without notice to the Contractor on the account and at the risk of the contractor, the stores not delivered or others of similar description (where other exactly complying with the particulars are not, in the opinion of the purchaser readily procurable, such opinion being final) without canceling the Contract in respect of the consignment(s) not yet due for delivery or,
 - iii) to cancel the contract or a portion thereof, and, if so desired to purchase or authorize the purchase of stores not so delivered or others of similar description (where others exactly complying with the particulars are not, in the opinion of the purchaser readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under sub-clause (ii) and (iii) of clause 10 above, the Contractor shall be liable for any loss which the Purchaser may sustain on that account, provided that the re-purchase, or, if there is an agreement to re-provide shall made within (6) six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor. This right shall without prejudice to the right of the purchase to recover damages for breach of contract by the Contractor.

11. EXTENTION OF DELIVERY TIME:

As soon as it is apparent that Contractor delivery period / dates cannot be adhered to, an application shall be sent by the Contractor to the Purchaser. If failure, on the part of the Contractor to deliver the stores 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 without prejudice to the Purchaser's rights to recover liquidated damages under clause 10(i)(ii) and (iii).

12. PAYMENT:

Contractor's Bill will be passed only after the stores have been received, inspected and accepted by the Purchaser for payment.

13. RECOVERY OF SUMS DUE:

Whenever there is a breach of contract whether liquidated or not, money arising out of or under this contract against the contract, the Purchaser shall be entitled to recover such sum by appropriating, in part or whole, the security deposited by the Contractor, if a Security is taken against the contract. In the event of the Security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be shall be deducted from any sum then due or which at any time thereafter may become due to the contractor under this or any other contract with the Purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the Purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claims, whether liquidated or not, against the Contractor under any other contract with the purchaser, the payment of all moneys payable under the contract to the Contractor including the Security Deposit shall be withheld till such claims of the Purchaser are finally adjudicated upon and paid by the Contractor.

14. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this contract are free and clean of infringement of any patent, copy right or trade mark, and shall at all time indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by patent, registration of design or trade mark and shall take all risk of accidents of damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all the means used by him for the fulfillment of contract

15. ARBITRATION:

In the event of any question, dispute or difference arising under these conditions contained in the purchase order in connection with this contract, (except as to any matters the decision of which is specially provided for by these conditions), the same shall be referred to the sole arbitration of the Head of the Institution or of some other person appointed by him. It will be no objection that the arbitrator is a Government Servant, that he has to deal with matter to which the Contract relates or that in the course of his duties as Government Servant he has expressed views on all or any of the matters in dispute binding on the parties of this Contract.

(a) IT IS TERMS OF THIS CONTRACT:

If the Arbitrator be the Head of the Institution.,

i) in the event of his being transferred or vacating his office by resignation or otherwise, it shall be lawful for his successor-in-office either to proceed with the reference himself, or to appoint another person as arbitrator, or,

ii) in the event of his being unwilling or unable to act for any reason, it shall be lawful for the Head of the Institution, to appoint another person as arbitrator or,

(b) If the Arbitrator be a Person appointed by the Head of the Institution :-

In the event of his death, neglecting or refusing to act, or resigning or being unable to act for any reason, it shall be lawful for the Head of the Institution either to proceed with reference himself or to appoint another person as arbitrator in place of the outgoing arbitrator. Subject as aforesaid, the Arbitration Act, 1940 and the rules there under and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceedings under this clause. The Arbitrator shall have the power to extend with the consent of the Purchaser and the Contractor the time for making a publishing the award. The venue of Arbitration shall be the place as the Purchaser. In his absolute discretion may determine. Work under the contract shall if reasonably possible, continue during Arbitration proceedings.

16. COUNTER TERMS AND CONDITIONS OF SUPPLIERS:

Where Counter Terms and Conditions/printed or cyclostyled conditions have been offered by the Supplier, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof is obtained.

17. SECURITY FOR PURCHASER'S MATERIAL(S):

Successful Tenderer will have to furnish in the form of a Bank Guarantee or any other form as called for by the Purchaser towards adequate security for the materials/property provided by the Purchaser for the due execution of the Contract.