

Tender Details

Tender No: SCL/PS4/2018E0109401

Tender Date: 23/07/2018

Purchase Entity: Pur_Entity4

Tender Notice

E-Procurement Tender No. SCL/PS4/2018E0109401 dated 23.07.2018 SEMI-CONDUCTOR LABORATORY [SCL] invites ONLINE offers in TWO part system through e-tender portal <https://eprocure.isro.gov.in> for Supply, Installation and Commissioning of 3D X Ray Inspection Systems. Tender documents can be downloaded from 24.07.2018 - 1101 hrs. to 27.08.2018 upto 1030 hrs. The vendors need to get enrolled in the e-tender portal to access tender and submit their offer online. Vendors need to have Digital Signature Certificate as detailed on our e-portal and corporate e-mail ID to register on the above portal. Only online tenders will be accepted. No Manual/Postal/ courier/ e-mail/fax tender will be entertained. Please note Tender fee shall not be applicable for tenders submitted on-line through this portal. Vendors interested to participate in this e-Tender are required to register themselves as vendors, if not already registered, in our e-procurement portal <https://eprocure.isro.gov.in> by downloading plugins and help demos listed on the home page of the e-procurement link mentioned above to complete the vendor registration process. They can seek help from help desk 020 25315555 / 9167969601 (Email: support.isro@nextenders.com) also the home page of e-procurement portal may be accessed for any technical help for registration and subsequent process. Vendors may please note that without registering in our E-procurement portal they will not be able to quote for this tender.

Tender Attachments

Technical Write-up/Drawings

Attachment - I:

IDT0018260000000000isro05401.pdf

Attachment - II:

IDT0018260000000000isro05402.pdf

Attachment - III:

Attachment - IV:

Attachment - V:

Instructions to Tenderers (PT):

1. Interested Tenderers may, login to <http://eprocure.isro.gov.in> and submit offers as per details in the tender notification.
2. Bid /Open Authorization shall be submitted on-line only complying specified schedule and complete in all respects with technical specifications, including pamphlets and catalogues.
3. This being a two part tender-Technical and Commercial part separate, the Technical part should not contain pricing information. The tenders containing Price details in technical part will be treated as unsolicited offers and rejected. Prices should be indicated in the Price Bid format only.
4. In this tender either the Indian Agent on behalf of the Principal/OEM or the Principal/OEM itself can bid, but both cannot bid simultaneously for the same item. Indian agents while quoting on behalf of their principals shall provide necessary latest authorization letter obtained from their Principal/manufacturers in their bid.
5. 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 tender for the same item. If submitted, all offers submitted by the said agent shall be excluded from the procurement process.
6. Request for the extension of the due date will not be considered. 7. SCL reserves the right to accept or reject any / or all the tenders in part or full without assigning any reasons thereof. The bidder is at liberty to seek information related to bidding conditions, bidding process and/or rejection of its bid.
8. Bids submitted other than the EGPS mode shall not be considered.
9. SCL reserves the right to verify all claims made by the bidder.

- 10.SCL reserves the right to change any milestone date of the tendering activity / tender schedule.
- 11.Tender which is not submitted in terms of instructions mentioned herein is liable to be rejected.
- 12.If tender opening date happens to be a public holiday, tender will be opened on the next working day and interested bidders may depute their representatives to attend the tender opening, with proper authorization.
- 13.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 portions of the quantity offered and the tenderer shall supply the same at the rates quoted.
14. It is expressly agreed that the acceptance of the Stores Contracted for is subject to final approval in writing by the Purchaser.
- 15.It is to be noted that the drawings, specifications, end-use etc. given by the purchaser, are confidential and shall not be disclosed to any third party.
- 16.Prices are required to be quoted according to the units indicated in the tender. Where 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.
17. The quote should indicate quantity wise unit rate separately which have to be filled online. The Prices are to be mentioned both in figures as well as in words. The taxes, duties etc. are to be calculated and indicated in the column provided in online forms explicitly.
- 18.Bidders are expected to comply with commercial and other terms and conditions given in Vendor Specified Terms of this tender. In case of any deviation, the reasons thereof should be clearly specified in the vendor specified terms column.
- 19.All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.
- 20.Specifications: Stores offered should strictly conform to our specifications. Deviations, if any, should be clearly indicated by the tenderer in their bid. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples wherever necessary along with the quotations. Test certificates wherever necessary should be forwarded along with 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.
- 21.The approximate net and gross weight and dimensions of the items offered shall be indicated in your offer. If dimensional details are available, the same should also be indicated in your offer.

22.The Tenderer would provide, the name of his banker as well as latest income tax clearance certificate duly counter signed by the income tax officer of the circle concerned under the seal of his office, if required by the purchaser duly evaluation of the tender.

23.Subletting and Assignment: The contractor/supplier cannot sublet, transfer or assign the order/Contract or any part thereof or interests therein or benefit or advantage thereof in any manner whatsoever, to any other party save with the previous written consent of the purchaser. Such consent by the purchaser, however, shall not relieve or discharge the contractor/supplier from any obligation, duty or responsibility under the Purchase Order/Contract.

24.The contractor/supplier shall indemnify the purchaser against Workmen Compensation Act.

25.The bids shall be opened on 1st day of opening schedule as indicated in the Tender in the presence of the bidders/their authorized representatives who may like to attend the tender opening against presentation of Authorization letter.

Due to any breakdown in Server/Link bid opening will be continued on the following dates.The schedule of opening of Price bids shall be intimated separately to the technically qualified bidders only.

26.PROCEDURE FOR EVALUATION OF TENDERS:

Technical Evaluation Criteria :

Vendor meeting the eligibility criteria and basic technical specifications mentioned in SCL Tender shall be considered to be technically qualified.

Evaluation of Price Bids:

The following elements shall be considered for evaluation of Priced Commercial offer:

- a. Price quoted by the bidder in the price bid template for meeting the functionalities given in the Tender and Technical Specifications sheet.
- b. Bid shall be evaluated on overall cost basis.
- c. AMC charges, recommended spares and consumable charges, if sought in this tender shall not be taken into account for evaluation of price bid.
- d. Compliance with the Payment Terms prescribed in this tender document. In the event, the bidder offers Payment Terms stringent than SCL prescribed Payment Terms, the bid of the bidder shall be loaded suitability.
- e. In the event of the bidder seeking a confirmed Letter of Credit, the bidders bid shall be loaded at the rate of 0.5 percent of the LC value towards confirmation charges.
- f. In the event of the bidder requiring SCL to bear bank charges outside India (foreign bank charges), the bidders bid shall be loaded at the rate 0.5 percent of the quoted value towards bank charges outside India.

27.The bid should contain the following information:

28.a. Agency Commission: Bidders are required to provide the following information in respect of their authorised Indian Agent, if any, along with bid as the same is mandatory as is required for consideration of the bid. Name, Address, Telephone no. , fax no., email of the Indian Agent including the contact person. A letter from the Manufacturer/supplier in the current date certifying that the said Indian Agent is their authorised Indian Agent and also indicating the responsibilities/role of the Indian Agent under the proposed purchase. Renumeration/service charges payable to the Indian Agent under the proposed purchase. The amount of agency commission included in the price and payable to Indian Agent of the contractor shall be paid directly to the Indian Agents by the Purchasers in equivalent in Indian rupees on the basis of an invoice from him applying TT buying rate of exchange ruling on the date of placement of the Purchase Order and which shall not be subject to any further exchange variations. The payment will be released to the Indian Agents within 30 days from the date of acceptance of the goods.

b. Details of any technical service, if required for installation and demonstration.

29.Part shipment is not allowed unless specifically agreed to by us.

30.All documents/correspondence should be in English Language only.

Standard Terms and Conditions.:

1.DEFINITIONS:

a)The term Purchaser shall mean the President of India or his successors or assignees.

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 Contractors Successors, representatives, heirs, executors and administrators unless excluded by the Contract.

c)The term Purchase Order shall mean the communication signed on behalf of the Purchaser by an officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the Tender or offer of the Contractor for supply of stores of plant, machinery or equipment of part thereof.

d)The term Stores shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order.

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.DEMURRAGE:

Supplier shall bear demurrage charges, if any, incurred by the purchaser due to delayed presentation of shipping documents as prescribed in para 3.2 to the bankers within a reasonable time (say within 10-12 days) from the date of bill of lading for sea consignments and within 3-4 days from the date of Air Way Bill for air consignments.

4.GUARANTEED TIME DELIVERY:

The time for and the date of delivery stipulated in the Purchase Order shall be deemed to be the essence of the Contract. Delivery must be completed within the date specified therein.

5.INSPECTION AND ACCEPTANCE TEST:

5.1The Purchasers representatives shall also be entitled at all reasonable times during manufacture to inspect, examine and test on the Contractors premises the material and workmanship of all stores to be supplied under this Contract and if part of the said stores is being manufactured on other premises, the Contractor shall obtain for the purchasers representative permission to inspect, examine and test as if the equipment were being manufactured on the Contractors premises. Such inspection, examination and testing shall not release the Contractor from the obligations under this Contract.

5.2For tests on the premises of the Contractor or of any of his sub-Contractors, the Contractor shall provide free of cost assistance, labour, material, electricity, fuel and instruments as may be required or as may be reasonably needed by the purchasers representative to carry out the tests efficiently.

5.3When the stores have passed the specified test, the purchasers representative shall furnish a certificate to the effect in writing to the Contractor. The Contractor shall provide copies of the test/s certificates to the purchaser as may be required.

6.PORT OF ENTRY:

New Dekhi (for air shipment) / Mumbai (for sea shipment)

7.CONSIGNEE:

Purchase and Stores Officer, Stores,

8.SHIPPING MARKS.

The mark on the shipping documents such as invoice, bill of lading and on the packages should be as follow:

PURCHASE ORDER NO.

DATED

GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

(name of the Centre/Unit)

Destination:

Port of Entry:

9.CONTRACTORS DEFAULT LIABILITY:

The purchaser may upon written notice of default to the Contractor terminate the Contract in whole or in part in circumstances detailed hereunder:

a)If in the judgement of the Purchaser the Contractor fails to make delivery of Stores within the time specified in the Contract/agreement or within the period for which extension has been granted by the Purchaser to the Contractor.

b)If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of this Contract.

10.In the event the Purchaser terminates the Contract in whole or in part as provided in Contractor Default Liability, the Purchaser reserves the right to Purchase, upon such terms and in such a manner as he may deem appropriate, stores similar to that terminated and the Contractor shall be liable to the Purchaser for any additional costs for such similar stores and/or for liquidated damages for delay as defined in LD Clause until such reasonable time as may be required for the final supply of stores.

11.1If this Contract is terminated as provided in Clause Contractor Default Liability, the Purchaser in addition to any other rights provided in this Article, may require the Contractor to transfer title and deliver to the Purchaser under any of the following clauses in the manner and as directed by the Purchaser:

a.Any completed stores.

b.Such partially completed stores, drawing, information and Contract rights (hereinafter called manufacturing material) as the Contractor has specifically produced or acquired for the performance of the Contract as terminated. The Purchaser shall pay to the Contractor the Contract price for completed stores delivered to and accepted, by the purchaser and for manufacturing material delivered and accepted.

11.2In the event the Purchaser does not terminate the Contract as provided in Contractor Default Liability, the Contractor shall continue the performance of the Contract in which case he shall be liable to the purchaser for liquidated damages for delay as set out in LD Clause until the stores are accepted.

11.REJECTION :

In the event that any of the stores supplied by the Contractor is found defective in material or workmanship or otherwise not in conformity with the requirements of the Contract specifications, the

purchaser shall either reject the stores or request the Contractor, in writing, to rectify the same. The Contractor, on receipt of such notification, shall either rectify or replace the defective stores free of cost to the purchaser. If the Contractor fails to do so, the purchaser may at his option either –

- a. replace or rectify such defective stores and recover the extra cost so involved from the Contractor, or
- b. terminate the Contract for default as provided under Contractor Default Liability, above, or
- c. acquire the defective stores at a reduced price considered equitable under the circumstances. The provision of this article shall not prejudice the Purchasers rights under LD Clause

12. EXTENSION OF TIME:

If the completion of supply of stores is delayed due to reason of force majeure such as acts of god, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, etc., the Contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.

13. 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 twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein are found to have developed under proper use arising from faulty materials, design or workmanship, the 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 stores or any parts thereof are faulty.
- c. If in the opinion of the purchaser it becomes necessary to replace or renew any defective stores, such replacements or renewals 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 period of 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 or 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 defects requires renewal or replacement shall be final, conclusive and binding on the Contractor.
- f. To fulfill guarantee conditions outlined in Guarantee and Replacement above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser - Bank Guarantee

format enclosed) 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 applies to all stores, in case where a greater period is called for by our specifications, then such a specification shall apply, and in such cases, the period of 14 months referred to in Guarantee and Replacement shall be asked for guarantee period plus two months.

14. REQUIREMENT OF ADDITIONAL NUMBERS OF THE STORES/SPARE PARTS ORDERED:

The Contractor shall also undertake the supply of additional number of items covered by the order as considered necessary by the purchaser at a later date, the actual price to be paid shall be mutually agreed to after negotiations.

15. PACKING:

a. The Contractor wherever applicable shall pack and crate all stores for sea /air shipment as applicable in a manner suitable for export to a tropical humid climate, in accordance with internationally accepted export practices and in such a manner so as to protect it from damage and deterioration in transit by road, rail or sea for space qualified stores. The Contractors shall be held responsible for all damages due to improper packing.

b. The Contractor shall ensure that each box / unit of shipment is legible and properly marked for correct identification. The failure to comply with this requirement shall make the Contractor liable for additional expenses involved.

c. The Contractor shall notify the purchaser of the date of shipment from the port of embarkation as well as the expected date of arrival of such shipment at the designated port of arrival.

d. The Contractor shall give complete shipment information concerning the weight, size, content of each packages, etc.

e. Transshipment of equipment shall not be permitted except with the written permission of the purchaser.

f. Apart from the despatch documents negotiated through Bank, the following documents shall also be airmailed to the purchaser within 7 days from the date of shipment by sea and within 3 days in case of air-consignments:

a. Commercial Bill of Lading / Air Way Bill / Post parcel Receipt (Two non-negotiable copies) b. Invoice (3 copies)

c. Packing List (3 copies)

d. Test Certificate (3 copies)

e. Certificate of Origin.

The Contractor shall also ensure that one copy of the packing list is enclosed in each case.

16. LANGUAGE AND MEASURES:

All documents pertaining to the Contract including specification, schedule, notice, correspondence, operating and maintenance instructions, drawings or any other writings shall be written in English language. The metric system of measurement shall be used exclusively in the Contract.

17. 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, copyright or trade mark and shall at all times indemnify the purchaser against all claims which may be made in respect of stores for infringement of any right protected by Patent, Registration of design or Trade Mark, and shall take all risk of accident or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfillment of the Contract.

18. 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.

19. SECURITY INTEREST:

On each item to be delivered under this Contract, including an item of work in progress in respect of which payments have been made in accordance with the terms of the Contract, purchaser shall have a security interest in such items which shall be deemed to be released only at the time when the applicable deliverable item is finally accepted and delivered to the purchaser in accordance with the terms of the Contract. Such security interest of the purchaser shall constitute a prior charge as against any other charge or interest created in respect of such items by any entity.

20. TRAINING:

The Contractor shall, if required by the purchaser, provide facilities for the practical training of Purchasers engineering / technical personnel from India and for their active association on the manufacturing processes throughout the manufacturing period of the Contract / stores, number of such personnel to be mutually agreed upon.

21. RECOVERY OF SUM DUE:

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, 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 claim, 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.

22.SECURITY FOR PURCHASE OF MATERIALS:

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 and properties provided by the Purchaser for the due execution of the Contract.

Bid Templates

3D X ray Inspection System

Item Specifications

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	1) Scope of workVendor's scope of work should supply installation & commissioning of 3D X ray inspection system for Screening Process of CMOS device, Failure Analysis of CMOS VLSI/MEMS devices. The scope of work should include the following:			
2	Supply of 3D X ray inspection system as per the required specification.			
3	Supply of all essential accessories and auxiliary item & tools, required for trouble-free operation of 3D X ray inspection system.			
4	Installation of the equipment and support tools (if any), including all utility connections for 3D X ray inspection system.			
5	Commissioning of the 3D X ray inspection system and			

	demonstration of its functionality as per the required specification.			
6	On-site training to concerned SCL personal on operation, maintenance & trouble shooting of the 3D X ray inspection system.			
7	It is not the intent of this document to completely specify all details of design and construction of 3D X ray inspection system.			
8	Nevertheless the system should conform in all respects to high standard of engineering, design and workmanship and should be capable of performing the operation in safe and efficient manner as per industry norms/codes.			
9	2)Eligibility Criterion Only OEMs (Original Equipment Manufacturer) and their authorized representative of similar 3D X ray inspection system are eligible to participate in the tender. System should be supplied by the OEM.			
10	The bidder should have experience in the manufacture and maintenance support of equipment and have supplied similar systems to semiconductor			

	<p>manufacturing facility/ semiconductor package facility/ Department of Space Govt of India or facility having similar requirement of 3D X ray inspection system during the last seven years.</p> <p>Parties should provide list of similar installation (with client detail) carried out by them during the last seven years.</p>			
11	<p>3) Scope of supply Vendor should supply the equipment, including all essential accessories and auxiliary items and tools (if any) as per the technical specification (refer clause 6) and for the intended use.</p>			
12	<p>Vendor should supply all the auxiliary items like interconnect matching cables for electrical connection; interconnect fitting etc. For support tool installation as may be required to complete the installation and commissioning of the equipment.</p>			
13	<p>Any items not specifically in the specification but required for safe and efficient operation of the system should deem to be included in the scope of</p>			

	supply of the vendor unless explicitly indicated in the bid by the vendor.			
14	4) Scope of installation and Commissioning It should be the responsibility of the vendor to ensure installation and commissioning of the equipment at SCL.			
15	Vendor shall provide guidelines for preparation of installation site including pedestals for distribution of equipment load on to the existing concrete floor (if required).			
16	Vendor shall also supply the installation drawings giving detailed information regarding the port size & type for the utility connections (if required).			
17	Vendor shall uncrate the equipment, move the same to the respective area(s) and install the equipment on foundations, etc. SCL will provide utilities hook-up to the system.			
18	Vendor should commission the system with the required utility (to be supplied by SCL) and demonstrate the			

	functionality of the tool supplied at SCL site.			
19	Vendor should bring all necessary tools/instrument/special tools etc. That may be required for successful commissioning/ installation/ verification/ acceptance of the tool and sub tools of the equipment.			
20	5) Training During commissioning of the equipment, vendor should provide on- site hands on training to the concerned SCL personal (including classroom training) on operation/ process, application software, related application, of the tool supplied.			
21	The training should be extensive (at least for week) enough so that quick diagnostics of problems and remedial action is possible at SCL.			
22	6) Technical requirementFollowing are the detailed technical specification of the required system. Vendor has to provide complete information as required in various sections for proper evaluation of the system. Vendor has to provide			

	<p>clause be clause compliance with relevant numerical value. The statement in the compliance sheet should be supported by relevant document/brochures. Indicating merely Yes or NO or OKEY in the compliance statement will not be considered.</p>			
23	<p>I. X Ray Tube a) Tube should be closed in nature and it should be, sealed Transmissive X ray Tube.</p>			
24	<p>I. X Ray Tube b) X ray Beam configuration should be a horizontal/Vertical x-ray beam to enable cross section & multilayer stack information.</p>			
25	<p>I. X Ray Tube c) It should have provision of active vibration isolation system to isolate vibration generated from various dynamic element of system.</p>			
26	<p>I. X Ray Tube d) The sample to be imaged rotates around vertical / horizontal axis or sample to be stationary and detector should rotate around sample during scanning to enable cross section and multilayer stack information</p>			

27	I. X Ray Tube e) It should be able to supply 10W or higher power.			
28	I. X Ray Tube f) Target of X ray tube should be long life.			
29	I. X Ray Tube g) X ray tube voltage should be in range of 30-160KV.			
30	I. X Ray Tube h) Vendor has to clearly specify the x ray voltage and current control (minimum step size).			

3D X ray Inspection System

Item Specifications -I

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
31	I. X Ray Tube i) X ray tube should be able to recognize feature of 0.1µm at 10W or better.			
32	II. Detector a) It should be either multiple objective based detector or CMOS digital Flat Panel detector.			
33	II. Detector b) Detector array size must be ≥ 2048 x 2048 pixels, 16 bit or better.			

34	III. Display and image processinga) System should be having dual monitor display system with 24 inch size 4K Ultra High Definition Displays are better			
35	III. Display and image processingb) System should provide 2000X or higher geometric magnification and it should be able to give 10000X total magnification or better.			
36	III. Display and image processingc) System should be able to transfer image directly into JPEG/TIFF/GIF/BMP formats. No intermediate format is acceptable.			
37	IV. 3D inspection and X Planea) System should be capable of 3D reconstruction of image by capturing image from different viewing angle.			
38	IV. 3D inspection and X Planeb) System should be capable of viewing individual 2D slices within a sample from top and bottom and at any plane in between.			
39	V. Stage Travel a) System should provide 4/5 axis movements (X, Y, Z liner			

	motion, 360 degree rotation and 70 degree tilt or better) to object under test.			
40	V. Stage Travel b) It should ensure collision free scanning.			
41	VI. Sample size, weight and placement a) System should have flat stage for sample placement and it shall be able to accommodate sample size upto 200mm x 200mm x 50mm.			
42	VI. Sample size, weight and placement b) Maximum sample weight for testing shall be less than 2Kg.			
43	VII. Post processing image and software a) System shall be capable of automated and manual calculation of attachment/ interconnection voids.			
44	VII. Post processing image and software b) Preferably system shall have X-ray navigation map for easy fault detection.			
45	VII. Post processing image and software c) System should be equipped with state of art controller and software with perpetual licence with free updates			

	for programming and measurement.			
46	VIII. System safety cabinet a) System should have fully lead shielded system safety cabinet with radiation leakage less than 1µSv/hr as per international standard.			
47	VIII. System safety cabinet b) System shall have lead shielded display window for radiation safe viewing.			
48	IX. The system shall have internal power supply port for inspection of relays under active condition.			
49	X. Computer requirement a) Vendor should provide work station to be complete with hardware processor and GPU accelerator for fast tomography, image reconstruction.			
50	7) Acceptance Criterion Vendor shall demonstrate the functionality of equipment at SCL site as well as during pre shipment acceptance, as per the specification.. In particular the following shall be verified/ checked during acceptance procedure.			

51	<p>7) Acceptance Criterion I. Pre dispatch acceptance. SCL shall send one sample each of multi layer, single layer ceramic, metallic, plastic package and bare IC chip, for x ray analysis for (but not restricted to) detection of void within package device (% of void calculation) and conductive loose particle of dimension 0.1&micro; with in package and internal structure of ICs.</p>			
52	<p>7) Acceptance Criterion I. Pre dispatch acceptanceii. This X ray images will be shared with SCL for pre shipment acceptance. SCL at its option can participate in pre shipment acceptance at vendor by deputing its engineer or through video mode. Travel as well as boarding expanses of SCL engineer will be borne by SCL.</p>			
53	<p>7) Acceptance Criterion II. Acceptance of the system at SCL. Vendor shall repeat same test as mentioned in para 7 I (i) at SCL premises for final acceptance of equipment. List of acceptance tests at vendor site and at SCL shall be mutually agreed.</p>			

54	7) Acceptance Criterion III. Resolution capability demonstrationThe supplier should demonstrate the resolution capability (as motioned in clause 6.1(i)) of the system at SCL site and vendor site (if pre dispatch acceptance option exercised by SCL.			
55	7) Acceptance Criterion IV. Radiation safety and other safety The machine must comply with requirement of health and safety regulation with regard to mechanical, electrical and radiation hazard. The supplier/manufacturer shall furnish test certificate from AERB (Atomic Energy Regulation Board of India) regarding radiation safety and also shall specify standard radiation level. System should have all safety interlock with audio visual alarm. Vendor should demonstrate radiation leakage test in the surrounding of equipment complying with AERB norms.			
56	8)Other requirement I.Software update) Software update in the system if any during warranty period shall be			

	updated (without any cost). For minimum 5 years software updates should be available. (May be at cost)			
57	8)Other requirement II. Instruction manuala) Two copies including installation procedure and service manual with details regarding operation and maintenance of the system shall be provided by vendor.			
58	8)Other requirement III.Calibration a)Vendor is required to submit factory calibrated certificate for tool.			
59	8)Other requirement III. Calibration b) Guideline to be provided regarding calibration procedure along with list of tools required for calibration.			
60	8)Other requirementIV.Warranty a) The equipment shall have minimum warranty for 24 month from date of installation			

3D X ray Inspection System

Item Specifications -II

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
61	8)Other requirementIV. Warranty b) Vendor to guaranty 95% uptime for the tool.			
62	8)Other requirementIV. Warranty c) Vendor to give two preventive maintenance and calibration visit in the warranty period of tool.			
63	8)Other requirementV. Post warranty system supporta) Spare and maintenance support is required for 10 years after expiry period. Vendor to quote separate for post warranty 'labour-only' AMC charges inclusive of onsite calibration.			
64	8)Other requirementVI. Configuration of the offered system (without price) should be included in part I of the bid for technical evolution of the bid.			
65	8)Other requirementVII. Spare and accessories)			

	The supplier shall provide the list of recommended spares/ accessories of the system which may be required for meeting the essential above state tool uptime in part I of price bid.			
66	8)Other requirementVII. Spare and accessoriesb) Vendor shall provide list of these spare/accessories in part II of price bid. However it shall also not be used for competitive price evaluation/bidding			
67	9) Deliverables I. X ray inspection system with all hardware, software and accessories (mandatory & optional).			
68	9) DeliverablesII. PC System			
69	9) DeliverablesIII. Acceptance test result			
70	9) Deliverables IV. Standard sample to demonstrate 0.1μ resolution capability of the system.			
71	9) Deliverables V. Warranty certificate, certificate of conformance			
72	9) Deliverables VI. Radiation safety certificate from AERB			

73	9) Deliverables VII. Operator user manual in English language			
74	9) Deliverables VIII. Service manual including circuit schematics.			

Vendor Specified Terms

Description	Vendor Terms
<p>1. Delivery Terms:</p> <p>For imported stores, prices shall be quoted on FOB/FCA nearest International/Gateway airport basis inclusive of all taxes, levies, duties arising in the tenderer country.</p> <p>For Indigenous stores, prices shall be quoted on F.O.R. destination basis i.e. SCL, S.A.S. Nagar, Mohali, Punjab exclusive of GST as may be applicable.</p>	
<p>2. GST:</p> <p>Purchaser is entitled to concessional CGST of 2.5 % and IGST of 5 % as per Ministry of Finance, Department of Revenue, Notification Nos. 45/2017 Central Tax (Rate) and 47/2017 Integrated Tax (Rate) both dated 14th November, 2017 respectively and would accordingly issue Exemption Certificate in favour of the contractor quoting in Indian Rupees. The bidder should take note of the same while quoting the prices in Indian Rupees.</p>	
<p>3. For imported materials, Purchaser is entitled to issue Customs duty exemption certificate (CDEC) to the contractor under customs notification no.51/96 dated 23.07.1996 and subsequent amendments to enable the contractor to avail off the benefit of concessional rate of customs duty under this notification. CVD under this notification is nil. In addition to the above CDEC, any documentary support requested by the contractor from the purchaser for customs clearance of goods against the above CDEC shall be provided by the purchaser. (Purchaser will provide Customs Duty Exemption Certificate in case of Import Orders/ imported supplies/ High Sea Sales).</p>	

<p>4.Delivery Period:</p> <p>The contractor shall specify their best delivery period inclusive of all Govt. formalities of the exporting country.</p>	
<p>5.Security Deposit (SD):</p> <p>On acceptance of the tender, the Contractor shall submit security deposit for ten percent (10 percent) value of the Purchase Order (PO) within 15 days from the date of PO towards successful execution of the PO. Security Deposit shall be submitted through Demand Draft / Bankers Cheque/ fixed deposit receipt or Bank Guarantee from any of the Scheduled Banks executed on non-judicial stamp paper of appropriate value, and shall be valid for a period of sixty (60) days beyond the date for completion of the Purchase Order.</p> <p>(This will be returned by SCL immediately on execution of the PO satisfactorily as per order terms. If not, the amount will be forfeited).</p> <p>Central PSUs/PSEs/PSEs/Autonomous Bodies/MSEs shall be exempted from the payment of Security Deposit, and instead, an Indemnity Bond shall be secured from them in lieu of the Security Deposit.</p>	
<p>6.Terms of Payment in case of overseas supplier(s):</p> <p>Being a Department of the Government of India, the normal terms of payment are by Sight Draft. The payment shall be remitted as Under:</p> <p>90% of the PO value shall be paid within 30 days of receipt of material at Purchaser site against presentation of shipping documents to SCL banker routed through contractor bank and the balance 10% amount shall be payable on successful installation, commissioning and acceptance of the entire project at Purchasers site against a Performance Bank Guarantee.</p> <p>In the event of the contractor not being able to provide the Performance Bank Guarantee the payment of balance 10% amount shall be made after the expiry of the warranty period.</p> <p>All bank charges outside India related to the payment shall be borne by the Contractor and all bank charges in India shall be borne by the purchaser .</p>	

<p>Indian agent remuneration/service charge shall be payable by the Purchaser directly to the Indian agent in Indian Rupees based on T.T buying rate of exchange prevailing on the date of placement of purchase order within 30 days of acceptance of material at purchaser site.</p>	
<p>7.Terms of payment in case of indigenous supplier(S):</p> <p>The payment shall be remitted as under:</p> <p>90% of the PO value shall be paid within 30 days of the receipt of the materials at purchaser site and the balance 10% amount shall be payable on successful installation, commissioning and acceptance of the entire project at Purchasers site against a Performance Bank Guarantee.</p> <p>In the event of the contractor not being able to provide the Performance Bank Guarantee the payment of balance 10% amount shall be made after the expiry of the warranty period.</p>	
<p>8.Performance Bank Guarantee (PBG):</p> <p>The Contractor shall furnish a Bank Guarantee (as per format given by purchaser) from any nationalized/scheduled bank for an amount equivalent to 10% of the value of the Contract and shall be valid for a period of 60 days beyond the expiry date of warranty period. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.</p>	
<p>10.Warranty Replacements:</p> <p>If in the opinion of the purchaser it becomes necessary to replace or repair defective equipment during the warranty period, such replacement or repair 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 period of 26 months from the date of acceptance thereof.</p> <p>All replacement parts during the warranty period shall be supplied by the Contractor, free-of-cost on DDP (Delivery Duty Paid) basis with freight and insurance upto Purchaser site at S.A.S. Nagar, Punjab and customs duty applicable in India to the Contractor account including compliance with the customs procedure in India. The indigenous replacement parts, if any, shall be supplied by the Contractor free of</p>	

<p>cost on F.O.R. Purchaser site at SAS Nagar, Punjab basis.</p> <p>All defective parts including the imported parts shall be returned by Purchaser to the Contractor, if requested, on Freight to pay basis.</p>	
<p>11.Replacement:</p> <p>If the stores or any portion thereof is damaged or lost during transit, the Purchaser shall give notice to the Contractor setting forth particulars of such stores damaged or lost during transit. The replacement of such stores shall be effected by the contractor within a reasonable time to avoid unnecessary delay in the intended usage of the Stores. In case the purchaser agrees, the price towards replacement items shall be paid by the purchaser on the basis of original price quoted in the tender or as reasonably worked out from the tender.</p>	
<p>12.Validity:</p> <p>The offer should be valid for a minimum period of 120 from the date of opening of Tehno-Commercial bid and 90 days after opening of Price Bid.</p>	
<p>13.Installation and Commissioning:</p> <p>Installation, commissioning, and demonstration of performance of the tendered stores as per Purchaser tendered specifications shall be carried out by the Contractor at Purchaser s site at S.A.S. Nagar, Punjab, India.</p> <p>The contractor shall provide in advance guidelines for preparation of installation site and list of items to be supplied by Purchaser during installation.</p> <p>On receipt of intimation from the Purchaser, the Contractor shall depute its engineer to the Purchaser site within two weeks to carry out installation and commissioning and will demonstrate the functionality of the tendered equipment to Purchaser specifications as per mutually agreed acceptance procedure. The Contractor shall be responsible for any loss/damages sustained due to delay on the part of the Contactor to send its engineer for installation and commissioning.</p> <p>Failure to commission the tendered equipment successfully shall</p>	

<p>entitle Purchaser to full refund of the payment made and the interest thereon. Decision regarding successful installation and commissioning shall rest solely with the Purchaser.</p>	
<p>14.Liquidated Damages (LD):</p> <p>If the Contractor fails to deliver the stores within the time specified in the contract or any extension thereof, the purchaser shall recover from the Contractor as liquidated damages a sum of one-half of one percent (0.5 percent) of the Contract price of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed ten percent (10 percent) of the Contract price.</p>	
<p>15.Mode of Despatch:</p> <p>In case of foreign orders, stores should be despatched by Indian Flag Vessels/Air India or through any Agency nominated by us whose contact details shall be indicated in the purchase order.</p>	
<p>16.Insurance of Stores:</p> <p>Insurance wherever necessary, will be arranged by the Purchaser. The necessity or otherwise of insurance will be as indicated in the Purchase Order/Contract.</p>	
<p>17.Packing & Forwarding:</p> <p>The Contractor shall pack and crate all stores for air/sea/road shipment as applicable in a manner suitable for export to a tropical humid climate, in accordance with internationally accepted export practices and in such a manner so as to protect it from damage and deterioration in transit by road, rail, air or sea. The Contractors shall be responsible for all damages due to improper packing.</p>	
<p>18.Arbitration:</p> <p>If at any time any question, dispute or difference whatsoever shall arise between the purchaser and the Contractor upon or in connection with this Contract, either party may forthwith give to the other notice in writing of the existence of such question, dispute or difference and the same shall be referred to the adjudication of two arbitrators, one to be nominated by purchaser, other by a Contractor and in the event of any difference of opinion, the arbitrators will refer the matter to the umpire. The arbitration shall be conducted in accordance with the rules and procedure for arbitration of the International Chamber of</p>	

Commerce at Paris. The expenses of the arbitrators and umpire shall be paid as may be determined by them. However, the venue of such arbitration should be in India. In case of dispute arises with domestic/Indian suppliers, the applicable Arbitration procedure shall be as per Indian Arbitration & Conciliation Act, 1996.	
19. Applicable Law: The Contract shall be interpreted, construed and governed by the laws of India.	
20. Address if Indian Agent, if any:	
21. Any Other Term:	

Supporting Documents from Vendor

Attachment - I:

Attachment - II:

Price Bid Form

Item Description	Slab Range	Qty	UOM	Currency	Unit Price	Total Price
3D X Ray Inspection system 3D X ray inspection system (Radiography System)	-	1	No.	-	-	-

Break-up of other taxes and other costs should be specified in respective narration columns.

Sum of these Break-up values should be specified in respective value columns.

Supporting Documents from Vendor (Commercial)

Document attachment with price bid

Attachment - I:

Attachment - II: