



राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान, भुवनेश्वर
(परमाणु ऊर्जा विभाग, भारत सरकार का एक स्वयं शासित संस्थान)
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR
(AN AUTONOMOUS INSTITUTE UNDER DEPT. OF ATOMIC ENERGY, GOVT. OF INDIA)

CORRIGENDUM

REF.: Tender No. NIT-18/2017
File Ref. No.: NC-000175-PHY-17-18

The tender date for "5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET & FLOW DIVIDER" is further extended as per the following.

1. Date & Time of Submission: 10.10.2017 (Up to 5:30 P.M.)
2. Date & Time of Opening: 11.10.2017 (At 2:30 P.M.)

All other Terms & Conditions of our Tender No. NIT-18/2017 will remain same.

Stores & Purchase Officer



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(AN AUTONOMOUS INSTITUTE UNDER DEPT. OF ATOMIC ENERGY, GOVT. OF INDIA)

Notice Inviting Tender No. 18-2017 (2 Part Tender)

**5 CHANNEL GAS MIXING SYSTEM
WITH CYLINDER CABINET**

Cost of Tender is 1500.00 (Non Refundable)



NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH
JATNI CAMPUS, P.O.: BHIMPUR-PADANPUR,
KHURDA-752050
Tender Notice No. NIT-18/2017 (2 Part Tender)

Sealed Tenders are invited on behalf of the Director, National Institute of Science Education and Research, Bhubaneswar from the manufacturers (Indian or Foreign) and their authorised reseller/Indian agent only for supply & installation of the following items:-

Sl. No.	Name of the Items	Tender No.	Dept	Indent No.	Qty.	EMD in INR
01	5 Channel gas mixing system with cylinder cabinet and flow divider	NIT-18	School of Physics Science	NC-000175-PHY-17-18	1 No.	60000.00

NB: PARTIES REGISTERED WITH SSI/DGS&D/DAE AND FOREIGN PARTIES QUOTING DIRECTLY ARE EXEMPTED FROM PAYING EMD ONLY. TENDER FEE IS NOT EXEMPTED

Interested parties may collect the Tender Documents from the Dy. Controller of Accounts, NISER, on payment of Rs.1500/-(Non Refundable) in cash/Demand Draft up to 19.09.2017 during working hours. The Tender, complete in all respects should be submitted up to 05.00 p.m. of 19.09.2017 along with prescribed Earnest Money Deposit. The pre-bid meeting of the above tender will be held on 07-09-2017 at 11.30 A.M. at NISER, Jatni Campus.

Detailed Tender Document can also be downloaded from the NISER web-site address: www.niser.ac.in directly. Bidders who submit the form downloaded from the web site must attach Demand Draft of requisite amount (cost of tender document) prepared in favour of the DIRECTOR, NISER, BHUBANESWAR with their bid.

NISER reserves the right to accept or reject any or all the Tenders without assigning any reason.

Stores & Purchase Officer



**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
NIT OPEN DOCUMENT (2 PART BID)
SUPPLY & INSTALLATION OF
5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET AND FLOW DIVIDER**

National Institute of Science Education & Research (NISER), Bhubaneswar, India is an Autonomous Institute under Dept of Atomic Energy. NISER would like to procure the following equipment. The Technical Specifications Schedule of Requirements and Allied Technical details are given in Part-1 of tender document.

- **Item:** 5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET AND FLOW DIVIDER
- **Tender Enquiry No:** NIT-18/2017
- **Pre-bid Meeting:** 07-09-2017 at 11.30AM
- **Due Date & Time:** 19th September, 2017 AT 05.00PM (For submission of Bids)
- **Opening of Technical Bids:** 20th September, 2017 AT 02.30 PM

Sealed tenders are invited for supply and installation of AC Resistance Bridge in the National Institute of Science Education & Research, Bhubaneswar. The tender document consists of the following two parts.

Part-1: "TERMS & CONDITIONS" & "TECHNICAL BID" of the tender.

Part-2: "FINANCIAL BID" of the tender.

The sealed envelope containing "Terms & Conditions", "Technical Bid" and "Financial Bid" on prescribed tender document should reach to the Stores & Purchase Officer, National Institute of Science Education & Research, Bhubaneswar on or before **19th September, 2017** upto 5:00 p.m. otherwise the tender will not be accepted.

The sealed envelope of the bidders containing Part-1 "Terms & Conditions" and "Technical bid" shall be opened on **20th September, 2017** at **02:30 p.m.** One representative of each vendor may participate at the time of opening the bids (The representative must have the valid authorisation from their respective company for attending the tender opening meeting). The Part -2 "Financial Bid" of only those parties who qualify in Part -1 will be opened on a later date. The date of opening will be informed to each qualified party separately.

(Deepak Srivastava)
Stores & Purchase Officer

**The Institute can provide following documents.
Custom Duty exemption certificate.**

**COST OF TENDER IS RS.1500/- / USD 50.00 OR EQUIVALENT FOR FOREIGN BIDDER
(NON REFUNDABLE).**

Tender fee is mandatory.

**This is payable in cash or Demand Draft of a scheduled Bank in favour of
Director, National Institute of Science Education and Research, Bhubaneswar.**



PART - 1
TERMS & CONDITIONS
FOR SUPPLY AND INSTALLATION
OF
5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET AND FLOW DIVIDER
FOR
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR

1. Director, National Institute of Science Education & Research, Bhubaneswar (NISER) invites sealed tenders for 5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET AND FLOW DIVIDER from the Manufacturer and their authorised reseller only having following credentials.
 - A. Should have satisfactorily completed **03 Nos. of similar supply** (at least one of them in Central Government/Central Autonomous Body/Central PSU)
 - B. **Similar or Similar Nature of work means** Supply & Installation of 5 Channel Gas Mixing System with Cylinder Cabinet and Flow Divider for any of the following :
 - a) **Government/Autonomous Institutions**
 - b) **Government Research Centres**
 - c) **Universities**
 - d) **Autonomous/Reputed Private Research Centres**
 - e) **Purchase Orders / Completion certificates if any, for supporting above requirements.**
2. The Bidders are requested to give detailed tender in the prescribed forms in two Bids
i.e. Part - I Technical Bid.
Part - II Commercial Bid.

1. Contact for information: (Only E-mail enquiries will be entertained)
For Technical Information of 5 Channel Gas Mixing System with Cylinder:
Dr. V. K. S. Kashyap
SPS, NISER.
E-Mail – vkashyap@niser.ac.in

For Information regarding Commercial & all other Terms & Conditions:
Deepak Srivastava
Stores & Purchase Officer
National Institute of Science Education & Research, Bhubaneswar
E-Mail-spo@niser.ac.in

4. Supply means:

“Supply, Installation, Commissioning and satisfactory demonstration of the whole equipments”.
If any charges extra are payable for Installation and Commissioning, the same should be specified in the commercial offer.

5. Submission of Bids:

- (a) Place: Office of Stores & Purchase Officer, NISER, Bhubaneswar.
- (b) Time and Date of Submission: up to **05.00 PM on 19.09.2017**
- (c) Time and Date of opening Technical Bid: At **2.30 P.M on 20.09.2017**

NISER will not be responsible, for submission / delivery of quotation at wrong places other than the Office of Stores & Purchase Officer, NISER, Bhubaneswar.

6. Two Bid System: -

The two bid system should be followed for this tender. In this system the bidder must submit his offer in two separate sealed envelopes. Both the technical bid and commercial bid envelopes should be securely sealed and stamped separately for each quoted equipment and clearly marked as “Envelope No.1 – Technical Bid” and “Envelope No.2 – Commercial Bid” respectively. Both the sealed envelopes should be placed in a third larger envelope. The main envelope which will contain both the bids should be super scribed with our tender enquiry No.**NIT-18/2017** due on **19.09.2017 with name of the equipment & Department** and to be submitted to the address given below so as to reach on or before **05.00 PM** on **19.09.2017**.

Stores & Purchase Officer,
National Institute of Science Education & Research,
Jatni Campus, PO-Bhimpur-Padanpur
Via-Jatni, Khurda-752050.

The envelopes must be super-scribed with the following information:

- Tender Reference Number
- Name of the Equipment
- Name of the Department
- Due Date
- Name of the Vendor
- Envelope No. 1: Shall contain “Acceptance of Terms & Conditions”, “Technical Bid” and Earnest Money Deposit (EMD)
The technical offer should not contain any price information.
- Envelop No.2: Shall contain financial bid only.

The Technical Bid must be submitted in an organized and structured manner. No brochures/leaflets etc. should be submitted in loose form. Please indicate page nos. on your quotation eg. If the quotation is containing 25 Pages, please indicate as 1/25, 2/25, 3/25 -----25/25.

Printed conditions of the vendor submitted with the tender will not be binding on National Institute of Science Education & Research, Bhubaneswar.

Important Instruction

The parties are requested to make separate bid (technical & financial both) for each quoted equipment along with the requisite amount of EMD.

The Technical Offer should comprise of the following:

- a) Tenders, which are submitted without following the Two-Bid Offer System, will summarily be rejected.
- b) The technical offer should be complete to indicate that all products and services asked for are quoted. Each page of the bid and cutting/corrections shall be duly signed and stamped by the bidder. Unsigned Tenders will also be rejected. Failure to comply with this requirement may result in the bid being rejected.
- c) The purpose of certain specific conditions is to get or procure best product/service etc. for NISER. The opinion of Technical Committee shall be the guiding factor for technical short listing.
- d) The earnest money deposit as indicated against the item should be enclosed along with the terms & conditions & technical bid duly signed and stamped in the form of Account Payee

Bank Draft payable on any branch of Nationalised/Schedule Bank at Bhubaneswar in favour of “Finance Officer, NISER, Bhubaneswar, in a separate sealed envelope. All tenders submitted without requisite amount of earnest money shall be rejected and their technical and financial bids shall not be opened. No interest is payable on EMD. The EMD will be returned to the bidders(s)/ Agents whose offer is not accepted by NISER within one month from the date of the placing of the final order(s) on the selected bidder(s). In case of the bidder(s) whose offer is accepted the EMD will be returned on submission of Performance Bank Guarantee (if applicable). However, if the return of EMD is delayed for any reason, no interest /penalty shall be payable to the bidders.

EMD EXEMPTION:

PARTIES REGISTERED WITH SSI/DGS&D/DAE AND FOREIGN PARTIES QUOTING DIRECTLY ARE EXEMPTED FROM PAYING EMD. FOREIGN PARTIES QUOTING DIRECTLY UNDER ORIGINAL SEAL AND SIGNATURE (NOT SCANNED) WILL GET THE EXEMPTION.

The EMD shall be forfeited:

If the bidder withdraws the bid during the period of bid validity specified in the tender. In case a successful bidder fails to furnish the Performance Bank Guarantee (if applicable).

- e) Undertaking that the successful bidder agrees to give a Performance Bank Guaranty of 10% of the purchase order value in favour of “Director, National Institute of Science Education & Research, Bhubaneswar valid till warranty period.

Performance Bank Guarantee:

Within ten (10) days of the award of contract, the vendor shall furnish a Performance Bank Guarantee amounting to 10% of the purchase order value in the form of Bank Guarantee favouring the Director, National Institute of Science Education & Research, Bhubaneswar valid till completion of warranty period.

- f) Duly filled in Technical Bid with proper seal and signature of authorized person on each page of the bid should be submitted and the same should accompany with complete specifications and drawings, Manufacturer’s name, address and relevant Technical Literature/Brochures with warranty Terms and EMD.
- g) If the bid is for branded makes, authorization letter from principals clearly indicating that the vendor is the competent authority to sell and provide services towards the items mentioned in the scope of supply given in this tender document.
- h) Copy of GST No. & PAN No. allotted by the concerned authorities.
- i) List of deliverables / Bill of materials and services.
- j) Compliance sheet with any deviation with reference to the terms and specifications.
- k) Indicate the names of the Indian reputed Organizations where you have supplied similar equipment and may attach the satisfactory performance report of the equipment from user Organization.
- l) The item should be supplied with manuals and the manuals including technical drawings should be complete in all respects to operate the system without any problem.
- m) Bid documents should be submitted as per the above sequence with Index page and page numbers (including technical literature). Each page of the bid should be signed & stamped in original. Unsigned bids will not be considered for evaluation.

• Envelope 2: “Commercial Bid” shall contain:

- a) Price schedule complete in all respects with proper seal and signature of authorized person.
Tender with any condition including conditional rebate shall be rejected forthwith.
- b) Cost of all the items should be mentioned clearly and individually in the Commercial Offer (Part-II) only.
- c) **The Bidders are requested to quote for Educational/Institutional Price for Machine/ Equipment and, since we are eligible for the same.**

d) Printed conditions of the vendor submitted with the tender will not be binding on NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH.

7. Date of opening the Technical Bids.

Technical Bids will be opened on – **20th September, 2017 at 2.30 P.M** at office of the Stores & Purchase Officer, National Institute of Science Education & Research, Bhubaneswar.

The Technical bids will be opened in the presence of the bidders on the specified time and date. Bidders/Agents who have responded to the tender only will be allowed to be present.

The technical bids will be evaluated to shortlist the eligible bidders. The commercial bids of only the short listed bidders shall be considered for further processing. Bidders whose technical offer is found acceptable and meeting the eligibility requirements as specified in this tender will be informed about the date and time of the opening of the commercial bid.

- Note:** (1) Please do not insert ‘Commercial Bid’ (prices quoted) in the technical bid envelope. If the price quoted is submitted with technical bid the tender will be rejected.
- (2) No camera mobiles / mobiles are allowed during tender opening.

8. Opening of Commercial Bids

NISER will open commercial bids of only the short listed bidders, in the presence of the bidders or their authorized representatives who choose to attend the commercial bid opening. The Date and Time of opening the Commercial Bid will be intimated only to pre-qualified and technically acceptable Bidders for the item at a later date.

The representatives of short listed firms only will be allowed for commercial bid opening.

ONLY TECHNICALLY accepted competitive bids will be considered for placing Purchase Order. The commercial offers of the vendors whose technical offers are found to be technically deficient or do not meet the qualification criteria as specified in this tender will be returned to them without opening.

The bid can be submitted in person or through post/courier (NISER will not be responsible for delayed / late quotations submitted / sent by Post / Courier etc. resulting in disqualification/rejection of any bid) so as to reach NISER on or before the due date and time. Fax / E-mail / Telegraphic / Telex tenders will not be considered unless it is asked for. The bidders ‘authorized representative can attend the bid opening.

9. The Director NISER reserves the right to accept the offer in full or in parts or reject summarily or partly.

10. Delivery Period / Timeliness

The deliveries, installation must be completed within 120-180 days, after placement of purchase order. The time is the essence of the contract. It is mandatory for the bidders who respond to this bid to meet these expectations, as they are tightly linked to NISER’s plans of completing the project within the time frame.

11. Locations for the Supply / Services

The Laboratory Equipments covered by this document is required to be supplied and installed at School of Physical Science of NISER, Jatni Campus, Dist. Khurda.

12. Order Placement and Release of Payment

The Purchase Order and payment shall be processed by –

Stores & Purchase Officer

**National Institute of Science Education & Research, Bhubaneswar,
Jatni Campus, PO-Bhimpur-Padanpur, Via-Jatni, Khurda-752050.**

Payment for the items to be supplied by the vendor against the purchase order shall be made by National Institute of Science Education & Research as follows:-

80% payment will be made after 100% delivery of the material on submission of original invoice and original delivery challans duly signed and stamped by the authorised representative of NISER along with performance Bank Guarantee.

Balance 20% payment will be released on submission of installation and warranty certificate duly signed and stamped by the authorized representative of the user department.

In case of imports 100% payment will be made through Letter of Credit. 80% will be paid after submission original shipping documents & balance 20% will be released after satisfactory installation and commissioning along with submission of performance Bank Guarantee.

Agency Commission: Agency Commission to be paid to India Agent should be specified separately and same will be paid in INR.

The tenderers who are not agreeing to above payment terms are requested not to submit their tender otherwise their EMD will be forfeited.

13. NISER will not provide any accommodation/transportation for the engineers/ representatives for attending installation, commissioning and demonstration work. It is the absolute responsibility of the Principal Supplier/Indian Agent to make their own arrangements.

14. The successful bidder, on award of contract / order, must send the contract / order acceptance in writing, within 7 days of award of contract / order failing which the EMD will be forfeited.

15 Period of validity of bids

Bids shall be valid for a period of 90 days from the date of opening the Technical bid.

NISER may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. The bidder is free not to accept such request without forfeiting the EMD. A bidder agreeing to the request for extension will not be permitted to modify his bid.

Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

16. AWARD OF CONTRACT

NISER shall award the contract to the eligible bidder whose bid has been determined as the lowest evaluated commercial bid. If more than one bidder happens to quote the same lowest price, NISER reserves the right to award the contract to more than one bidder or any bidder.

Purchaser's Right to vary Quantities at the time of Award: NISER reserves the right at the time of award of Contract to increase or decrease the quantity of items specified in the Schedule of Requirements without any change in price or other terms and conditions.

17. Corrupt or Fraudulent Practices

NISER requires that the bidders who wish to bid for this project have highest standards of ethics. NISER will reject a bid if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices while competing for this contract. NISER may declare a vendor ineligible, either indefinitely or for a stated duration, to be awarded a contract if it at any time determines that the vendor has engaged in corrupt and fraudulent practices during the execution of contract.

18. Interpretation of the clauses in the Tender Document / Contract Document

In case of any ambiguity / dispute in the interpretation of any of the clauses in this Tender Document, Dy. Controller of Accounts, NISER's interpretation of the clauses shall be final and binding on all parties.

19. Price

The price quoted shall be considered firm and no price escalation will be permitted at any time. The quotation should be in Indian Rupees or any known foreign currency. Packing, forwarding, freight, insurance, **Agency commission** and commissioning charges, if any extra may be quoted separately in Commercial Bid.

In case of INR bids the price criteria should be on F.O.R., NISER, Bhubaneswar. Govt. Levies like custom duty, GST etc., if any, shall be paid at actual rates applicable on the date of delivery. Rates should be quoted accordingly giving the basic price, Custom Duty, GST etc., if any.

Please provide GST no. of the firm allotted by the concerned authorities in your quotation.

In case of Foreign Currency bid: - Price criteria should be FOB nearest airport detail break up of Price, FCA cost, **Agency Commission**, Insurance, Freight up to Kolkata Airport is required.

20. Pre-installation:

Pre-installation facilities required for installation may please be intimated in the technical bid. Subsequently, before the consignment lands in NISER, Bhubaneswar the bidder shall confirm that the pre-installation requirements are sufficient for installation of the equipments. In other words the bidder should continuously monitor the pre-installation requirements and see that everything is ready before the consignment is taken to the site for installation.

21. Installation, Warranty & Support

Bidder shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty and thereafter.

The items covered by the schedule of requirement shall carry minimum three years OEM warranty from the date of acceptance of the equipments by NISER. Warranty shall include free maintenance of the whole equipment supplied including free replacement of parts. The defects, if any, shall be attended to on immediate basis but in no case any defect should prolong for more than 24 hours. The comprehensive warranty includes onsite warranty with parts.

The defects, if any, during the guarantee/warranty period are to be rectified free of charge by arranging free replacement wherever necessary. This includes cost, insurance, freight, custom duty, GST if any should be borne by the beneficiary or his agent. A clear confirmation should be given for this item.

The bidder shall assure the supply of spare parts after warranty is over for maintenance of the equipment supplied if and when required for a period of 10 years from the date of supply of equipment on payment on approved price list basis.

The equipment must be supported by a Service Centre manned by the principal vendor's technical support engineers. The support through this Centre must be available 24 hours in a day, seven days a week and 365 days a year. Also it should be possible to contract the Principal's vendor support Centre on a toll free number/web/mail.

The vendor will have to arrange for all the testing equipment & tools required for installation, testing & maintenance etc.

- Installation and integration of all supplied hardware and software shall be done by the vendor. The vendor shall install and configure all required hardware and software suites, including but not limited to racking and stacking, cluster networking, configuring all nodes, execution and submission of jobs, installation of compilers and applications, configuration of environment variables and license utility configuration.
- The bidder must install and configure user application / software on the cluster, and demonstrate its running in parallel as part of the system acceptance. The application software will be provided by the Institute.
- A half-a-day admin and user training on the cluster usage and administration must be provided.
- The vendor shall reproduce the benchmarks performed during the bidding criteria (see below) on all the compute nodes. The supplied hardware should have 3 years OEM warranty including upgrades of BIOS, firmware, patches etc.

22. Indemnity

The vendor shall indemnify, protect and save NISER against all claims, losses, costs, damages, expenses, action suits and other proceeding, resulting from infringement of any law pertaining to patent, trademarks, copyrights etc. or such other statutory infringements in respect of all the equipment's supplied by him.

The successful will be fully responsible for payment of wages and other dues as prescribed and compliance of various Labour Laws.

The successful tender should give an undertaking that the staff deployed at the centre in terms of this contract at all time will be employees of the agency exclusively and they shall not be entitled to any claim of employment or permanency of job with NISER.

NISER reserves the right to forfeit whole or part of the security money towards any damage/lose caused due to the negligence on the part of the agency engaged.

23. Insurance

The equipment's to be supplied will be insured by the vendor against all risks of loss or damage from the date of shipment till such time it is delivered at NISER site in case of Rupee/Foreign currency transaction.

24. Penalty for delayed Services / LD

As time is the essence of the contract, Delivery period mentioned in the Purchase Order should be strictly adhered to. Otherwise the bidder will forfeit EMD/SD and also LD clause will be applicable /enforced.

If the supplier fails to Supply, Install and Commission the equipment as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of 1% of order value per every week of delay subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier.

NISER reserves the right to cancel the order in case the delay is more than 30 days Penalties, if any, will be deducted from the EMD.

25. Jurisdiction

If a dispute arises out of or in connection with the contract, or in respect of any defined legal relationship associated therewith or derived therefrom, the parties agree to submit that dispute to arbitration under the ICADR Arbitration Rules, 1996.

The authority to appoint the arbitrator(S) shall be the International Centre for alternative dispute resolution.

The International Centre for Alternative Dispute Resolution will provide administrative services in accordance with the ICADR arbitration Rules, 1996.

**Stores & Purchase Officer
NISER, BHUBANESWAR**

DECLARATION BY THE VENDOR

It is hereby declared that I/We the undersigned, have read and examined all the terms and conditions etc. of the tender document for which I/We have signed and submitted the tender under proper lawful Power of Attorney. It is also certified that all the terms and conditions of the tender document are fully acceptable to me/us and I/We will abide by the conditions from serial no. 1 to 25 and we have not given any printed conditions beyond the scope of this tender. This is also certified that I/We/our principal manufacturing firm have no objection in signing the purchase contract if the opportunity for the supply of the items against this tender is given to me/us.

Date:

Signature:

Address:

Name:

Designation:

On behalf of:

(Company Seal



PART - 1
FOR SUPPLY AND INSTALLATION OF
5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET
FOR
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR
General Information

1.	Name of the Company	
2.	Full address of company alongwith Telephone no. Fax no. E-mail address :	
3.	Local address of company for communication, if any	
4.	Are you a manufacturer or dealer/reseller	
5.(a)	Annual turn over in last 3 financial years in Rs. Crores. (i) Year 2014-2015 (ii) Year 2015-2016 (iii) Year 2016-2017	
5.(b)	Supply & Installation of equivalent to our tendered OF 5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET last 3 financial years in State Government or Govt. of India Department(s) /Reputed Organisation(s) (in Nos. and Value) (Please attach list of clients) (i) Year 2014-2015 (ii) Year 2015-2016 (iii) Year 2016-2017	
5.(c)	GST Registration no. with Place	
5.(d)	Income Tax Registration no. with place	



**SUPPLY AND INSTALLATION
OF
5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET
FOR
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR
TECHNICAL SPECIFICATION**

S. No.	Item Specification	Offered specification with Make & Model No. please specify any deviation if any. Please attach separate sheet if required
(1)	(2)	(3)
01	5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET AND FLOW DIVIDER (NC-000175-PHY-17-18)	
	<u>5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET AND FLOW DIVIDER</u> <u>Item Specifications:-</u> The detailed specification is attached as per Annexure-I	

Note: - Parties must mention make & model no. of the equipment offered by them, with detailed specification (on separate sheet). Otherwise their tender will not be accepted.

5 channel gas mixing system with cylinder cabinet and flow divider

1. Gas mixing system

Specification	Description			
No. of gases / gas inputs	<ol style="list-style-type: none"> 5 Each gas input will be connected to a cylinder of the respective gas (Refer to attached schematic). Gas ON or OFF control through ball valves at input of gas system 			
Mixing method	<ol style="list-style-type: none"> Gases are to be mixed with the help of appropriate and calibrated Mass Flow Controllers (MFC) and gas cartridge. Proper values of MFC may be determined using the information about the type of gas, maximum flow rate required and percentage of gas in mixture. (Refer to attached schematic and flow rate below). 			
MFCs	<ol style="list-style-type: none"> Accuracy at calibration conditions after tare: $\pm (0.8\% \text{ of Reading} + 0.2\% \text{ of Full Scale})$ or better Repeatability $\pm 0.2\% \text{ Full Scale}$ Zero Shift and Span Shift : $0.02\% \text{ Full Scale} / ^\circ\text{C} / \text{atm}$ Operating Range : 1% to 100% Full Scale Turndown Ratio : 100:1 Maximum Controllable Flow Rate : 102.4% Full Scale Typical Response Time 100 ms (Adjustable) Warm-up Time < 1 Second Operating Temperature : -10 to $+60$ $^\circ\text{C}$ Humidity Range (Non-Condensing) : 0 to 100% 			
Maximum flow rate	<ol style="list-style-type: none"> The maximum flow rate of the combined mixture is 400 sccm When using all 8 channels of the flow divider detailed below, the flow per channel becomes 50 sccm. (Refer to attached schematic) 			
Gas mixture details	Sl. No.	Mixture gases	Percentage in mixture	Individually
	1.	Argon	0 - 100 %	0 - 100 %
2.	Isobutane	0 - 10 %		
3.	Freon-R134a (1,1,1,2-Tetrafluoroethane)	0 - 100 %		
4.	Sulphur Hexafluoride (SF ₆)	0 - 1%		
5.	CO ₂	0 - 100 %		
Comments <ul style="list-style-type: none"> To keep certain gases such as isobutane and SF₆ under limit, in the mixture they will never exceed 10 and 1 percent respectively. It must be possible for the gases to be flown individually keeping the other gases OFF for calibration purposes using alternate gas flow lines. 				
Input pressure	Pressure at each gas input : < 3 bar			
Gas system piping	Standard 1/4" SS piping			

Alternate gas flow lines	Each gas inlet to the mixing system should have an alternate line with the help of a 3 way diverter valve after the MFC to facilitate calibration when needed occasionally (Refer to attached schematic).
System control	<ol style="list-style-type: none"> 1. Remotely via software 2. Must be possible to set the flow rate of each gases individually by specifying selectable options: (1) Mass flow. (2) Mixing percentage.

2. Flow divider system

Specification	Description
No of output channels	8
Piping	1/4" SS piping
Input	<ol style="list-style-type: none"> 1. 1 input of gas mixture from gas mixing system 2. Moisture trap before flow division to 8 channels
Output	<ol style="list-style-type: none"> 1. Numbered panel to select outputs from 1 to 8 2. Each panel output should have ball valve to switch the output ON and OFF. 3. Output connection to client end via push fit 1/4" connectors.
Pressure safety system	Detailed below
Bypass	Bypass line to be provided to ignore pressure safety system before moisture trap in case of safety system error. Bypass line selectable via 3-way diverter valves.

3. Pressure safety system

<ol style="list-style-type: none"> 1. Electronic pressure safety system to protect client end system from excess differential pressure in case of blocks 2. Differential pressure limit : User selectable from 1 to 100 mbar. 3. The system should indicate excess pressure condition via alarm or light. 4. Differential pressure to be measured between flow division point and atmosphere. 5. Under condition of pressure beyond set limit, the excess gas needs to be vented to the atmosphere.
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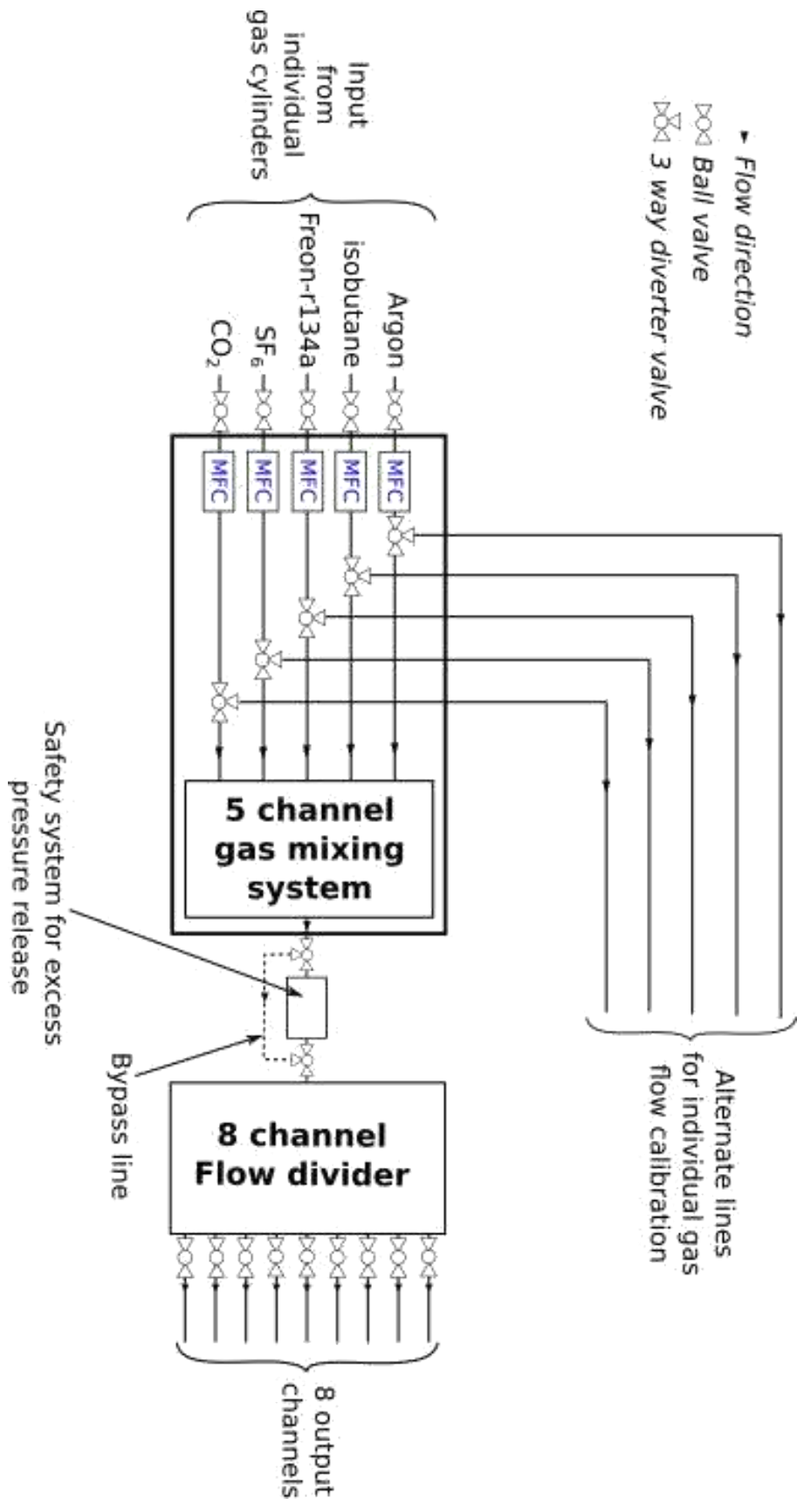
4. Gas Cabinet

Specification	Description
Features	<ol style="list-style-type: none"> 1. Capable of accommodating 5 cylinders
Cabinet dimensions	Height : 2200 mm max. Width : 1700 mm max. Depth : 500 mm max.
Cylinder dimensions	<ol style="list-style-type: none"> 1. Four standard 47 litre capacity gas cylinders 2. One 60-62 kg packaging refrigerant cylinder (Freon r134a)
Holders	Chain locks for holding cylinders in place

Doors	<ol style="list-style-type: none"> 1. 2 doors 2. Flush mounted paddle type door lock with key 3. Louvered air intake panel on both doors at the bottom (300 x 200 sq.mm) 4. Reinforced safety glass on each door above the paddle type door locks (500 x 500 sq.mm)
Piping and valves	<ol style="list-style-type: none"> 1. 1/4" SS piping to each cylinder with regulator will be routed through the 500 mm side of the cabinet at the top towards the Gas mixing system. Option to route from either side of the cabinet. 2. Check valves and hose for cylinder connections.

IMPORTANT:

1. Three systems i.e. Gas mixing, flow divider and pressure safety must be integrated in an instrumentation rack of size 32U or similar unit (600 mm x 800 mm maximum dimension).
2. The integrated system must be easily serviceable.
3. Client system will be at atmospheric pressure.
4. Drawings for the system and cabinet are to be provided.
5. Manuals for mixing system operation, software, documentation and live demonstration of the system are to be provided at the time of installation.



Schematic of gas mixing system and flow divider.



FINANCIAL BID
FOR SUPPLY AND INSTALLATION OF
5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET
FOR
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR

Sl. No.	Systems	Approx. Qty.	Unit Price FOB in Foreign currency	Unit Price including all freight, Insurance, transporation charges (delivered at NISER, Jatni) service charges, installation and warranty charges in INR
(1)	(2)	(3)	(4)	(5)
	5 CHANNEL GAS MIXING SYSTEM WITH CYLINDER CABINET (NC-000175-PHY-17-18)			
1.	5 Channel Gas Mixing System with Cylinder Cabinet and Flow Divider (Detailed Specification As Per Our Technical Bid)	1 Unit		
2.	Above item should carry three years OEM warranty. In case the tendered provide warranty less than 03 years then he has to give justification for lesser period of warranty. Without justification his tender is liable to be rejected.			
3.	Agency Commission to be paid to Indian Agent (will be paid in INR only after successful installation)	Included/Excluded _____% of basic price		
4	CIP Kolkata Charges Included/Excluded in the quoted price	Amount		
5	Custom Duty Included/Excluded in quoted price	_____ . _____% of basic price (Custom Duty exemption certificate will be issued)		
6	GST (to be paid extra on INR Prices only)	_____ . _____% of (basic price)		
7	AMC Charges after expiry of warranty	Amount in INR		

ALL ABOVE ITEMS ON 3 YEARS ONSITE FULL COMPREHENSIVE OEM WARRANTY.

Note: Please mentioned GST rate of the above mentioned item

Date:
Address:

Signature:
Name:
Designation:
On behalf of:

(Company Seal)

(Please take the printout on your letter head along with all details)

To,
The Director
National Institute of Science Education & Research
Jatni Campus, Jatni,
Khurda-752050

Ref: Tender Ref. No.: _____ Dated. _____

Sub: Refund of EMD

Dear Sir,
We have deposited EMD of Rs. _____/- vide D/D No. _____ dated.
_____ of _____ **(Name of Bank)**
against above mentioned tender. Since our tender has not being qualified, we request to
release our EMD.

Yours faithfully,

Signature of the Authorised Signatory
(with company seal)

Our addressed is verified as below:

M/s. _____

Pin Code: _____

Phone No.: _____



**NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH
JATNI CAMPUS, P.O.: BHIMPUR-PADANPUR,
KHURDA-752050
Tender Notice No. NIT-18/2017**

CHECK LIST

Your bid should accompany with following documents. Please enclose the required document and put (√) mark in the check list where ever applicable.

Sl. No.	Description of Documents	Enclosure
1.	EMD to be attached with Technical bid only	Yes / No
2.	Part I of Tender Documents with Declaration by the Vendor	Yes / No
3.	Duly filled EMD refundable sheet (if EMD is there)	Yes / No
4.	General Information Sheet	
	Annual turnover in last 3 financial years in Rs. Crores (i) Year 2014-2015 (ii) Year 2015-2016 (iii) Year 2016-2017	Yes / No
	Supply & Installation of equivalent to our tendered for the required item from last 3 financial years in State Government or Govt. of India Department(s) /Reputed Organisation(s) (in Nos. and Value) (Please attach list of clients) (i) Year 2014-2015 (ii) Year 2015-2016 (iii) Year 2016-2017	Yes / No
	GST Registration no. with Place	Yes / No
	Income Tax Registration no. with place	Yes / No
5.	Detailed technical description of the item	Yes / No
6.	Detailed filled Financial Bid	Yes / No
7.	Authorisation letter in letter head duly signed by the authorised signatory for allowing your representative to attend the tender opening meeting.	Yes / No

Signature of the Authorised Signatory with Date
(with Company Seal)