

# INSTITUTE FOR PLASMA RESEARCH

An Aided institute of department of Atomic Energy, Govt. of India)  
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## MINOR FABRICATION WORKS ENQUIRY

Office Copy

ENQUIRY NO : IPR/MFW/21-22/121

Date : 06-12-2021

Due Date : 28-12-2021 13:00 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 **sameer@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-V1**)
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-V1**

QUOTATION SHOULD BE ADDRESSED TO **S. S. KHIRWADKAR** ONLY.

Sr.No.	Description	Quantity	Rate
1	Fabrication, Installation and Testing of 4 nos. of Maintenance-Free Electrical Earthings and supply and laying of 100 meters of copper earthing strip as per technical specifications attached herewith.	1	No.

### Free Issue Material

Sr.No.	Description	Quantity	Unit	Value
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Note : Please quote with complete technical details (Technical Compliance sheet and product data sheet)



Encl:As per attachment

Sd/-  
S. S. KHIRWADKAR  
Scientific Officer-G

Sr.No	Description	Quantity	Rate
1	Installation, Installation and Testing of 1 nos. of Maintenance Free Electrical Handing and supply and laying of 100 meters of copper wiring size as per technical specifications attached herewith	1	No

Sr.No	Description	Quantity	Unit	Value

Note: (Please quote with complete technical details (Technical Specifications sheet and product data sheet))





**Annexure-1: Technical Specifications For Supply, Installation and Testing of Earthing Electrodes**

Sr. No.	Item description		Quantity
1.	<b>Pure copper earth electrode</b>		4 nos.
	I.	Material of electrode	Pure copper with purity $\geq 99.9\%$
	II.	Outer pipe diameter	75mm $\pm 2\%$ or better
	III.	Length of electrode	$\geq 3000$ mm
	IV.	Thickness of pipe	$\geq 2$ mm
	V.	Material Test Certificate	Required either from Manufacturer or NABL Accredited Lab.
2.	<b>Ground Enhancement material (Backfill compound)</b>		250 kg. approximately.
	I.	Standard	IEC 62561-7 or equivalent Indian standard (for corrosion, leaching, sulfur content, and other environmental regulations)
	II.	Resistivity of powder	$\leq 2 \Omega\text{-cm}$
	III.	Anti-corrosive to electrode	Required
	IV.	Material test certificate	Required
3.	<b>Brick/RCC chamber with manhole</b>		4 nos.
	I.	Chamber material	RCC/ Brick
	II.	Manhole material	RCC/Metal
	III.	Manhole Size	$\geq 300\text{mm} \times 300\text{mm}$
	IV.	Chamber height	$\geq 300\text{mm}$
4.	<b>Earthing Resistance</b>		$\leq 2 \Omega$
5.	<b>Inspection, Installation, testing and the final acceptance criteria</b>		As per the below mentioned instructions/procedures.

**1. Instructions for Inspection and Installation :**

- Before execution of the installation work, dimensional checks will be performed by IPR staff for all the earthing electrodes as per the item description mentioned in the purchase order. After a successful dimensional acceptance by IPR, installation work may be initiated.
- Prepare a hole of diameter 125 - 150 mm manually with the help of 'Earth auger' to a depth of minimum 3 meters.
- Place the earth electrode into the center of the hole.
- Penetrate earth electrode into the soil so that a minimum 150 mm of the electrode shall be inserted in the natural soil.
- Fill the Ground Enhancement Material (approx.40 - 50 kg) into the augured/dug hole in slurry form and allow it to set.

*Shiwach*  
06 DEC 2021



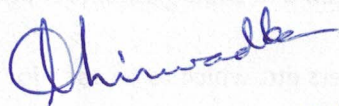
- f) Construct a chamber either using brick with both side plaster or a RCC chamber with a manhole of size mentioned in the above table.

**2. Procedures for Testing and Final Acceptance:**

- a) Material Test Certificate of Pure Copper Electrode should be submitted to prove that purity of Copper Electrode material being supplied is greater than or equal to 99.9%. The certificate to be submitted by the vendor to IPR must be obtained either from the manufacturer or from the NABL accredited material test laboratory.
- b) Material Test Certificate of Grounding Enhancement Material (GEM) should be submitted to prove that it is meeting IEC Standard 62561-7 or equivalent Indian standard.
- c) Vendor should put all efforts to get the lowest possible earthing resistance.
- d) Earthing resistance should be less than or equal to 2 Ohms for each individual earth-pit. Vendor should perform Testing of all the earth-pits resistance using three wire measurements and should submit a consolidated test report of the measurements of earth resistance of newly installed earth pits to IPR. If the earth-pit resistances are not within the allowed limit, regeneration with Grounding Enhancing Material and relevant other procedures shall be carried out by the vendor.
- e) Upon successful installation and testing of all the earth-pits, acceptance will be submitted by the user to IPR to initiate the payment process.

**Note:**

- The necessary tools and tackles, material and labours required to carry out the work, including measurement of earth resistance, shall be in the scope of the vendor.
- Vendor shall be responsible for any damage to nearby structures caused due to negligence while carrying out the earth-pit jobs.
- Vendor shall take all necessary safety precautions, such as providing Personal Protective Equipment(s) to his personnel/labours for carrying out work of the new earth-pits.



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## **Annexure-2: Technical Specifications for Supply and laying of Copper Earth**

### **Strip**

Sr. No.	Description	Specification
1.	Copper strip for Electrical purposes conforming to	IS:1897:2008
2.	Condition of supply	HB - Half-hard
3.	Thickness (in mm)	6 mm
4.	Width (in mm)	25 mm
5.	Length (in mm) [Refer Note mentioned below.]	100 meter
6.	Availability of test report either from Manufacturer or Central government/NABL/ILAC accredited laboratory to prove conformity of material with the IS standard as per Sr.No. 1 above.	Required


**Note:** Entire length of Copper strip should be preferably provided in a single piece. However, in case of multiple pieces, length of each copper piece of the Copper strip should be minimum 45 meter.

#### **1. SUPPLY & LAYING OF EARTH STRIP:**

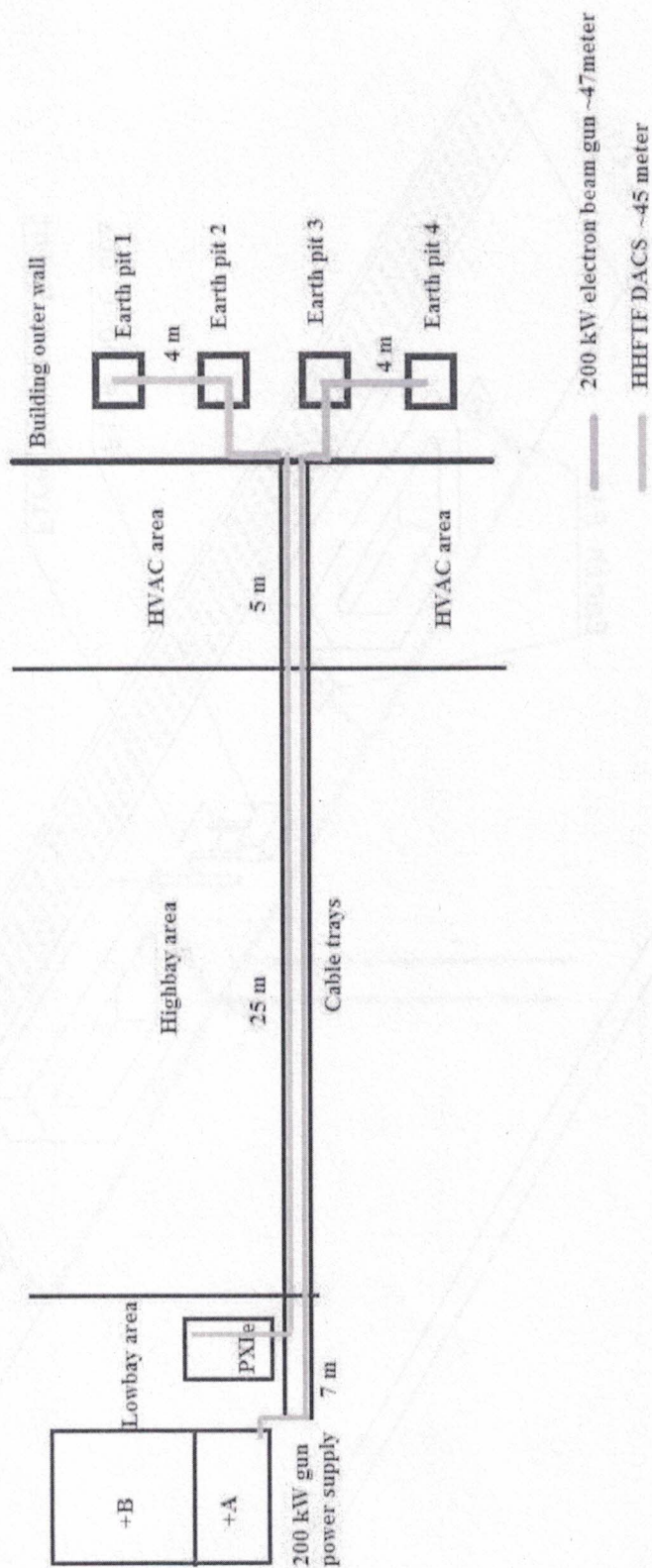
- Supply, proper laying & connecting 25x6 mm Copper earth strip with existing earth-pit electrode and Data Acquisition and Control System and 200kW/45kV High Power Electron Beam System of the High Heat Flux Test Facility (HHFTF) as per the attached layout.
- Joints and tapings in the main earth loop shall be made in such a way that reliable and good electrical connections are permanently ensured.
- As far as possible, Copper strip should not be cut. Vendor should bring proper bending tools for the systematic laying of Cu strip. If it is essential to cut the strip in between, then the vendor should inform the concerned IPR staff and should obtain his prior approval.
- All hardware, parts like Brass/SS bolts & nuts, washers etc. which to be used for the above jobs, is also in the scope of the vendor.

#### **2. OTHER TERMS AND CONDITIONS:**

- The necessary tools, tackles, labour etc. required for carrying out this job shall be borne by the vendor at his cost & risk. No additional payment will be made for the same.
- The vendor is responsible for any damage caused while carrying out Copper strip laying and connection establishing job between new earth pit and High Heat Flux Test Facility. Vendor shall take care of all necessary safety precautions including providing Personal Protective Equipment(s) and insulated tools to his personnel for carrying out the job.

  
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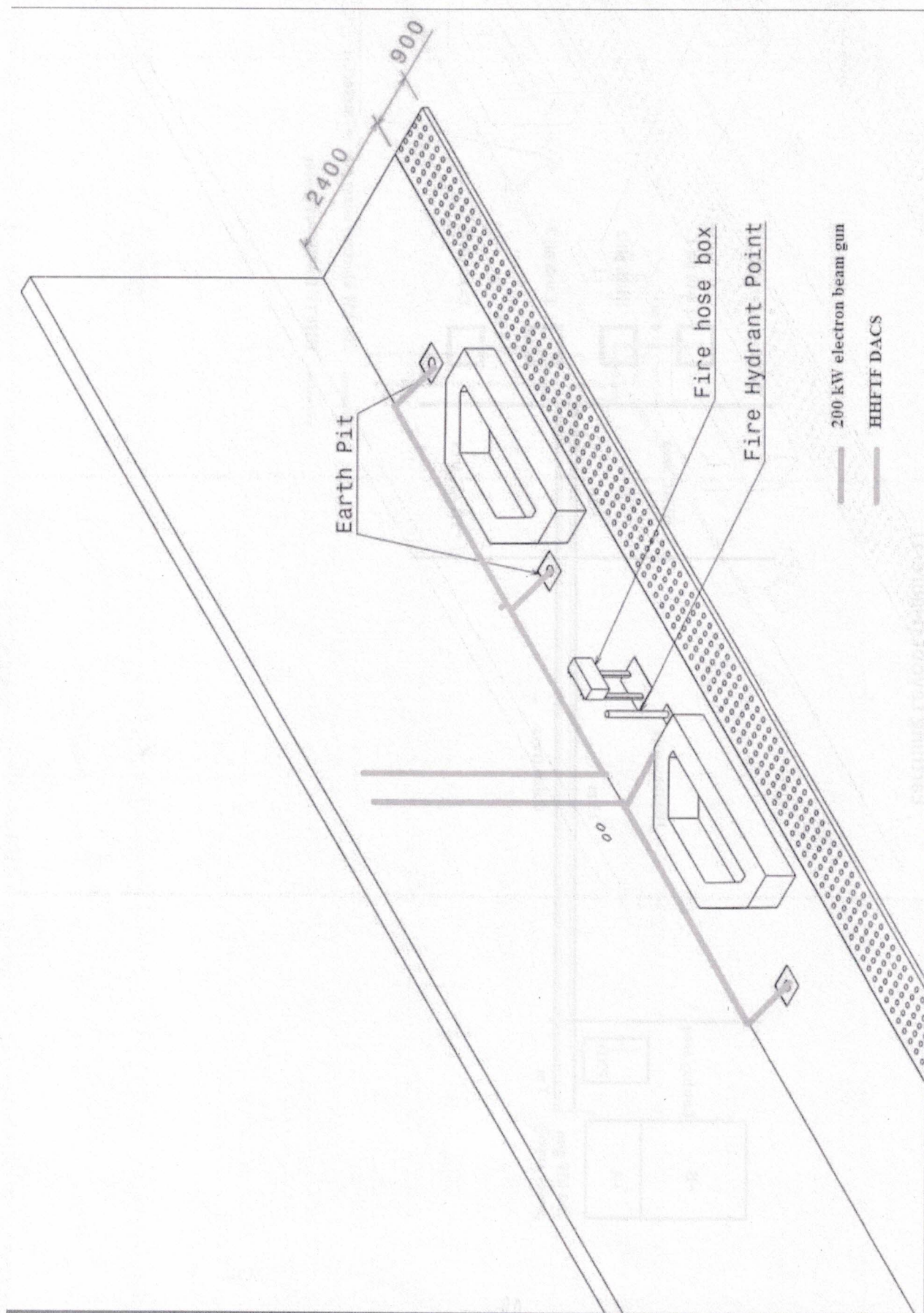
Earthing Layout (Figure-1)



*Shinwada*  
06 DEC 2021



Earthing Layout (Figure-2)



*Shirwadkar*  
06 DEC 2021





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 Gujarat:  
(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.





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/Warranty 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 of Quotation: Indian Rupees

Sr. No.	Item Description	HSN/SAC Code	Quantity	Unit Rate (Basic)	Packaging & forwarding (P&F)	Applicable GST	Rate (incl P&F and GST)	Total Value
1			a	b	c	d	e = b + c + d	f = a * e
2								
3								
4								
5								
6								

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)	
IX.	Remarks	

Place: Authority Signatory

Date: Company Seal

**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