### INSTITUTE FOR PLASMA RESEARCH

An Aided institute of department of Atomic Energy, Govt. of India)

Near Indira Bridge, Bhat. DIST.GANDHINAGAR - 382 428 (INDIA)

PHONE :(079-2396 2000),FAX :91-079-23962277

Web: www.ipr.res.in

### MINOR FABRICATION WORKS ENQUIRY

Office Copy	ENQUIRY NO: IPR/MFW/21-22/100
	Date: 07-06-2021

Due Date: 13-06-202113:00 IST

Please send your offer in sealed envelope specifying Inquiry no, Date & Due Date, ALONG WITH your credentials for the following items:

Important note:

Please note that e-mail quotations are not acceptable however you may send your queries (if any) to nema@ipr.res.in

Please Ensure that your sealed quotation reaches this office not later than above mentioned due date and time.

Kindly go through the following document properly before Quoting which are available on the IPR web portal i.e., http://www.ipr res in/documents/tenders html/ attached here with.

- 1. Technical specification as enclosed.
- 2. Instruction to the bidders & terms and Condition (refer Form NO:IPR-MFW-01-VI)
- 3. Bidding format/refer: Biddingformat MFW-Bid.pdf)

GST fro Goods and Services (IGST/CGST/SGST TAX BENEFITS): PLEASE REFER clause no:8 of Form No: IPR-MFW-01-VI

QUOTATION SHOULD BE ADDRESSED TO SUDHIR KUMAR NEMA ONLY.

Sr. 0.	Description		Quantity	Rate
1	mechanical furnace chamber as per the d	rawings	1	No.
	e Material			
Sr. no.	Description	Quantity Unit	Value	

SUDIDR KUMAR NEMA Scientific Officer-H

### Annexure - 1

### Specification of mechanical furnace chamber as per the drawings

### **Scope of work in this tender:**

Fabrication, assembly, testing, supply, installation and commissioning of the mechanical furnace top and bottom chamber with generating 1000 Degree C in bottom muffle furnace section as shown in the drawing. Muffle furnace must be supplied with suitable power supply and control panel.

### **Detail requirements:**

The purpose of the mechanical furnace chamber is to create a high temperature at the bottom muffle section of the order of 1000 Deg C. The muffle section has an air flow pipe which carries the air from compressor. The upper section has provision to insert two graphite electrodes for generating a plasma arc between them. The material is dropped from the top lid which is hinged and closed with proper high temperature sealing and a suitable clamps. This top lid has to be air tight to avoid any leakages due to slight positive pressure inside the chamber. There is one port for thermo-couple connection and two ports for gas outlet. There is also high temperature insulation lining inside the top and bottom section of the furnace as shown in the drawing.

### **Muffle furnace chamber:**

The bottom muffle furnace heating section is 200mm x 200mm x ~380mm, which is connected to ash collection port at one side and perforated ceramic plate with top chamber at other side. The temperature inside the muffle furnace has to be 1000 degree C. the lining inside the muffle furnace is as per the dimension and material shown in the drawings. The suitable power supply and control panel shall be provided along with the muffle furnace chamber.

### **Top furnace chamber:**

The top furnace heating section is 300mm x 300mm x ~1000mm, which is having provision for the hinged mounted top sealed lead and is integrated with the bottom muffle furnace as shown in drawing. The perforated ceramic plate as shown in drawing in installed at the bottom of the top chamber. The top chamber is integrated with the ports and provision for graphite electrodes installation and moving arrangement. The insulation lining inside the top furnace chamber is as per the dimension and material shown in the drawings.

### Scope of work of vendor:

- Fabrication shall commence only after the detail understanding of the system from IPR engineer and approval given by IPR.
- 2. Procurement of all raw/finished/semi-finished material required for the fabrication of the system with all required appropriate support structure shall be carried out by the vendor as per the material standards & technical specifications given in this document.
- 3. Vendor shall submit the manufacturer's test certificates of all materials (Certified Material Test reports) for verification by IPR.
- Machining of all required parts/components, welding of all joints with full penetration welds where ever required shall be performed by the vendor.

### 1. Materials:

✓ The material for construction of the system must be Mild steel (Structural steel-IS 2062), insulation and SS 304 wherever applicable as per the BOM of drawing. The material for construction for appropriate supporting structure shall be M.S. (powder coating).

### **Fasteners:**

As per ASTM A193-AISI304 B8

### **Inspection and testing requirements:**

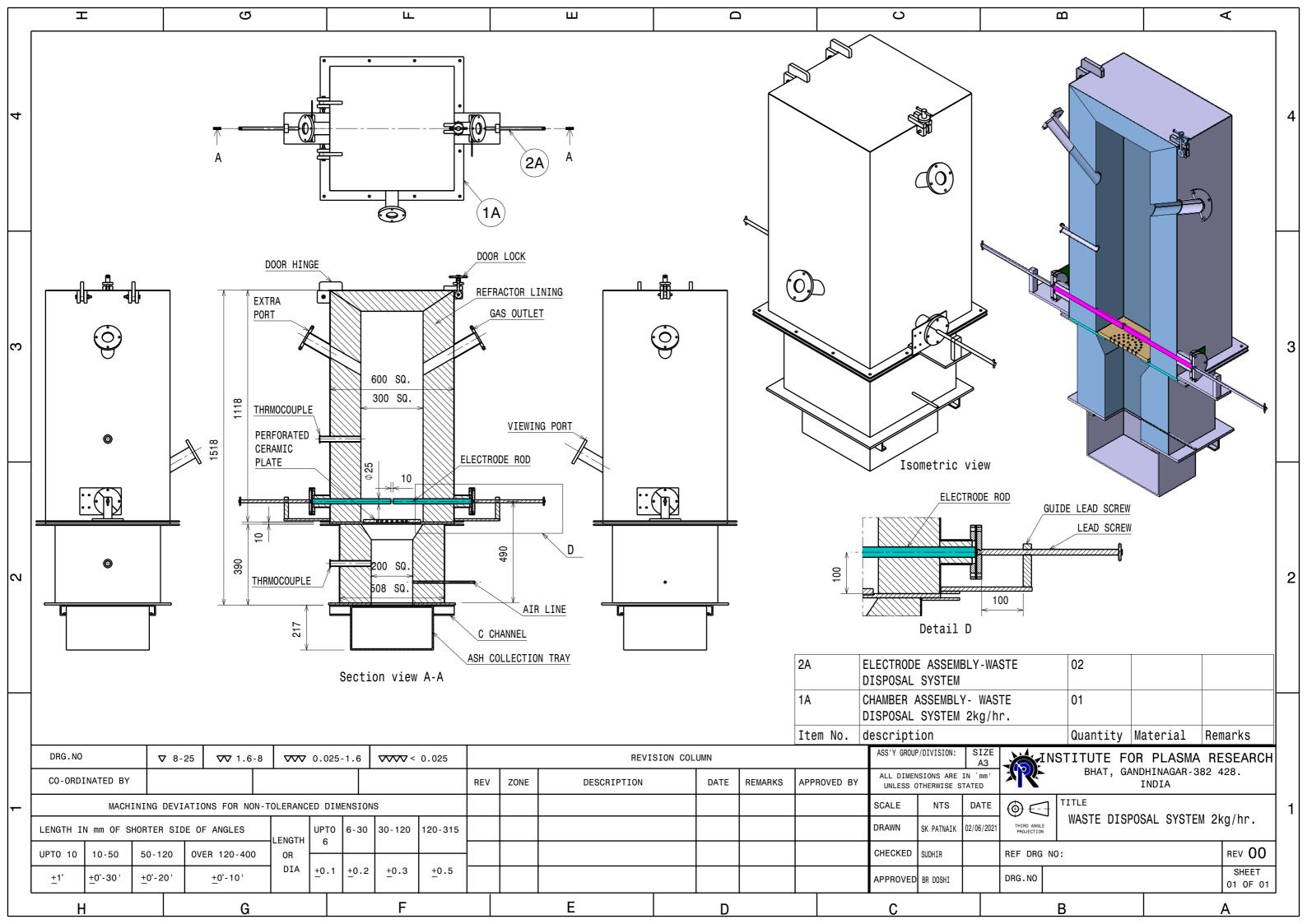
✓ All the components shall be inspected for its dimensions and tolerances for all the demountable and welded joints.

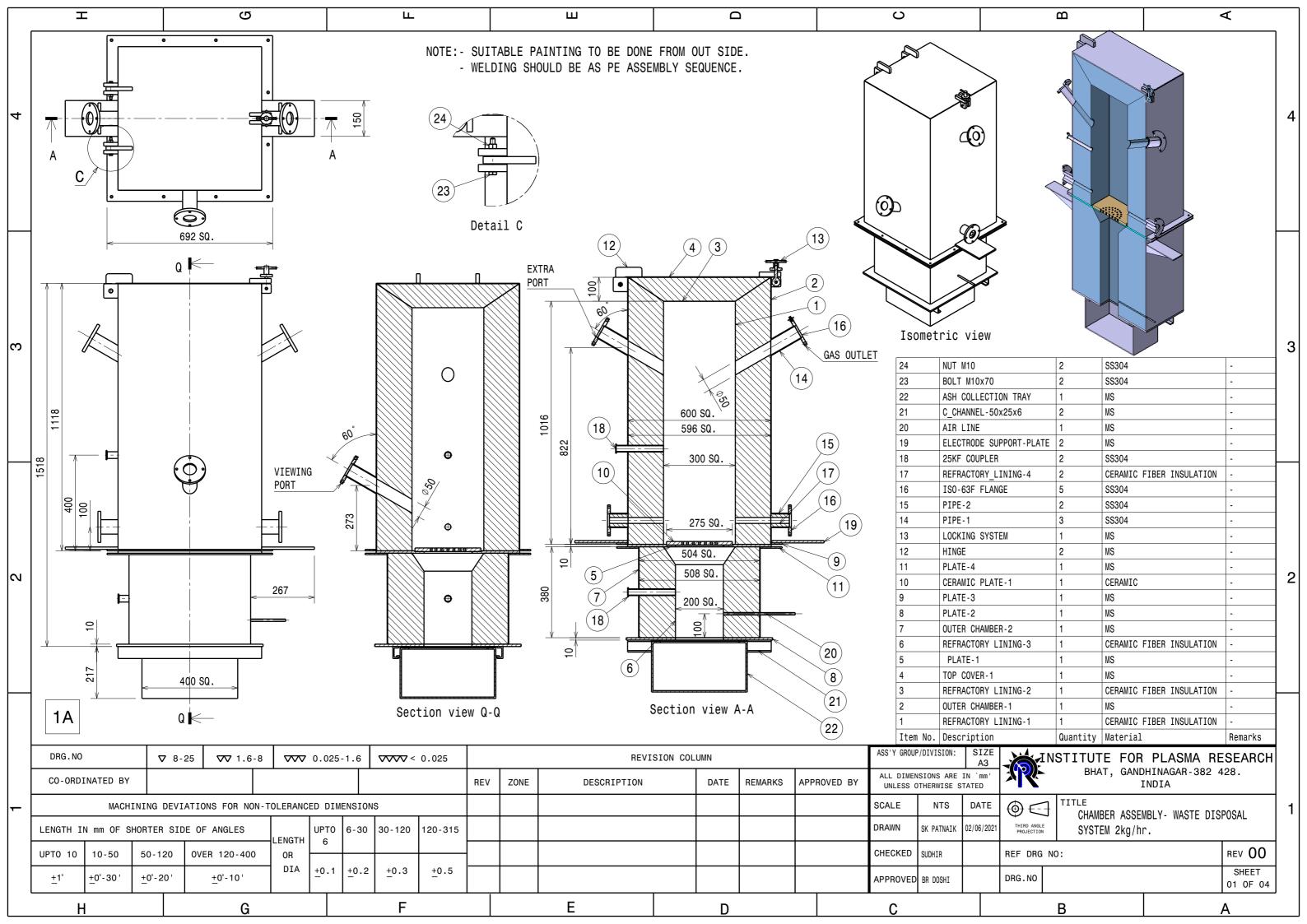
### A. Acceptance Test Plans (ATP)

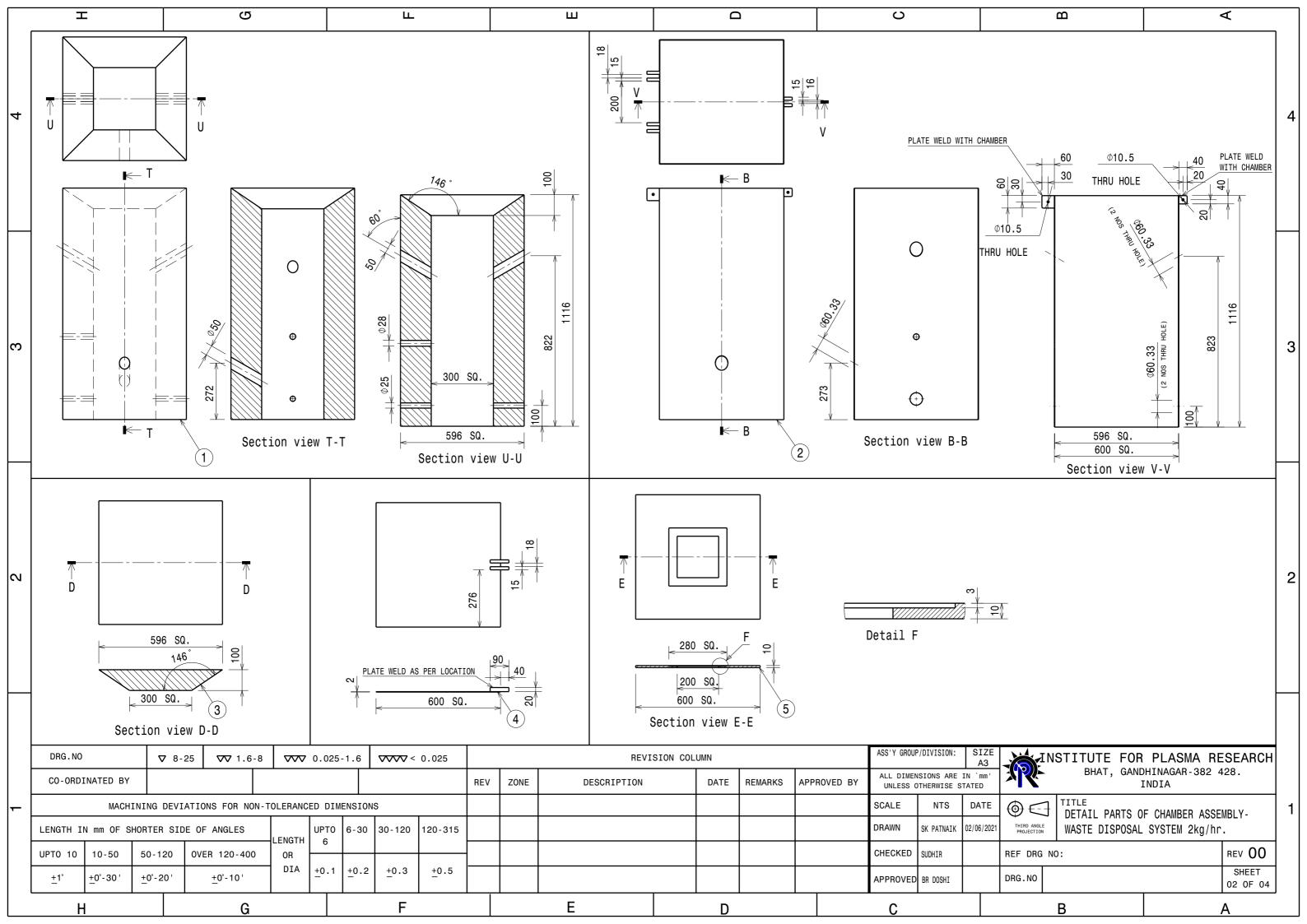
- A. Acceptance test plan at vendor's site
- 1. Dimensional check of all the components of System.
- 2. Vendor will demonstrate the mechanical furnace generating 1000 Degree C in the heating section of muffle furnace zone continuously for 6 hours along with its suitable power supply and control panel. Also suitable functions of the top furnace chamber sealing door and insulation integrity and electrode movement mechanism.
- 3. System will be inspected for its workmanship.
- 4. System should be firm on appropriate support structure and should not skid while It is under operation.
- 5. Any damage of the component and test material during trial will have to be replaced by vendor.

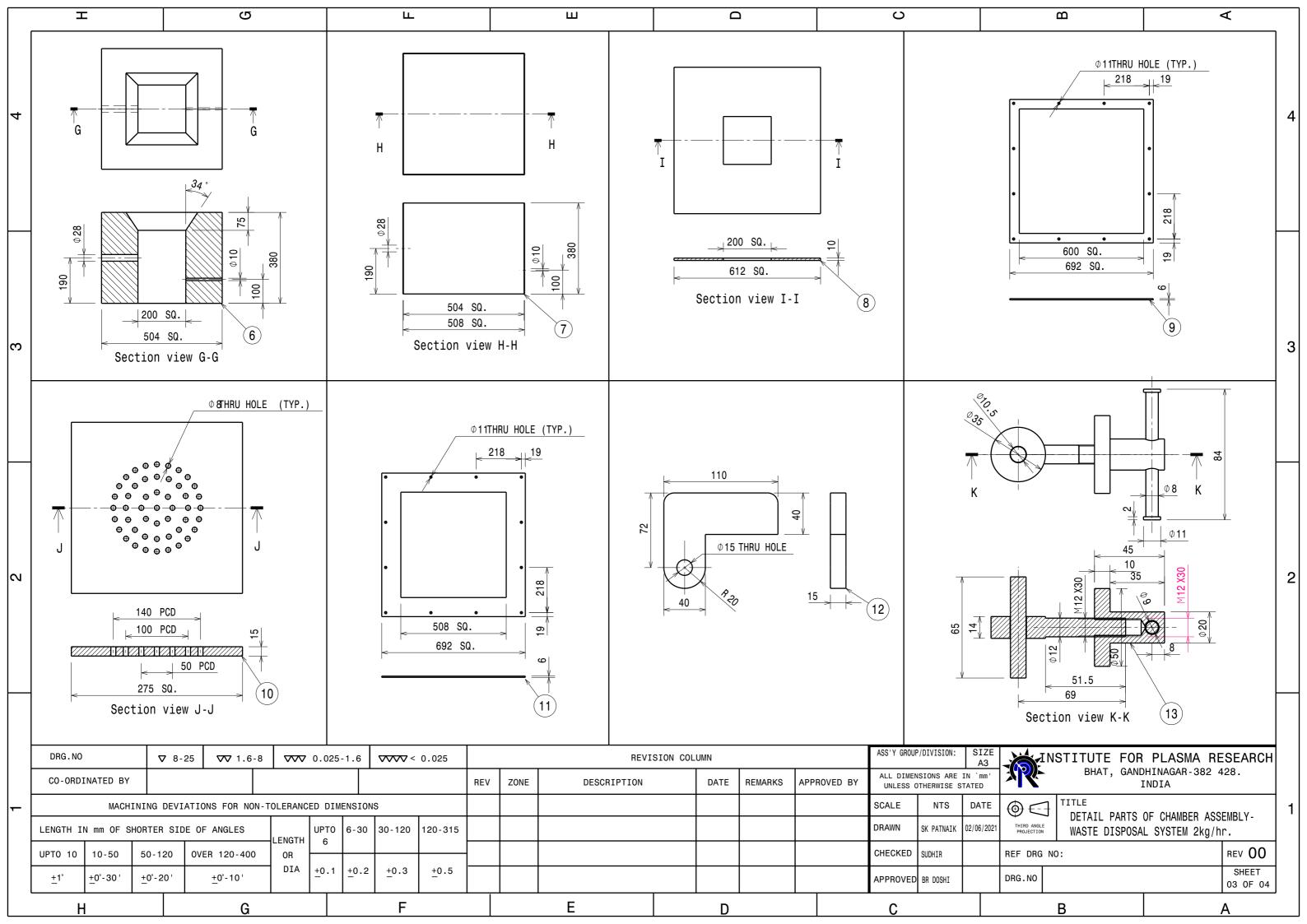
### B. Acceptance test plan at FCIPT-IPR.

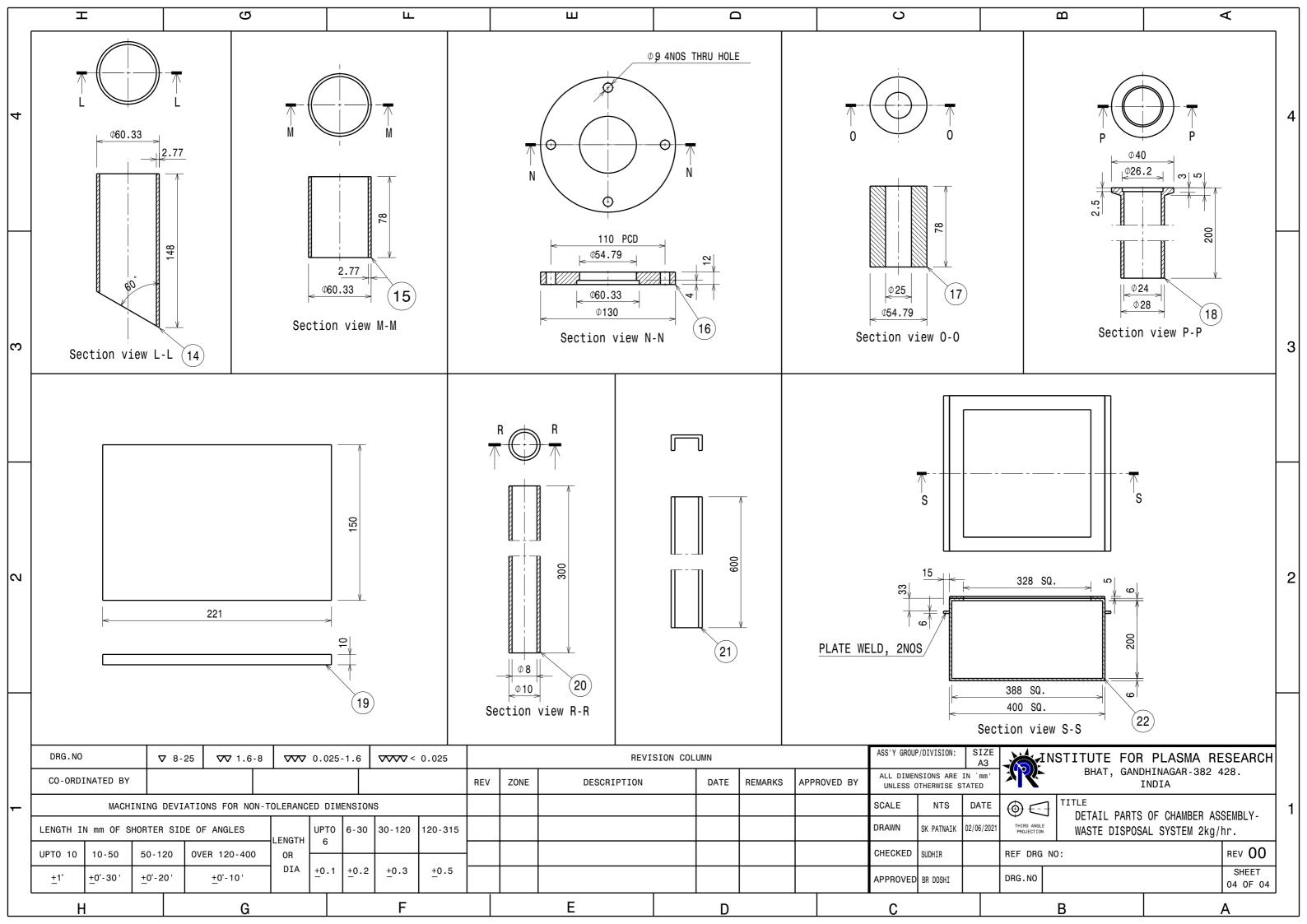
- 1. Installation and commissioning of the whole system at IPR.
- 2. All the test conducted during FAT at vendor site will be demonstrated at IPR.

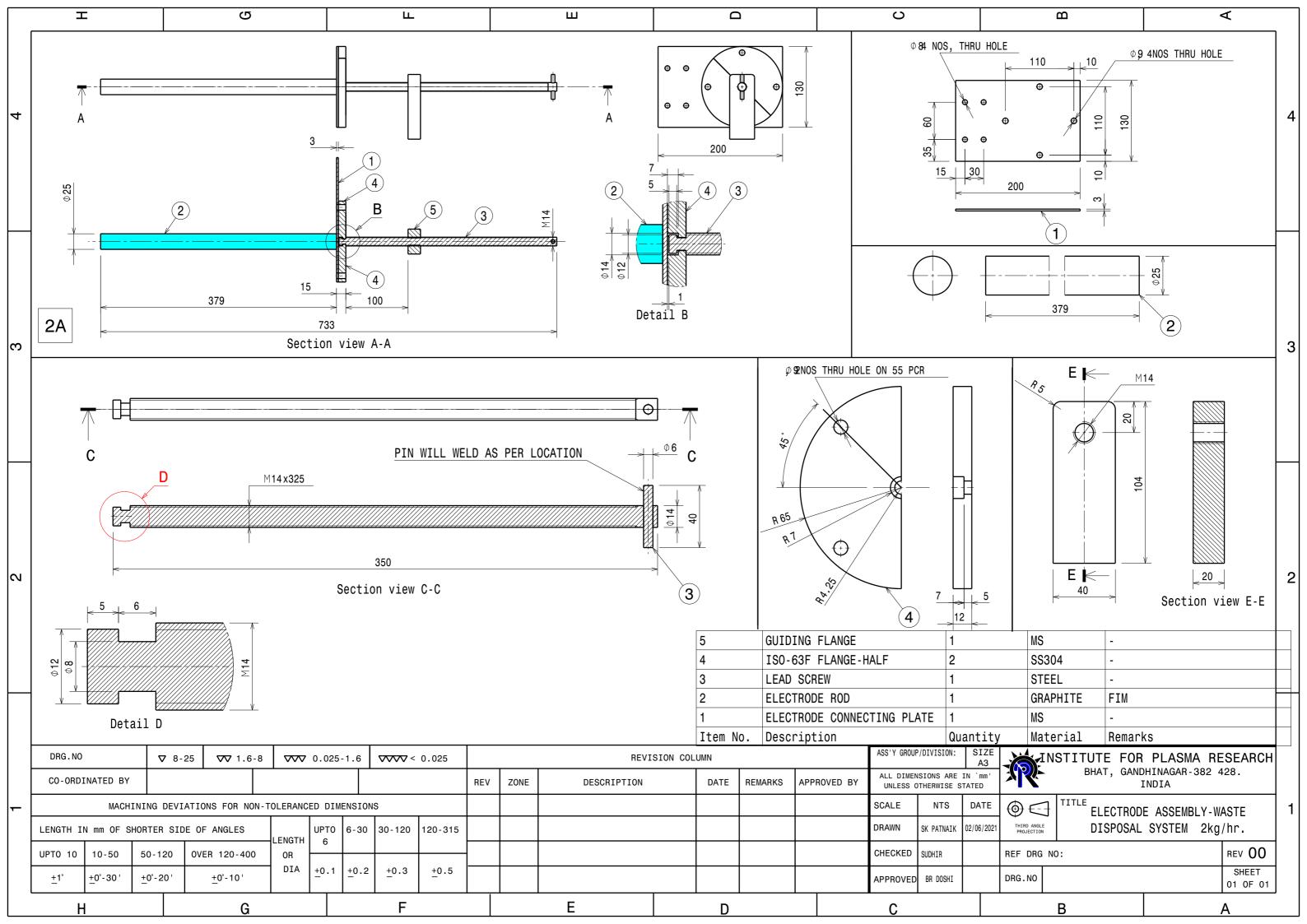














# प्लाज्ञमा अनुसंधान संस्थान

(भाट, इनदीरा पुल के पास, गांधीनगर382428 - , गुजरात

# Institute for Plasma Research Bhat, Near Indira Bridge, Gandhinagar – 382428, Gujarat (INDIA)



Form No: IPR-MFW-01.V1

### INSTRUCTIONS TO BIDDERS AND TERMS AND CONDITIONS

- 1. The Quotation and any order resulting from this enquiry shall be governed by our Conditions of Work Order and Contractor quoting this enquiry shall be deemed to have read and understood the same completely.
- 2. Where counter terms and conditions have been offered by the Tenderer, the same shall not be deemed to have been accepted by IPR unless our specific written acceptance thereof is obtained.
- 3. Quotation: Quotation should be submitted in the prescribed QUOTATION FORMAT attached with this Enquiry and the same should be submitted in a sealed envelope super-scribing the same with our enquiry No., date, due date and brief description of item on or before the due date. Late/delayed/incomplete/unsigned quotations will not be considered. Envelopes received without Enquiry number, date, due date and brief description of item may be rejected. The quoted prices should be firm for a period of 90 days from due date for placing order. IPR is not bound to accept lowest rate/s. IPR reserves the right to place on one or more parties. The scope of supply includes insurance by the Contractor.
- 4. **Specifications:** Goods should be offered strictly confirming to our specifications/drawings. Deviation, if any, should be clearly indicated by the contractor in their quotation. The Tenderer should also indicate the Make/Type number of the goods offered and catalogues, technical literature and samples, wherever necessary should accompany the quotation. Clarification/s on drawings should be obtained before submitting quotation.
- 5. **Terms of Prices:** Quotation should be submitted on door delivery basis without extra charge wherever possible. For quotations on Ex-Works, Ex-godown basis the approximate packing and forwarding charges should be indicated by the contractor. In the case of local contractors, the goods are to be delivered at our stores free of charge.
- 5.1 In respect of tenders on Ex-works basis, in case the tenderer has not mentioned in the offer packing, forwarding and transportation charges for safe delivery up to Purchaser's site, 2% of the price quoted towards packing (in respect of both local and outstation firms), 1% of the basic price quoted towards safe delivery charges in respect of local tenderer and 3% of the basic price quoted towards safe delivery charges in respect of outstation firm will be added for comparison of offers on safe door delivery at Purchaser's site.
- 5.2 Prices are required to be quoted according to the units indicated in the tender form/Enquiry. 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. Tender should be free from Correction and Erasures. 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. Unsigned quotations will summarily be rejected. If there is a discrepancy between the unit price and total price, unit price shall prevail.
- 7. IPR 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 rate quoted.
- 8. Goods & Services Tax (GST): The details of Taxes/GST and other levies legally applicable and intended to be claimed should be clearly indicated in the tender. Where this is not done, no claim on these accounts would be admissible later.

### a) GST for Goods (IGST/CGST/SGST TAX BENEFITS):

IPR is entitled to avail tax benefit as per the following notifications issued by Ministry of Finance, Department of Revenue, Government of India:

- (1) No: 47/2017-INTEGRATED TAX (RATE) DATED 14/11/17 for IGST
- (2) No: 45/2017-CENTRAL TAX (RATE) DATED 14/11/17 for CGST

And,

IPR is entitled to avail tax benefit as per the following notifications issued by Finance Department, Government of Guiarat:

(1) No. 45/2017-STATE TAX (RATE) DATED 15/11/17 for SGST

As per above notifications IPR will bear only 5% IGST for procurement of goods from outside Gujarat & 2.5% CGST and 2.5% SGST (total 5%) for procurement of goods within Gujarat. Vendors are required to charge tax as per these notifications while quoting/supplying the goods. Deviations, (if any) should be clearly mentioned in the quotation/offer.

### Please specify the HSN codes while quoting.

### b) GST for Services:

As applicable. Specify the SAC codes wherever services are involved.

- 9. **Delivery Date:** Delivery period is essence of the Contract. Contractor must indicate the firm delivery date by which the goods will be dispatched or delivered by them from the date of our order. Delivery period shall be clearly indicated against each item separately.
- 10. Price/ Purchase Preference: Purchase/Price preference to industries will be given as per the policy of the Government of India in force at the time of evaluation provided their offer is in compliance with the conditions of the policy.

An Aided Institute of Department of Atomic Energy, Government of India



## प्लाज्मा अनुसंधान संस्थान

भाट. इनदीरा पल के पास. गांधीनगर382428 — . गजरात

# Institute for Plasma Research Bhat, Near Indira Bridge, Gandhinagar – 382428, Gujarat (INDIA)



- 11. **Liquidated Damages:** The successful Vendor/Bidder should pay liquidated damages @ ½% (half percent) of the total work order value for the delay of each week in the scheduled date of completion of the work envisaged in the Work Order subject to a maximum of 5% (Five percent) of the total Work Order value.
- 12. **Inspection**: Goods on its arrival at IPR will be inspected by Stores, and his decision in the matter will be final. However, where the items are required to be inspected at the Contractors Premises, Contractor has to give advance notice regarding readiness of the Goods to enable us to depute our representative for inspection.
- 13. **Payment:** Payment will be arranged for accepted goods only within 30 days from the date of receipt of goods at IPR and bills in our accounts section, completed in all respects.
- 14. No correspondence will be entertained within 30 days from the date of receipt of good and bills, whichever is later.
- 15. **Guarantee**: The Stores offered should be guaranteed for a minimum period of twelve months, from that date of acceptance, against defective Goods, design, workmanship, operation or manufacture. For defects noticed and communicated during the Guarantee period, replacement/rectification should be arranged free of cost within a reasonable period of such notifications. In case where our specifications call for a guarantee period more than 12 months specifically, then such a period shall apply.
- 16. **Performance Bank Guarantee**: If demanded by IPR, the successful bidder will have to furnish Performance Bank Guarantee for 10% of the order value (basic price) from a Nationalized/Scheduled Bank/State Bank of India, valid throughout the Guarantee/Warranty period. The scheduled banks approved by IPR are Axis Bank, HDFC Bank, ICICI Bank and IDBI Bank. Bank Guarantees submitted other than from banks approved by IPR will not be accepted.
- 17. **Security Deposit:** If demanded the successful Bidder will have to furnish to the Purchaser an interest free security deposit for 10% (Ten percent) of the order value in the form of Bank Guarantee of an equivalent amount from a nationalized/ scheduled Bank/State Bank of India within 15 days from the date of work order and the said Guarantee should be valid till the goods are accepted by IPR. The scheduled banks approved by IPR are Axis Bank, HDFC Bank, ICICI Bank and IDBI Bank. Bank Guarantees submitted other than from banks approved by IPR will not be accepted. The Security deposit shall be forfeited in case the selected Bidder does not start the work within the time limit specified or fail to complete the work within the stipulated delivery period or fail to comply with any of the terms and conditions in the work order. On successful completion of scope of work and its acceptance by IPR, Contractor should send a letter requesting return of the original BG.
- 18. The Contractor shall at all times indemnify the purchase 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 or damage, which may cause failure of supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfilment of the contract.
- 19. Free Issue Material (FIM): Successful tenderer will have to arrange insurance showing beneficiary as "Institute for Plasma Research" at their risk and cost towards adequate security for the materials/property provided/issued by the Purchaser as Free Issue Material for the due execution of the contract.
- 20. The Director, IPR reserves the right to accept or reject any quotations fully or partly or to cancel the enquiry without assigning any reason.
- 21. **Jurisdiction**: The contract shall be governed by the Laws of India for the time being in force. The Courts of Gandhinagar only shall have jurisdiction to deal with and decide any legal or dispute arising out of this Contract.

# (This need to be printed in Bidders letter head)

1. Please quote with complete technical details along with technical compliance sheet.
2. Quotation should be submitted in the format given below, else IPR shall not consider the offer by the vendor.

NAME OF PARTY:

**ENQUIRY NO:** 

QUOTATION No. & DATE:

Currency	Currency of Quotation: Indian Rupees			tiu!	Packaging &			
Sr. No.	Item Description	Ş	Quantity	Rate (Basic)	forwarding (P&F)	Applicable GST	Applicable Rate (incl P&F GST and GST)	Total Value
		Code	С	q	U	P	e=b+c+d f=a*e	f
Н								
2								
m								
4								
2								
9								

Sr No.	Particular	Remarks
I.	Ex-works / FOR Destination	
II.	Freight	
III.	Insurance	
IV.	Delivery Period	
V.	Payment (IPR terms will apply)	
VI.	Guarantee / Warrantee	
VII.	Validity Period	
VIII.	Discount (if any)	
XI	IX. Remarks	

Authority Signatory Place:

Company Seal Date:

# Note:

1. Bidder should submit the copy of GSTIN / ARN Certificate along with the offer 2. Bidder should specify the SUPPLY and SERVICE rates/ charges separately wherever applicable