प्लाज़्मा अनुसंधान संस्थान
INSTITUTE FOR PLASMA RESEARCH
परमाणु ऊर्जा विभाग, भारत सरकार का एक सहायता प्राप्त संस्थान
An Aided Institute of Department of Atomic Energy, Government of India

इन्दिरा पुल के पास, भाट, गांधीनगर – 382 428 भारत
दूरभाष: (079) 2396 2020/2021/2028
फैक्स: 91-079-23962277
वेब: www.ipr.res.in

NEAR INDIRA BRIDGE, BHAT
DIST. GANDHINAGAR - 382 428 (INDIA)
Phone: (079) 2396 2020/2021/2028
Fax : 91-079-23962277
Web : www.ipr.res.in

ENQUIRY

ENQUIRY NO : IPR/EQL/19-20/315
Date : 13-11-2019

Due on : 12-12-2019 by 1:00 PM IST

Please send your offer in sealed envelope specifying Enquiry 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 localpurchase@ipr.res.in

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

Kindly go through the following documents properly before quoting which are available on the IPR web portal i.e., http://www.ipr.res.in/documents/tender_terms.html / attached herewith.

1) Instructions to the bidders & Terms and conditions (refer Form No: **IPR-LP-01.V4**)
2) Bidding format

GST for Goods and Services (IGST/CGST/SGST TAX BENEFITS): Please refer **clause no: 8** of Form No: **IPR-LP-01.V4**

QUOTATION SHOULD BE ADDRESSED TO PURCHASE OFFICER ONLY

Sr No	Description	Quantity
1	QUARTZ TUBE OPTION-1	2.0 Nos.
2	QUARTZ TUBE OPTION-II	2.0 Nos.
3	QUARTZ TUBE OPTION-1II	2.0 Nos.

4	QUARTZ TUBE OPTION-1V other details are as per attached specification sheet and drawings	2.0 Nos.

Note: Note : (1) Unsigned quotations are not acceptable.
Quotation should be submitted duly signed on ALL PAGES invariably
(2) TDS as per CGST Act : As per provisions of section No. 51 of the CGST Act 2017, TDS @ 2% (IGST 2% or CGST 1% and SGST 1%) will be deducted while making payment to the suppliers where total value of orders/contracts/work orders exceeds Rs. 2.5 Lakhs, in the event of order in Indian Rupees

Delivery Time:-02 months

Encl: As Per Attachment

Sd/-

Mr. D. Ramesh
Purchase Officer-II

Information to Vendors: We are working towards a single platform for our future requirement. Hence, please refer IPR website i.e, http://www.ipr.res.in/documents/tenderseng.html for our future requirement.

Specification of quartz tubefor Helicon Plasma Thruster

- Tube should be transparent and both end open.
- The tube should be electrically fused for low impurity content.
- Tube should be fabricated as per the drawings attached.
- Tolerance in ID/OD = ±2 mm and in length = ± 5 mm and in thickness=±1mm.
- Property test certificate of the material used for fabrication should be provided.
- The quartz material used for the fabrication of the tube should have the following properties:

1) Mechanical

- Density : 2.20 x10^3 Kg/m^3
- Young's Modulus : 74 x 10^6 KN/m^2
- Rigidity Modulus : 32 x 10^6 KN/m^2
- Compressive Strength : 20 x 10^6KN/m^2
- Tensile Strength : 70 x 10^3 KN/m^2
- Shear Strength : 70 x 10^3 KN/m^2

2) Electrical

- Electrical Resistivity : 2 x 10^{19} ohm cm at 20°C
  : 2 x 10^6 ohm cm at 800°C
- Dielectric Strength : 10KV/mm at 20°C
  : 2.5KV/mm at 500°C

3) Thermal

- Strain Point : 1385°K
- Annealing Point : 1455°K
- Softening Point : 1853°K
- Continuous Operating Temp : =>1000°C
- Coefficient of Expansion : 0.52 x 10^{-6} per °C

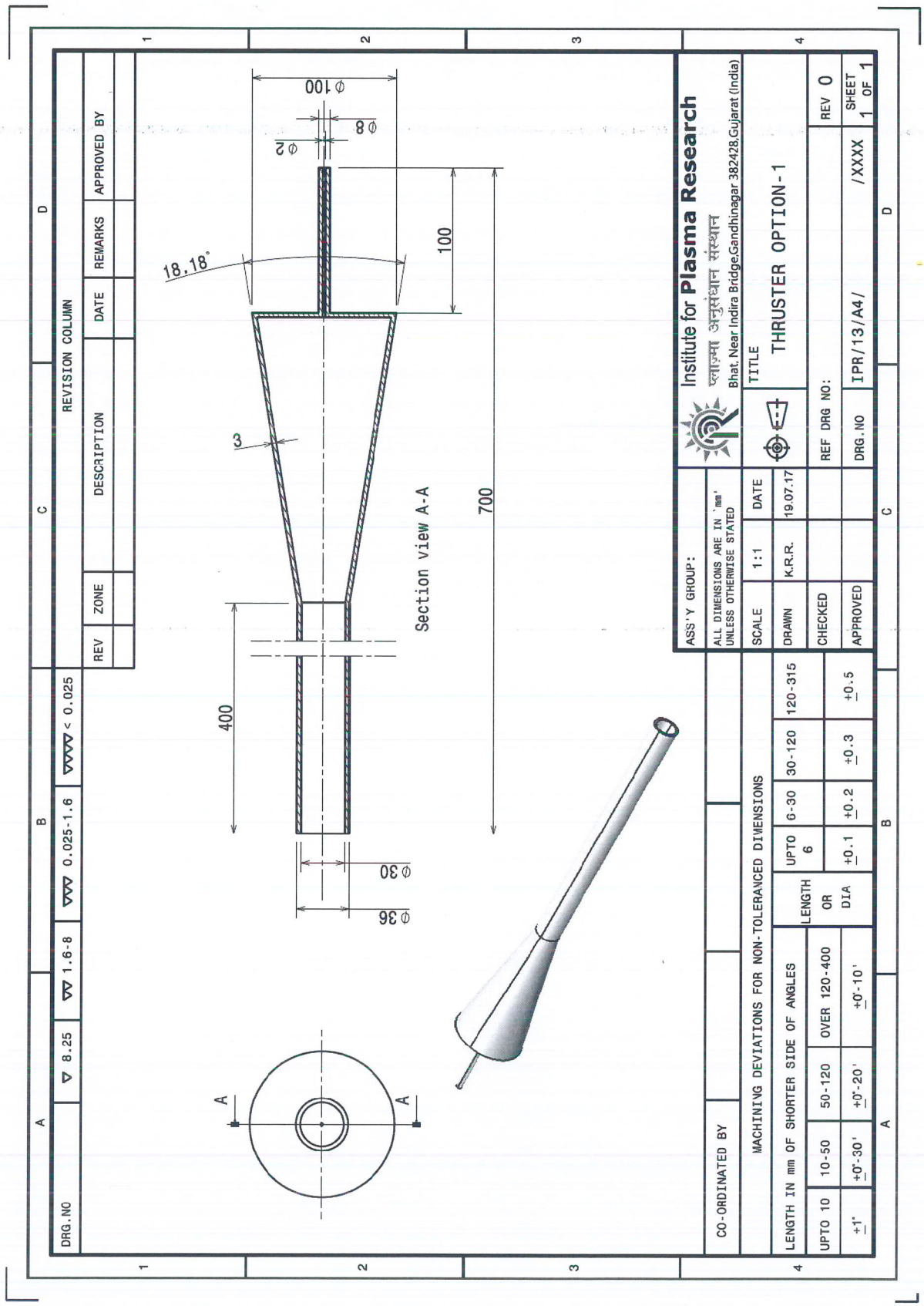
4) Chemical

- SiO_2 Content : 99.995%
- Total Metallic Impurities : 10ppm (Typical)

S. No.	Items	Quantity
1	Quartz tube Option-I	2
2	Quartz tube Option -II	2
3	Quartz tube Option -III	2
4	Quartz tube Option -IV	2

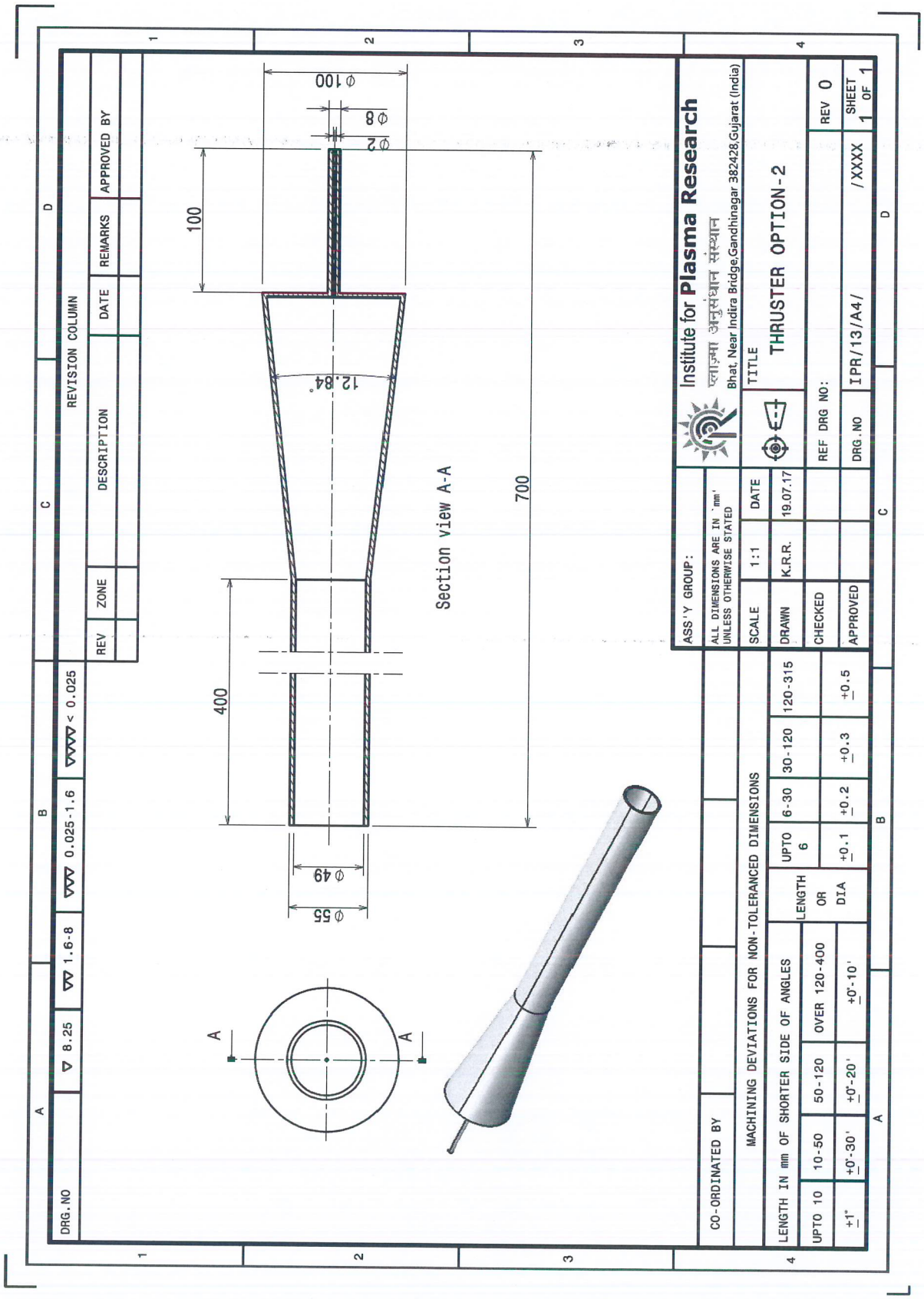
Item 1:
Required Quantity-2 Nos.

Drawing



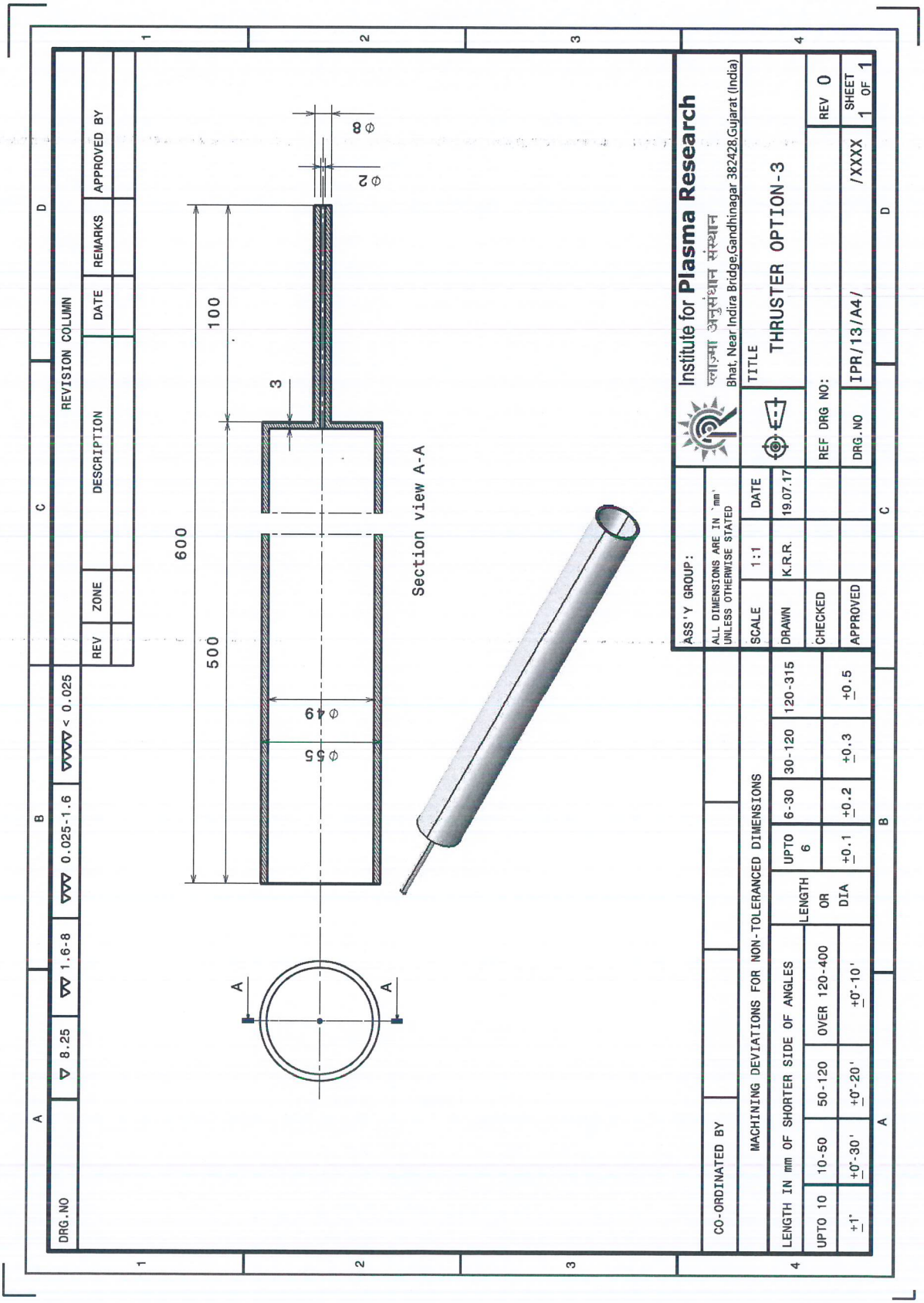
Item 2:
Required Quantity-2 Nos.

Drawing



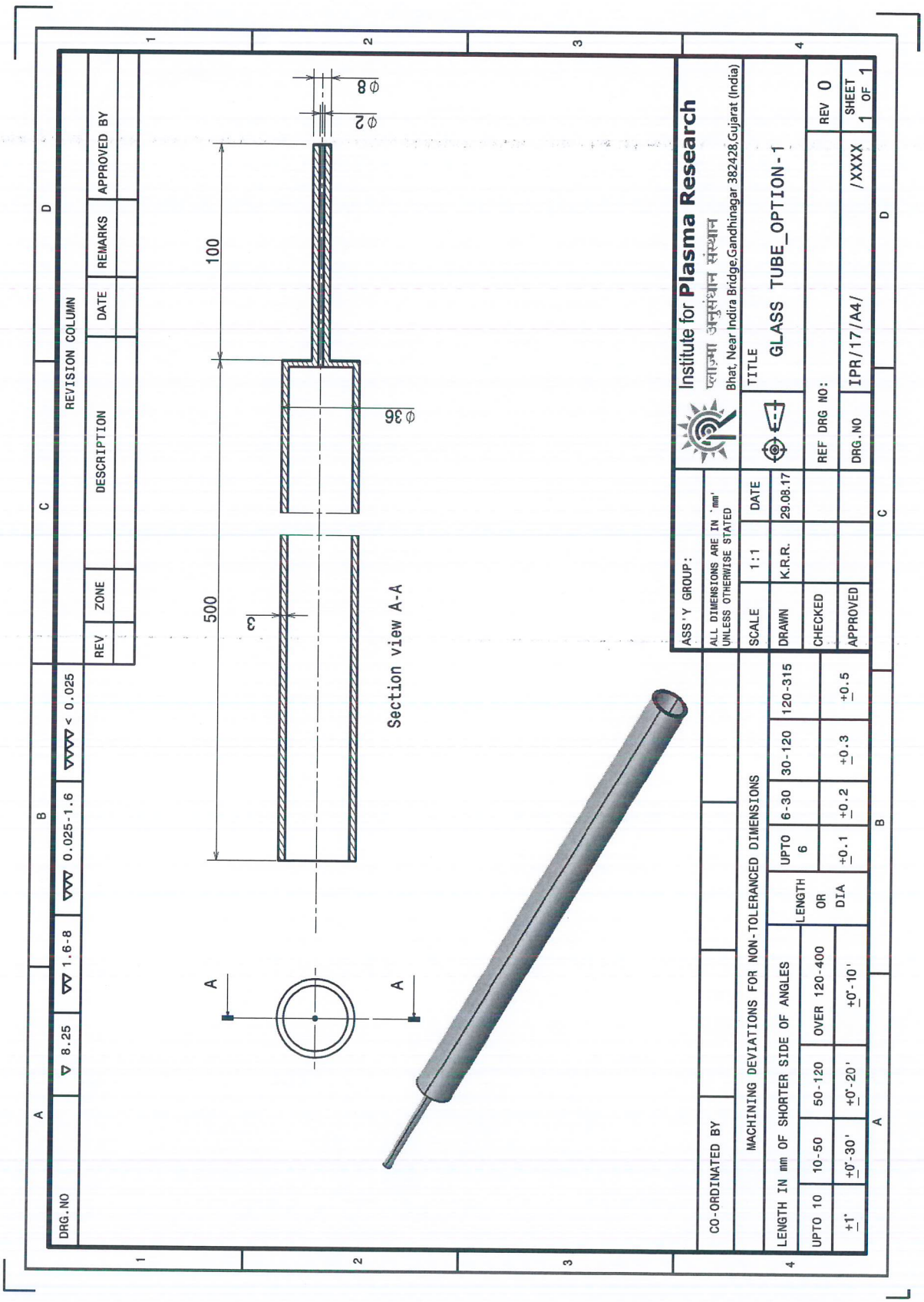
Item 3:
Required Quantity-2 Nos.

Drawing



Item 4:
Required Quantity-2 Nos.

Drawing



Compliance Sheet

Sr. No.	IPR Specification	IPR Requirement	Vendor **Bidder's official stamp and sign** **Date:** " Kindly use technical values avoid using words **"yes/complied/ok/agree/confirm "**
1	Tube should be transparent and both end open.as per drawings enclosed specifications sheet (Sr .I-IV)		
2	The tube should be electrically fused for low impurity content.		
3	Tube should be fabricated as per the drawings attached.		
4	The quartz material used for the fabrication of the tube should have the following properties:		
5	**Mechanical properties**		
	Density	2.20×10^3 Kg/m^3	
	Young's Modulus	74×10^6 KN/m^2	
	Rigidity Modulus	32×10^6 KN/m^2	
	Compressive Strength	20×10^6KN/m^2	
	Tensile Strength	70×10^3 KN/m^2	

	Shear Strength	70×10^3 KN/m^2	
6	**Electrical Properties** Electrical Resistivity Dielectric Strength	 2×10^{19} ohm cm at 20°C 2×10^6 ohm cm at 800°C 10KV/mm at 20°C2.5KV/mm at 500°C	
7	**Thermal properties** Strain Point Annealing Point Softening Point Continuous Operating Temp Coefficient of Expansion	 1385°K 1455°K 1853°K =>1000°C 0.52×10^{-6} per °C	
8	**Chemical properties** SiO_2 Content Total Metallic Impurities	 99.995% 10ppm (Typical)	
9	Tolerance in ID/OD = ±2 mm and in length = ± 5 mm and in thickness=±1mm.		
10	Property test certificate of the material used for the fabrication should be provided.		
11	Packing and forwarding shall be done with utmost care for preventing any kind of damages and safe handling of the Items.		

Bidder's official stamp and sign

Date:

" Kindly use technical values avoid using words **"yes/complied/ok/agree/confirm "**