

# TENDER DOCUMENT

## ( Two Stage Bidding System)

**SUB. : X-ray tube and accessories**

TENDER NO. : SMR/PUR/CN270/2022I/PT

DUE ON : 12/05/2022

EMD : Rs. 3,00,000/-

TENDER FEE : Rs. 500/- ( + 18 % GST )



प्रायोगिक सूक्ष्मतरंग इलेक्ट्रॉनिकी इंजीनियरी तथा अनुसंधान संस्था  
SOCIETY FOR APPLIED MICROWAVE ELECTRONICS ENGINEERING & RESEARCH  
आई आई टी कैंपस, पवई, मुंबई 400076. फोन : 022 25723030/7221 फैक्स : 022  
25723254  
IIT CAMPUS, POWAI, MUMBAI 400 076. TEL. : 022-25723030/7221, Fax : 022  
25723254  
WEB SITE : [www.sameer.gov.in](http://www.sameer.gov.in) E-mail : [purchase@sameer.gov.in](mailto:purchase@sameer.gov.in)

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## **SECTION – I**

### **INSTRUCTIONS FOR SUBMITTING THE OFFER**

1. Tender document can be purchased from the Accounts Section of SAMEER located at IIT Campus, Powai, Mumbai-76, between 1.30 pm to 4.30 pm, on cash payment, on all days except Saturdays, Sundays and public holidays.

If the Tender document is downloaded from our website <http://www.sameer.gov.in> or <https://eprocure.gov.in/eprocure/app>, then the Tender Fee is not applicable.

2. **Two Stage Bidding System** : Bidders may note that this procurement would be processed under Two Stage Bidding System.

- A. In the first stage of bidding process, Vendor should submit bid containing technical aspects and contractual terms and conditions of the proposed procurement without price bid.
- B. All first stage bids, which are otherwise eligible, shall be evaluated by SAMEER.
- C. In the second stage of bidding process, SAMEER shall invite bids from all those bidders whose bids are technically accepted, final bid with price bids in response to a revised set of terms and conditions of the procurement.
- D. Due to revised/modification in the specification or terms and conditions vendor may withdraw from the bidding proceeding by declaring his intention to withdraw from the procurement proceeding with adequate justification. In such case the Earnest Money Deposit will not be forfeited.

3. **Earnest Money Deposit (EMD):**

A. Earnest Money Deposit should be submitted in the form of Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any commercial bank of India, drawn in favor of "**Society for Applied Microwave Electronics Engineering and Research**". If the EMD is given in the form of Bank Guarantee or Fixed Deposit, then it should be valid for minimum 15 days beyond the validity of the quotation. EMD also can be paid through online payment mode. Intimation should be sent to SAMEER once the online payment is done. A copy of the Transaction details should be enclosed with Technical Bid.

For online payment our banker's details are as below:

Beneficiary Name : **Society for Applied Microwave Electronics Engineering and Research (SAMEER)**

Name and address of the Bank : Canara Bank, IIT Powai Branch Mumbai 400 076.

Account Number : 2724101086829, Type of the Account : Saving,

IFS Code : CNRB0002724 , MICR : 400015129

B. **Refund of EMD** : Unsuccessful tenderer's earnest money will be returned to them **without any interest** after expiry of the tender validity period/ once the tender is finalized. Successful bidder's earnest money will be returned **without any interest** only after execution of order and submission of PBG (if asked).

**C. Forfeiture of EMD :** Except in the circumstances mentioned **at 2D above**, earnest money of a tenderer will be forfeited, if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. Successful tenderer's earnest money will be forfeited if tenderer does not execute purchase order / contract as per the terms and conditions mentioned therein.

**D. Exemption from submission of EMD:** Firms which are registered with Ministry of Electronics and Information Technology (MeitY) or All MSEs having registration as per provisions of the MSME Policy i.e. registration with District Industries Centre (DIC) or Khadi and Village Industries Commission (KVIC) or Khadi and Industries Board (KVIB) or Coir Board or National Small Industries Commission (NSIC) or directorate of Handicrafts and Handlooms or Udyog Aadhaar Memorandum or any other body specified by Ministry of MSME are also exempt from payment of EMD. Proof of valid registration should be attached along with the Technical Bid, failing which the Tender will be rejected.

**E. Bid Security Declaration for EMD:** In lieu of submission of EMD, vendor may submit the "Bid Security Declaration" as per Annexure I, on their letterhead.

**4. A.** In a tender, either the Indian Agent on behalf of the Principal / OEM (Original Equipment Manufacturer) or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.

**B.** If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

Failure to adhere to the above conditions will lead to automatic disqualification of bid. Tenders submitted by the Indian agent on behalf of his principal /OEM should be supported with a letter of authority from the Principal/ OEM.

In case the manufacturer does not have an authorised representative in India at the time of submission of the bids and the company appoints a representative later on, SAMEER will only correspond with the manufacturer.

**5. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services or works only if they are registered with the Registration Committee, constituted by the Department of Promotion of Industry and Internal Trade (DPIIT). A valid registration certificate is to be attached. "Bidder from a country which shares a land border with India" means: -**

- a. An entity incorporated, established or registered in such a country; or
- b. A subsidiary of an entity incorporated, established or registered in such a country; or
- c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
- d. An entity whose beneficial owner is situated in such a country; or
- e. An Indian (or other) agent of such an entity; or
- f. A natural person who is a citizen of such a country; or
- g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.

**The Successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India, unless such contractor is registered with the Registration Committee, constituted by the DPIIT.**

## **6. PERFORMANCE SECURITY**

- a. The successful bidder has to give Performance Security Deposit in the form of an Account Payee Demand Draft / Fixed Deposit Receipt from an Indian commercial bank / Bank Guarantee from an Indian commercial bank / a counter Letter of Credit (LC) from our bankers (in case of foreign order), for **3 %** of Order Value, immediately after receiving the purchase order. Performance Security should remain valid for a period of sixty days beyond the date of all contractual obligations including warranty obligations.
- b. Successful tenderers Performance Security will be forfeited if the purchase order / contract is not executed as per the terms and conditions mentioned therein.
- c. Performance Security Deposit without any interest will be returned only after complete execution of purchase order (including warranty period), as per purchase order 's terms and conditions.

**7. Purchase Preference (Preference to make in India) :** As prescribed in "Public Procurement (Preference to Make in India) order 2017 of GOI, Dept of DIPP" ( OM No. P-45021/2/2017-PP(BE-II dated 15<sup>th</sup> June 2017 as amended from time to time ), purchase preference will be given to the bidder. Necessary certification for local content must be submitted by the prospective bidders strictly as per Annexure II", on their letterhead.

**8. Tender is to be submitted in sealed cover, superscribed as `Technical Bid`. Tender should be addressed to 'The Purchase Officer, SAMEER, IIT Campus, Powai, Mumbai 400 076'. Tender reference number including 'Due Date' should be clearly mentioned on the cover. Name, Address and contact details of the vendor should be mentioned at back side of all cover.**

## **9. Further details concerning 'Technical Bid' are given below:**

### **A. Technical Bid:**

- ❖ Original manufacturer's technical specification sheet must support details provided in the Technical bid with all the specifications/ relevant technical Literatures/Brochures/Catalogues for the item. Bids received without the printed technical specification sheet/brochures/catalogues for item will be technically disqualified.
- ❖ The Technical Bid should **not** contain any **financial information**.
- ❖ The item and accessories quoted must be from original manufacturer and must be first purchased ( **No second hand item/sub-item will be accepted** )
- ❖ In case the bidder is the authorised representative of a foreign manufacturer/supplier, a certificate from the principal must be included in the technical bid.
- ❖ In case of deviation or substitution from the particular specification contained in the tender document, please indicate clearly as 'Alternate offer' and should contain sufficient details to show that the alternative would equally serve the purpose. All relevant technical data should be enclosed. In case of equipment, the itemised cost of essential accessories, optional accessories and spares required need to be specified.

❖ **Technical Bid should contain the following :**

- a. **Earnest Money Deposit (EMD) / valid certificate for exemption or Bid Security Declaration** ( Annexure I ).
- b. **Tender Fee Receipt Number** ( if the tender document is purchased from Accounts Section, SAMEER, Mumbai).
- c. **Technical Specification**
- d. **SECTION III** of Tender Document i.e. Commercial Terms & Conditions duly filled, stamped and signed.
- e. Certification for local content ( Annexure II ).
- f. A valid registration certificate from DPIIT as per Sr. No. 5 of Section I, if applicable.

**Technical Bid without the above information will not be considered.**

**B. Price Bid ( Should be submitted at Second Stage only by the qualified vendors ) :**

**Price bid shall contain the following information:**

- a. **Quotation for the items (including the price break up for all options and accessories).**
- b. TAXES , DUTIES AND LEVIES if applicable should be clearly specified.
- c. Discount offered on quoted price ( considering that SAMEER is an R&D organization).
- d. Total price should be mentioned in both figures and words. Alterations, if any, should be attested / initialed.
- e. The bid shall be free of hidden costs / ambiguity.
- f. There shall be no overwriting.

**10.** Tenders/Bids should be dropped in **Tender Box** only.

**11.** Tender received via email, fax and **Late Tenders** will not be considered.

**12.** Unsuccessful bidders will **not be formally informed** of the result of their tender.

**13.** The **Technical Bid/Price Bid** will be opened on the next day of their respective due date. **As per two stage bidding process, only the technically qualified bidders will be asked to submit the price bids. The bidders have to submit the price bids in stipulated time in sealed cover, superscribed as 'Price Bid', as per the SECTION IV.** Tender should address to **'The Purchase Officer, SAMEER, IIT Campus, Powai, Mumbai 400 076'**. Tender reference including 'Due Date' should be clearly mentioned on the cover. Name, Address and contact details of the vendor should be mentioned at back side of cover.

**14. Date and Timing for opening Tender:** Next day after due date.

**IMPORTANT NOTE:**

- a. Participation in Public Tender Opening will be STRICTLY via ONLINE VIRTUAL PLATFORM.
- b. Vendors interested must fill the ONLINE FORM available at <http://publictender.sameer.gov.in/> , two working days before the tender opening date.
- c. On the day of tender opening, a virtual meeting link will be provided through mail to the vendors who have registered for participating in the tender. Only the vendors who have submitted the offer can participate in the online tender opening.
- d. It will be assumed that those Vendors who did not fill in the form are not interested in joining the Tender Opening Process.

**15.** For any clarification please mail at [purchase@sameer.gov.in](mailto:purchase@sameer.gov.in)

**16. Corrigenda:** Corrigenda, if any, to this tender will be published on our website [www.sameer.gov.in](http://www.sameer.gov.in). The bidders are advised to check our website, before submitting the bid.

## SECTION - II

# TECHNICAL SPECIFICATION

### **Scope:**

Supply, installation, commissioning, warranty, documentation of 225 KV/4.0 KW - 4.5 KW, variable voltage and current X Ray System, unipolar X-Ray tube, digital control console, HV cables, Cooling system and accessories for ready to use set up as per details below.

The X-ray based irradiator system are multipurpose equipments commonly used in the field of blood irradiation, inactivation of RNA Viruses, food preservation, mutation, biological and genetic effects of radiation, sterile insect technique, radiation chemistry, preservation of graft tissue etc.

### **Detailed specifications for X-ray based irradiator:**

#### List of items:

1. X ray tube as per specifications
2. High voltage Generator, Control unit, Power supply, High voltage tank
3. High Voltage Cables: 1 pair, 5 meter long each.
4. Power connection cables: 15 meter long
5. Water cooler including pair of 10m cooling hoses, cooler control cable 10m and cooler power cable 10m: The water is cooled by an air cooled heat exchanger
6. Digital Control unit and software
7. Warning flash lamp with 15m cable
8. Service tool kit
9. Necessary Standard / Certificate traceable to International Standard.
10. Optional / Compulsory Accessories like IP65/54 cover, Cover adapter, coolant, antifreeze, Laser centering devices etc.
11. Spares & Consumables
12. Installation, commissioning & performance prove-out, training on operation, troubleshooting & maintenance
13. Documentation: Testing & Calibration Certificates, exposure charts as per international standards.
14. O & M Manuals with soft copy pdf form. [3 Sets]

#### **X-ray tube specifications:**

The X-ray tube should be capable of operating at very high power up to 4.5 KW whose dose level and uniformity is sufficient enough for the irradiation of blood samples. The tube should be capable of operating continuously at its maximum rated power for at least 8 hours. The tube should be water cooled. The cooling water requirement should be clearly mentioned by the manufacturer so that the temperature of the tube is maintained at the ambient conditions. X-Ray tube housing shall be so constructed that leakage radiation through the protective tube housing in any direction, averaged over an area not larger than 100 sq. cm with no linear dimension greater than 20 cm, shall not exceed and air kerma of 10 mGy in 1 hour at a distance of 1.0m from the target when the tube is operating at the maximum rated kVp and the maximum rated current at that kVp. The detailed specifications for the X-Ray tube are attached.



## SPECIFICATION FOR 225 kVp X-RAY TUBE

Sr.No.	PARAMETERS	DESCRIPTION
1.	Tube Voltage and type	~225 kVp Unipolar, directional
2.	Tube Power	4000 W-4500 W
3.	Maximum Current	20 mA
4.	Focal spot size EN12543	d=5.5 mm or higher
5.	Tube type	Continuously operable
6.	Period of continuous operation of tube	Minimum 8-hours
7.	Focus	Large focus
8.	Inherent filtration	< 2.4 mm Be
9.	Beam angle	40 degree
10.	Target angle	30 degree
11.	Target Cooling medium	Water
12.	Cooling medium flow rate	As required to keep the temperature on the surface of the tube at ambient condition.
13.	Dose at 1 meter from focalspot	>300 Sv/hr
14.	Leakage @ 1m	< 10m Sv/hr
15.	HV cable	R24
16.	Weight	< 12 kg
17.	Tube life	Maximum
18.	Dimension of the X-Ray tube head	Maximum 500 mm length & 150 mm dia.

High voltage generator specifications:

The high voltage to the tube is provided from a high voltage generator capable of delivering several kilovolts for the X-Ray tube. The High voltage generator and its power supply terminal should be compatible with the above X-Ray tube head and should operate from the 230V, 50 Hz single phase A.C mains supply. Over current protection and over voltage protection is to be provided for the power supply unit safety. The control unit should incorporate an accurate feedback system that constantly monitors different parameters to ensure precise and stable output. The generator status is monitored by internal electronics to maintain safe and reliable operations.

Additionally hardware interfaces should be provided as terminal outputs for the implementation of external operational safety interlocks and also provision for the measurement of different operational parameters (analog and digital) so as to facilitate safe operation and easy integration into the master control system. The detailed specifications are as below.

**SPECIFICATION FOR HIGH VOLTAGE GENERATOR FOR 225 kVp X-RAY TUBE**

Sr.No.	PARAMETERS	DESCRIPTION
1.	Mains	230V, 30A, Single Phase, 50Hz
2.	High voltage range	20 to 225Kv unipolar
3.	KV Accuracy	Less than equal to +/- 1% of demand value
4.	Current range	(0.1-30) mA continuous
5.	mA accuracy	Less than +/- 0.5% of demand value
6.	Line regulation	Less than +/- 0.1% of rated output voltage.
7.	Load regulation	Less than +/- 0.2% of output voltage.
8.	Maximum output power	4000 W-4500 W
9.	Ripple	Less than 0.15% Vpp
10.	Insulation	Encapsulated
11.	Lifting arrangement	Preferably, Eye bolt for lifting
12.	Power supply cable length	Approx. 5 metre
13.	HV connection terminal	R28 standard HV connector
14.	Operating temperature	<45°C
15.	Dimension of the HV Generator (HxWxL)	Approx.600 mm x 650 mm x 800 mm
16.	Interfaces	Analog/RS232/Ethernet
17.	Large filament output	0.1 - 6 A @ 10V DC maximum
18.	Pre Warning	1 – 30 seconds with warning flash lamp

SPECIFICATION FOR GENERATOR CONTROL PANEL FOR 225 kVp X-RAY TUBE

Sr.No.	PARAMETERS	DESCRIPTION
1.	Mains	230V, Single Phase, 5 A, 50Hz
2.	High voltage adjustment range	5 to 225kV
3.	kV and mA display	Digital (true value)
4.	Current adjustment range	0.1 - 30mA continuous
5.	KV resolution	Less than or equal to 1kV
6.	mA resolution	Less than or equal to 0.1 mA
7.	Power supply cable length	Approx. 5 metre

Analog Interface Specifications:

Sr. No.	PARAMETERS	DESCRIPTION
1.	mA set	Analog (single ended) 0-10V DC @ 10 bit resolution, +/- 1 LSB or better
2.	kV set	Analog (single ended) 0-10V DC @ 10 bit resolution, +/- 1 LSB or better
3.	mA monitor	Analog (single ended) 0-10V DC @ 10 bit resolution, +/- 1 LSB or better
4.	kV monitor	Analog (single ended) 0-10V DC @ 10 bit resolution, +/- 1 LSB or better
5.	Filament set	Analog (single ended) 0-10V DC @ 10 bit resolution, +/- 1 LSB or better
6.	Filament monitor	Analog (single ended) 0-10V DC @ 10 bit resolution, +/- 1 LSB or better
8.	X-Ray Enable	-I- 24V@5mA DC source/sink
9.	X-Ray ON/OFF status	+ 24V@5mA DC source/sink
10.	Power supply fault state	+ 24V@5mA DC source/sink
11.	Power	+24V DC
12.	Safety Interlock	Contact output with at least two NO and two NC PF contact
13.	System Set/Reset	+24V@5mA DC source/sink

#### Cooling Unit:

The water cooling should be a compact, closed circuit type capable of removing the heat generated in the anode of X-Ray tube head and compatible for above mentioned X-ray tube. The cooling capacity should be maximum 4000W. The coolant can be water or a mixture of water and antifreeze. Water circulates between the cooling unit and the heat source. The water is re-cooled by an air-cooled heat exchanger. The cooling system should be integrated with the above mentioned X-Ray system. Its operation should be controlled by the automation system and should be operated in synchronization with the X-Ray machine. Manual adjustment of control parameters like pressure, temperature and flow rate of water should be provided. Presets should switch OFF the X-Ray system if different parameters of the cooling unit exceed the preset limits. Control system should ensure that all the parameters are within the preset level. The unit shall have in-built warning system for unit failure, low level of coolant, lack of flow, leakage, etc. and connected with the tripping mechanism of the main equipment. The detailed specifications are as below.

#### SPECIFICATION FOR WATER COOLING UNIT

Sr.No.	PARAMETERS	DESCRIPTION
1.	Mains	230V, 10A, Single Phase, 50Hz
2.	Coolant type and capacity	Water, approximate 4 Litres
3.	Operational temperature range	1°C to 40°C relative and humidity up to 90%
4.	Cooling capacity	Maximum 4000W
5.	Maximum coolant temperature	45°C
6.	Temperature preset	Adjustable Analog 0-10V DC @ 10 bit resolution, +/- 1 LSB
7.	Coolant flow rate	Adjustable up to 8 litre/min(+ 24V@5mA DC source/sink output)
8.	Thermal switch open	Adjustable up to 50°C (+ 24V@5mADC source/sink output)
9.	Flow switch open	Adjustable up to 7 litre/min(+ 24V@5mA DC source/sink output)
10.	Maximum forward pressure	7 bar
11.	Flow output	Analog (single ended) 0-10V DC @ 10bit resolution, +/- 1 LSB or better
12.	Pressure output	Analog (single ended) 0-10V DC @ 10bit resolution, +/- 1 LSB or better
13.	Temperature output	Analog (single ended) 0-10V DC @ 10bit resolution, +/- 1 LSB or better
14.	<b>Safety Interlock</b>	Contact output with at least two NO and two NC PF contact

## SPECIAL TERMS & CONDITIONS

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### **INSTALLATION AND COMMISSIONING:**

Installation and commissioning of the entire system is in the scope of the Vendor/Supplier. Integration of X-Ray tube head, water cooler, high voltage generator and power supply control to our equipment is in the scope of the supplier.

The supplier needs to install the X-ray unit to the Purchasers' unit as shown in Fig 1. The unit consists of a structure designed for a load of 1 tonne. It consists of Irradiation Chamber, X-ray tube head Mounting, Lead shielding, motor, sensors, interlocks and PLC based master control panel with touch screen. It has provision to house the X-ray tube head, generator, control and cooling unit. The complete structure is covered by panels. For the access to the Irradiation chamber a door has been provided. The following works has to be carried out by the supplier at the purchaser site.

1. Assembling of each components of X-ray unit into the appropriate slots provided with the X-Ray cabinet. It includes fixing of tube head, high voltage generator and the cooling unit to the purchasers equipment. Necessary fittings (mechanical/electrical components) to be carried out to make the system robust.
2. Wiring of high voltage electrical connections to the X-ray tube from the high voltage generator.
3. Wiring of auxiliary inputs and outputs connections from the hardware interface module of the supplier to the master control system of the purchaser.
4. Fixing of the control panel to the cabinet and wiring of panel with the X-ray generator.
5. Integration of the cooling unit with the X-ray tube and optimize the control parameters to keep the temperature of the tube at ambient conditions. All connections such as piping for cooling unit to be integrated to the tube head. All accessories for this such as hose, nipple, and fittings are to be supplied by the supplier.
6. After completion of the installation and integration with our system, the supplier needs to demonstrate the complete operation to meet the entire user requirements.
7. It may be noted that all the necessary tools and man-power required for the installation and commissioning are to be arranged by the supplier.
8. Any minor design modifications/changes required at the time of installation should be incorporated by the supplier to suit our requirement with no extra charges.

### **SERVICE AGREEMENT:**

After the warranty period is over, the Vendor/Supplier shall provide us X-Ray tube/Accessories of the same specifications if it gets damaged with additional charges as per the market price and provide service support for at least five years. The supplier shall provide the list of accessories required for maintenance and its price along with the quotation.

**Maintenance contract:**

The Vendor/Supplier shall provide complete service for the supplied equipment during the warranty period. However after the warranty period is over the supplier shall be able to undertake maintenance contract on demand by the purchaser with additional charges whichever is applicable for at least next five years.

**INSPECTION/TRAINING:**

Inspection is to be carried out at OEM site before the dispatch of the material.

**PRE-DESPATCH INSPECTION AND ACCEPTANCE TESTS AT PURCHASER'S SITE:** The following activities are to be carried out.

1. Checking the specifications of the individual items.
2. Physical inspection, dimensional check and mechanical fittings of the individualsub-assemblies.
3. Physical connection of the sub-assemblies.
4. Robustness test of the X-Ray tube head. The X-Ray tube should run continuously for at least 8 hours at its maximum capacity.
5. Shielding integrity check of X-Ray tube head with dose levels conforms to international radiation safety standards.
6. Check for different electrical parameters like voltage, current and stabilityof the high voltage power supply.
7. Load and line regulation test for the power supply unit.
8. Checking of different voltage variations in the hardware interface for different parameter adjustments of the power supply.
9. Check for different operational safety interlocks using terminal output of the hardware interface provided on the control unit and check for operation sequence of the control unit.
10. Effectiveness of the cooling system at its maximum operating conditions. Also checking of operational safety interlocks.
11. Central dose measurement from the focal spot, dose uniformity and dose mapping to be carried out.
- 12.** Calibrated instruments shall be provided by the supplier to perform the above mentioned checks. Dosimeters suitable for X-Ray calibration need to be also provided.

The training includes the following,

1. Operational and maintenance of the equipment. It includes systematic operating procedures for safe operation of the equipment as well as handling of the instrument in case of system failure or some human errors.
2. Training for the maintenance of the complete equipment.
3. Software and electronic hardware training for programming the auxiliary ports of hardware interface and peripherals of the generator.
4. Training for integration of X-Ray tube head, high voltage generator and cooling unit to our equipment.

NOTE:

1. All the sub assemblies like X-Ray tube, X-Ray generators, cooling unit and its accessories should be from the same supplier so that there will not be any compatibility issues during system integration. Also only one party shall be responsible for the warranty and maintenance of the complete equipment after delivery.
2. The training shall be given at OEM site for three personnel for 1 week period without any additional charges.
3. The supplier shall give prior invitation/intimation for visit at least 1 month before the pre-dispatch inspection/training.

ADDITIONAL REQUIREMENT:

1. Vendor/Supplier shall have an experience of installation of at least 10 similar systems in the past 5 years.
2. Order copies of at least 10 similar systems sold & serviced in India by the vendor in the last 5 years and currently under Warranty / Annual Maintenance Contract duly certified by end user to be provided.
3. Vendor/Supplier shall have Indian agents capable of providing any type of services after the delivery.

DOSIMETRY:

Dosimetry reports including dose mapping, dose uniformity ratio (DUR), central dose rate etc. for water shall be provided after inspection.

AERB APPROVAL:

The supplier shall furnish valid Type Approval Certificate from AERB or equivalent certificate duly approved by the competent authority of the original equipment manufacturers country for the specific model offered.

**DOCUMENT:**

Operation and maintenance manual, quality control documents, regulatory documents, technical documents such as electrical circuit diagrams, mechanical drawing etc. shall be provided along with equipment. Calibration certificate for the X-Ray machine shall be supplied along with the document.

**DELIVERY SCHEDULE:**

The delivery of the items shall be completed within 3 months from the date of placement of order.

**PLACE OF DELIVERY:**

The supplier shall arrange delivery of the items to Stores Officer, SAMEER, IIT Campus, Hill side, Powai, Mumbai- 400 076, India, under intimation to the indenting officer.

**WARRANTY:**

The X-ray tube and other accessories should have a warranty of 2 years or more from the date of installation and acceptance. Services if required in the future during the operation and after expiry of warranty period shall be provided on the manually agreed terms.



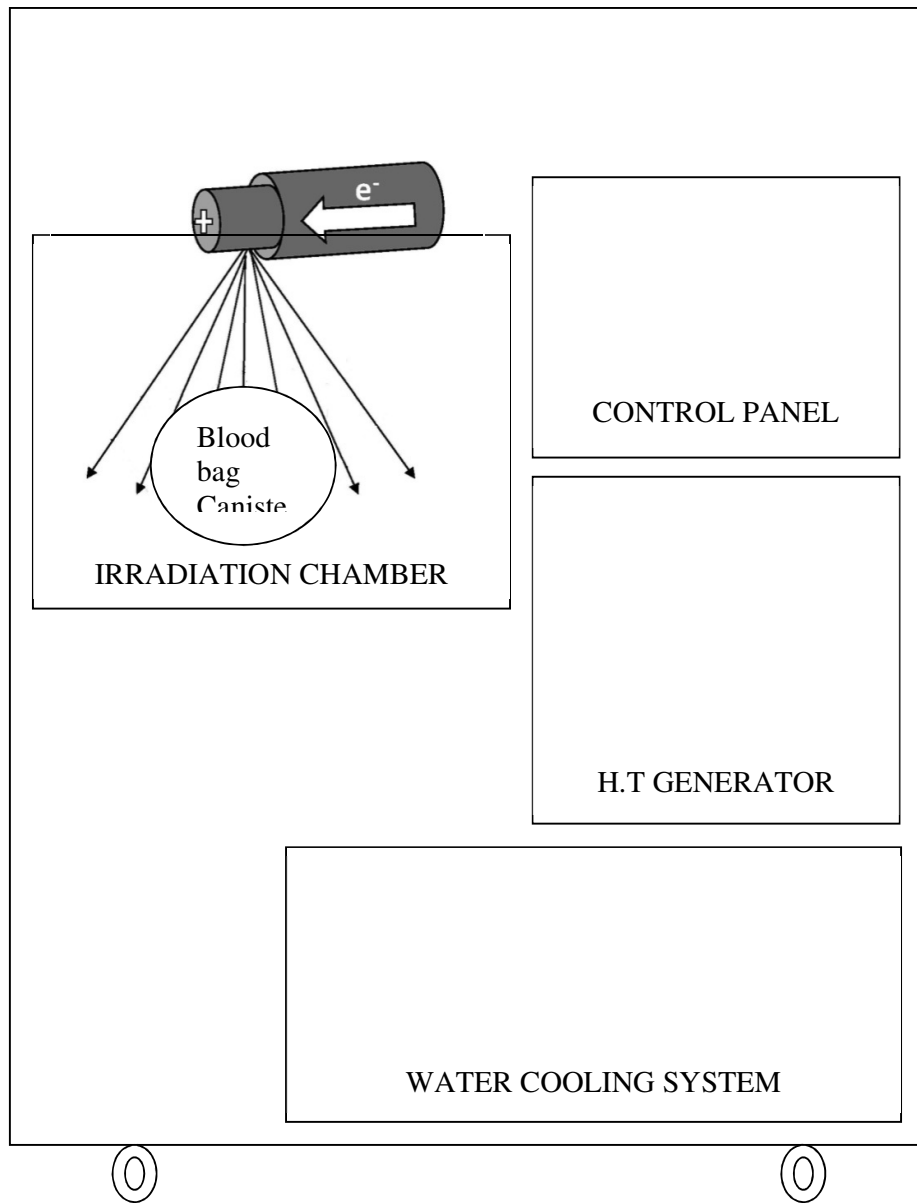


Fig. 1 X-Ray cabinet Schematic (Purchaser's unit)

**List of Deliverables:**

ITEM NO.	DESCRIPTION	QUANTITY
1.	X ray tube	2
2.	High voltage Generator, Control unit, Power supply, High voltage tank	2
3.	High Voltage Cables: 1 pair, 5 meter long each	2
4.	Power connection cables: 15 meter long	2
5.	Water cooler including pair of 10m cooling hoses, cooler control cable 10m and cooler power cable 10m: The water is cooled by an air cooled heat exchanger	2
6.	Digital Control unit and software	2
7.	Warning flash lamp with 15m cable	2
8.	Service tool kit	2
9.	Necessary Standard / Certificate traceable to International Standard	2
10.	Optional / Compulsory Accessories like IP65/54 cover, Cover adapter, coolant, antifreeze, Laser centering devices etc.	2
11.	Spares & Consumables	2
12.	Installation, commissioning & performance prove-out, training on operation, troubleshooting & maintenance	2
13.	Documentation: Testing & Calibration Certificates, exposure charts as per international standards	2
14.	O & M Manuals with soft copy pdf form	2

**SECTION- III**

**Commercial & Other Terms and Conditions**

Vendor to state Complied / Not Complied – Deviations if any in the REMARKS column

S.N.	DESCRIPTION	ESSENTIAL CONDITIONS	REMARKS
a.	PRICES	<p>a. <b>For Import Order</b> :Prices quoted should be on <b>FCA (nearest Intl. Airport at shipper's country)</b> , Name of the Airport should be mentioned clearly.</p> <p>b. <b>For Local Order</b> : <b>Prices</b> should include delivery charges up to <b>SAMEER's Stores</b>. Any additional charges, taxes and levies should be clearly mentioned. In the event of a Purchase Order, it will be the responsibility of the supplier to pay whatever charges are payable to different agencies in their country. The purchaser will not pay any charges other than the agreed price as per the contract.</p>	
b.	TAXES , DUTIES AND LEVIES APPLICABLE	<p>(Existing applicable rates should be mentioned)</p> <p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p>	
c.	PACKING	All the items should be packed in suitable boxes, crated and protected from damages during the transit till they are delivered to destination.	
d.	FREIGHT AND INSURANCE	<p>a. For Local Order : To be arranged by supplier. All the items shall be delivered to Stores Officer, SAMEER, IIT Campus, Powai, Mumbai after obtaining a shipping release in the appropriate pro-forma from the purchaser. The Vendor shall be fully responsible for the safe delivery of all the items from and to SAMEER Powai and shall satisfy the purchaser that adequate measures have been taken for the same.</p> <p>b. For Import Order : Will be arranged by SAMEER from FCA International Airport.</p>	
	Vendor's Signature:		Seal:

S.N.	DESCRIPTION	ESSENTIAL CONDITIONS	REMARKS
e.	ANY OTHER CHARGES APPLICABLE	SUPPLIER TO SPECIFY	
f.	MODE OF DELIVERY	a. For Local Order : By road b. For Import Order : By Air	
g.	DELIVERY SCHEDULE	The delivery of the items shall be completed within 3 months from the date of placement of order.	
h.	WARRANTY	The X-ray tube and other accessories should have a warranty of 2 years or more from the date of installation and acceptance. Services if required in the future during the operation and after expiry of warranty period shall be provided on the manually agreed terms.	
i.	PAYMENT TERMS	a. For Import order : 90 % against Irrevocable Letter of Credit or Sight Draft and balance 10 % through wire transfer after acceptance of material at SAMEER. b. For Local order : 75 % after delivery followed by inspection balance 25 % against Test, Installation & acceptance ( whichever is applicable ) of material / consignment, at SAMEER.	
j.	VALIDITY OF QUOTATION	90 DAYS MIN FROM THE DUE DATE.	
k.	Tender Fee ( Including GST )	Tender document may be purchased from the Accounts Section of SAMEER, Mumbai on cash payment or by Demand Draft from any commercial bank of India, drawn in favour of <b>“Society for Applied Microwave Electronics Engineering and Research”</b> .  If the Tender document is downloaded from website , then <b>the Tender Fee is not applicable.</b>	
l.	Earnest Money Deposit (EMD)	<b>a.Earnest Money Deposit</b> (EMD) should be submitted in the form of Account Payee Demand Draft, Fixed Deposit Receipt, Banker’s Cheque or Bank Guarantee from any commercial bank of India, drawn in favour of <b>“Society for Applied Microwave Electronics Engineering and Research”</b> .  b.For exemption, please refer SECTION I, 3 d  c.In lieu of EMD, vendor may submit “Bid security Declaration” on their letterhead. <b>(vendor should mention the applicable option from above in the Remark column)</b>	

Vendor’s Signature:

Seal:

S.N.	DESCRIPTION	ESSENTIAL CONDITIONS	REMARKS
m.	PERFORMANCE SECUIRITY	The successful bidder has to give Security Deposit in the form of an Account Payee Demand Draft / Fixed Deposit Receipt from an Indian commercial bank / Bank Guarantee from an Indian commercial bank / a counter Letter of Credit (LC) from our bankers ( in case of foreign order ), for <b>3 %</b> of Order Value, immediately after receiving the purchase order. Performance Security should remain valid for a period of sixty days beyond the date of all contractual obligations including warranty obligations.	
n.	EXEMPTION FOR CUSTOM DUTY AND EXCISE DUTY	SAMEER is registered with Department of Scientific and Industrial Research ( DSIR ) for the purpose of availing <b>custom duty exemption</b> in terms of Government of India Notification No. 51/96-customs amended to 24/2007-customs dated 1 <sup>st</sup> March 2007. {approx. 5.20 % duty is applicable under his notification ( 5 % Basic + cess/surcharge )} and <b>central excise duty exemption</b> in terms of Government Notification no. 10/97-central excise amended to 16/2007-central excise dated 1 <sup>st</sup> March 2007.	
o.	SHARING LAND BORDER WITH INDIA	a. Yes / No b. If Yes, whether necessary valid registration certificate is attached along with Technical bid.	
p.	JURISDICTION	MUMBAI	

Vendor's Signature:

Seal:

**SECTION- IV**

**Format for Price Bid (in INR )**

**IMPORTANT**

Vendor is required to submit the price bid in the given format on their LETTER HEAD.

ITEM	DESCRIPTION	QUANTITY	RATE IN INR	PRICE IN INR
I				
II				
III				
IV				
V	<b>OTHER CHARGES , , if any</b>			
1.	<b>TAXES AND DUTIES APPLICABLE ON ITEMS</b>			
	I			
	II			
	III			
	IV			
2.	<b>FREIGHT</b> from Vendor's manufacturing facility to SAMEER Powai.			
3.	<b>INSURANCE</b>			
4.	<b>ADDITIONAL CHARGES IF ANY</b>			
	<b>TOTAL AMOUNT</b>			
	<b>TOTAL AMOUNT (IN WORDS)</b>			
	Vendor's Signature:		Seal:	

**Format for Price Bid (in Foreign currency )**

**IMPORTANT**

Vendor is required to submit the price bid in the given format on their LETTER HEAD.

ITEM	DESCRIPTION	QUANTITY	RATE IN ( Name of currency)	PRICE IN ( Name of currency)
I				
II				
III				
IV				
	<b>ADDITIONAL CHARGES IF ANY</b>			
	<b>FCA CHARGES ( Name of the Intl. airport)</b> From Vendor's manufacturing/shipping facility to Manufacturer's country's Intl. Airport.			
	<b>TOTAL AMOUNT</b>			
	<b>TOTAL AMOUNT (IN WORDS)</b>			
	Vendor's Signature: _____ Seal: _____			

S/d  
Purchase Officer

**Annexure I**

**Bid Security Declaration**

Dated :

To,  
The Registrar,  
Society for Applied Microwave Electronics Engineering and Research  
IIT Campus, Powai,  
Mumbai 400076

Sir,

I, the undersigned, declare that:

1. I am duly authorised to submit bid and undertakings in response to your tender No. \_\_\_\_\_
  
2. I understand that the bidders are required to submit Bid Security of the prescribed amount, while submitting bids in response to tender enquiries of the Society for Applied Microwave Electronics Engineering and Research (SAMEER).
  
3. As an alternative to the Bid Security, I hereby declare that my firm, which is submitting the current bid, will be suspended for the period of time specified in the request for bid document or for a period of three years if no such period of time is specified in the request for bid document, from being eligible to submit bids for contracts with SAMEER,
  - i. if we withdraw or modify the bid during the period of validity (including the extended period of validity) **or**
  - ii. If we fail to sign the contract, or to submit the performance security before the deadline prescribed in the request for bid document or in the communication sent by SAMEER.

Signature with seal:

Name: \_\_\_\_\_

Designation \_\_\_\_\_

Name of the firm \_\_\_\_\_

Place \_\_\_\_\_



**Annexure - II**

**Self Certification for Local Content**  
( Should be on the letter head of the bidder )

\*We [name of manufacturer] hereby confirm in respect of quoted item(s) that Local Content is equal to or more than 50% and we come under 'Class-I Local Supplier' Category. Being 'Class-I Local Supplier', we are eligible for Purchase Preference in accordance with Department of Promotion of Industry and Internal Trade's Order No.P45021/2/2017-PP (B.E.-II) dated 15.06.2017 , as modified, vide the said Department's orders No. P-45021/2/2017-PP(BE-II) dated 28/05/2018, No. P-45021/2/2017-PP(BE-II) dated 29/05/2019 and No. P-45021/2/2017-PP(BE-II) dated 04/06/2020

**OR**

\*We [name of manufacturer] hereby confirm in respect of quoted items(s) that Local Content is more than 20% but less than 50% and we come under 'Class-II Local Supplier' Category, as per the said order of Department of Promotion of Industry and Internal Trade

**OR**

\*We [name of manufacturer] hereby confirm in respect of quoted items(s) that Local Content is less than or equal to 20% and we come under 'Non Local Supplier' Category.

The details of the location (s) at which the local value addition made is /are as under:

- 1.....
- 2.....
- 3.....

\*Strike out whichever is not applicable

Date:

Seal & Signature of the Bidder

**NOTE :-**

- 1 Bidder should submit Self-certification that the item offered meets the minimum local content (as above) giving details of the location(s) at which the local value addition is made in case the bidder wishes to avail the benefits under the make in India policy, if applicable.
- 2. In cases of procurement for a value in excess of Rs. 10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content to avail the benefits under the make in India policy, if applicable.
- 3. The orders quoted above are available on our website ( <https://www.sameer.gov.in/tenders.asp#page> ).