



टाटा मूलभूत अनुसंधान संस्थान हैदराबाद /
TATA INSTITUTE OF FUNDAMENTAL RESEARCH HYDERABAD

परमाणु ऊर्जा विभाग की स्वायत्त संस्था, भारत सरकार
Autonomous Institution of the Department of Atomic Energy, Government of India

सर्वेक्षण सं. 36/पी, गोपानपल्ली गांव, सेरिलिंगमपल्ली मंडल, रंगारेड्डी जिला, हैदराबाद - ५०० ०४६, तेलंगाना।
Survey No.36/P, Gopanpally village, Serilingampally Mdl., Rangareddy Dist., Hyderabad - 500 046, Telangana.

टेलीफोन / Telephone: +91-40-2020-3009
वेबसाइट / Website : www.tifrh.res.in

ई-मेल / Email: krishnaae@tifrh.res.in
तिथि / Date: 06.08.2025

NOTICE INVITING TENDER

निम्नलिखित कार्यों के लिए निविदा सह निविदा दस्तावेज (दो भाग सार्वजनिक निविदा) आमंत्रित करने की सूचना / Notice Inviting Tender cum Tender Document (Two Part Public Tender) for the following works

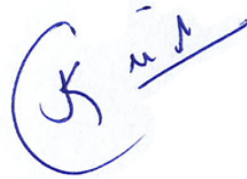
Retrofitting HVAC works for the cleanroom located at ground floor left wing in FreT-B	
निविदा सं. / Tender No.	TIFR/PD/CF25-85/250670
प्रकाशन की तिथि / Date of Publishing	06.08.2025
निविदा का प्रकार / Type of Tender	Two Bid System (Part-I: Technical cum eligibility Bid and Part-II: Financial Bid)
अनुमानित लागत / Estimated Cost	Rs.8,20,555/- (Inclusive of GST)
Location	Tata Institute of Fundamental Research, Technical Services Office, 36/P, Gopanpally Village, Serilingampally Mandal, Ranga Reddy District, Hyderabad 500046
ईएमडी की लागत / Cost of EMD	Rs.16,411/- (डिमांड ड्राफ्ट "टीआईएफआर सेंटर फॉर इंटरडिसिप्लिनरी साइंसेस" के पक्ष में तैयार किया जाना है, जो हैदराबाद में देय है (तकनीकी बोली भाग - I के साथ संलग्न किया जाना है)।" / Rs.16,411/- (Demand Draft to be drawn in favor of "TIFR Center for Interdisciplinary Sciences", Payable at Hyderabad. (To be enclosed with the Technical Bid Part – I).

बोली-पूर्व बैठक की तिथि और समय / Pre-Bid Conference: (a) Date & Time: (b) Zoom Link (c) Venue:	08.08.2025 at 11:00 Hrs. For Pre-bid conference Zoom link, check TIFRH webpage-Tenders-TIFR/PD/CA25-48/250560 TIFR, Survey No. 36/P, Gopanpally (Village), Serilingampally (Mandal), Ranga Reddy Dist., Hyderabad-500046. Phone: 040-2020-3001
निविदा प्रस्तुत करने की अंतिम तिथि / Last Date for Submission of Tender	13.08.2025 by 13:00 Hrs.
बोली खोलने की तिथि (केवल भाग-I: तकनीकी बिड) / Date of Opening Bids (Only Part-I: Technical Bid)	13.08.2025 by 15:00 Hrs.

टिप्पणी / NOTE:

- प्रतिष्ठित अनुसंधान संस्थानों, विश्वविद्यालयों, केंद्र सरकार / सार्वजनिक क्षेत्र के उपक्रम, निजी प्रयोगशालाओं, बहुराष्ट्रीय कंपनियों आदि में समान कार्य अनुभव रखने वाले ठेकेदारों से उपर्युक्त कार्यों के लिए सीलबंद आईटम दर निविदाएं आमंत्रित की जाती हैं। इच्छुक ठेकेदार जो टीआईएफआर, हैदराबाद द्वारा निर्धारित पात्रता मानदंडों को पूरा करते हैं, केवल अपनी बोलियां प्रस्तुत करेंगे। / Sealed Item Rate Tenders are invited for the aforementioned works from contractors having similar work experience in reputed Research Institutions, Universities, Central Government/Public Sector Undertaking, Private Laboratories, Multinational Companies, etc. Interested contractors who are satisfying eligibility criteria stipulated by TIFR, Hyderabad shall only submit their bids.
- तकनीकी सह पात्रता बोली (भाग-I) और वित्तीय बोली (भाग-II) दोनों को बोलीदाता द्वारा अलग-अलग लिफाफों में विधिवत रूप से लिखा हुआ सीलबंद किया जाना चाहिए और इन दोनों सीलबंद लिफाफों को एक बड़े लिफाफे में रखा जाना चाहिए, जिसे भी सीलबंद किया जाना चाहिए और उस पर निविदा संख्या, विवरण और नियत तारीख लिखी होनी चाहिए। / Both Technical cum eligibility Bid (Part-I) and Financial Bid (Part-II) should be sealed by the bidder in separate envelopes duly super-scribed and both these sealed covers are to be put in a bigger envelope which should also be sealed and duly super-scribed with the Tender No., Description and Due Date.
- यदि “भाग-I” और “भाग-II” बोलियां अलग-अलग लिफाफों में सीलबंद नहीं की जाती हैं तो निविदा अस्वीकार कर दी जाएगी। / In case, the “Part-I” and “Part-II” bids are not sealed in separate envelopes, the tender shall be rejected.
- तकनीकी बोली में मूल्य का कोई संकेत नहीं होना चाहिए। / Technical bid should not contain any indication of the price.
- बिना ईएमडी/अपर्याप्त ईएमडी के साथ प्राप्त तकनीकी बोली को सरसरी तौर पर अस्वीकार कर दिया जाएगा। / The Technical Bid received without EMD/with Insufficient EMD shall be summarily rejected.

- हाथ से डिलीवरी/कूरियर द्वारा भेजी गई बोलियां, टीआईएफआर, हैदराबाद सुरक्षा कार्यालय के सुरक्षा कर्मचारियों से मुहर, तारीख और हस्ताक्षर प्राप्त करने के बाद उन्हें सौंप दी जानी चाहिए। / Bids sent by hand delivery/courier are to be handed over to the security staff at TIFR, Hyderabad security office after obtaining stamp, date and signature from them.
- निविदा में उल्लिखित किसी भी तकनीकी या वाणिज्यिक शर्तों के स्पष्टीकरण के लिए श्री कृष्णा ए. ई., टेलीफोन: **040-2020-3009**, ई-मेल: krishnaae@tifrh.res.in से संपर्क करें। / Contact Mr. **Krishna A. E.**, Tel: **040-2020-3009**, Email Id: krishnaae@tifrh.res.in for any technical or commercial terms clarifications mentioned in the tender.
- बोलियाँ प्रमुख, तकनीकी सेवाएँ, प्लॉट संख्या 36/पी, गोपनपल्ली गाँव, सेरिलिंगमपल्ली मंडल, रंगा रेड्डी जिला, हैदराबाद- ५०० ०४६, तेलंगाना, भारत को संबोधित की जानी चाहिए। / The Bids should be addressed to Head, Technical Services, Plot No.36/P, Gopanpally Village, Serilingampally Mandal, Ranga Reddy District. Hyderabad- 500 046, Telangana, India.
- भविष्य में सभी शुद्धिपत्र/परिशिष्ट टीआईएफआर हैदराबाद वेबसाइट/सीपीपी पोर्टल पर प्रकाशित किए जाएंगे और इसके लिए कोई अलग विज्ञापन जारी नहीं किया जाएगा। सभी संभावित बोलीदाताओं से अनुरोध है कि वे ऐसे किसी भी अपडेट/शुद्धिपत्र के लिए नियमित रूप से हमारी वेबसाइट देखें। / All future corrigendum/addendum will be published on TIFR Hyderabad website / CPP portal and no separate advertisement will be released for the same. All prospective bidders are requested to visit our website regularly for any such updates/corrigendum.
- कृपया संलग्न बोली दस्तावेज देखें जिसमें विनिर्देश, निष्पादित की जाने वाली विभिन्न प्रकार की वस्तुओं की मात्रा की अनुसूची और अनुबंध की शर्तों का पालन किया जाना तथा अन्य आवश्यक दस्तावेज शामिल हैं जिन्हें टीआईएफआरएच वेबसाइट / सीपीपी पोर्टल से भी देखा और डाउनलोड किया जा सकता है। / Please see the attached bid document consisting of specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents which can also be seen and downloaded from TIFRH website / CPP portal.
- निविदा प्रस्तुत करने की अंतिम तिथि 13.08.2025 को 13:00 बजे तक है। / Last date for submission of the tender is 13.08.2025 by 13:00 Hrs.



Engineer (E)
Technical Services Dept.
टीआईएफआर, हैदराबाद / TIFR, Hyderabad.

सूचकांक / INDEX

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CHAPTER-I INFORMATION AND INSTRUCTIONS TO BIDDERS

1. INTRODUCTION: The Tata Institute of Fundamental Research (TIFR) is a National Centre of the Government of India, under the umbrella of the Department of Atomic Energy, as well as a deemed University awarding degrees for master's and doctoral programs.

Webpage: <https://www.tifrh.res.in>

2. DEFINITION OF TERMS: In constituting these general conditions and the annexed specifications, the following words shall have the meanings herein assigned to them unless there is something in the subject or context inconsistent with such construction.

2.1. The term 'TIFR, Hyderabad' shall mean Tata Institute of Fundamental Research, Hyderabad, 36/P, Gopanpally Village, Serilingampally Mandal, Ranga Reddy District, Hyderabad 500046 and shall include the TIFR, Hyderabad's heirs, successors and assigns.

2.2. The term 'Engineer' and 'Engineer-in-Charge' shall mean Engineer-in-Charge, TIFR, Hyderabad or such other officers as may be duly authorized and appointed in writing by the TIFR, Hyderabad to act as Engineer-in-Charge for the purposes of the Contract.

2.3. The term 'Bidder' shall mean any individual or organization that submits a proposal or offer in response to the invitation to tender for participating in a Tender Process.

2.4. The term "Contractor or Supplier" shall mean the tenderer whose tender has been accepted by the TIFR, Hyderabad for award of contract and shall include such tenderer's heirs, successors and assigns approved by the TIFR, Hyderabad.

2.5. The term 'Sub-Contractor' shall mean the firm or person other than the contractor named in the contract for any part of the work or any person to whom any part of the work has been sublet by the contractor with the consent in writing of the Engineer-in-Charge and shall include such person's heirs, successors and assigns approved by the TIFR, Hyderabad.

2.6. The Term 'Inspector' shall mean any person appointed by or on behalf of the TIFR, Hyderabad to inspect supplies, stores or work under the contract or any person deputed by the Inspector for the purpose.

2.7. The term 'Particulars' shall mean, the following:

2.7.1. Specifications

2.7.2. Drawing

2.7.3. Sealed Pattern denoting a pattern sealed and signed by the Inspector.

2.7.4. Proprietary make denoting the product of an individual firm.

2.7.5. Any other details governing the construction, manufacture and/or supply as existing for the contract.

2.8. The term 'Specifications' shall mean the specifications annexed to or issued with these Conditions of Contract.

2.9. The term 'Site' shall mean the whole of the premises, buildings and grounds in or upon which the work or works is / are to be provided, executed, erected, done or carried out.

2.10. The term 'Equipment' shall mean and include any equipment, stores and materials to be provided and work to be done by the contractor under the contract.

2.11. The term 'Contract' shall mean letter of Intent / Award, Letter of Acceptance of Tender and shall include the conditions of contract, specifications, schedules, tender, guarantee, drawings and any further conditions which may be specifically agreed to between the parties as forming a part of the contract.

2.12. The term 'Tests' shall mean such tests as prescribed in the contract and as instructed by the Engineer-in-Charge to be performed by the contractor before the works are finally accepted by the TIFR, Hyderabad ready for commercial use complete with all items to the satisfaction of the Engineer-in-Charge.

2.13. The term 'Writing' shall include any manuscript, typewritten or printed statement under or over signature and / or seal as the case may be. Words importing singular shall also include plural and vice versa where context requires.

2.14. The term 'Item Rate Tender' shall mean tenders in which the contractors are required to quote rates for individual items of work as given in the schedule of quantities.

3. SCOPE & OBJECTIVE:

3.1. The Objective of the tender is to execute **“Retrofitting HVAC works for cleanroom located at ground floor left wing in FreT-B”** at TIFR Survey No. 36/P, Gopanpally (Village), Serilingampally (Mandal), Ranga Reddy Dist., Hyderabad – 500 046 as per the specifications and Bill of quantities mentioned in the Financial Bid.

3.2. Period of Completion of Work: **90 days** from the date of signing the work order and Contract / agreement.

3.3. Defect Liability Period: **12 months** from the date of handing over of completed system as per the tender.

4. INSTRUCTIONS:

4.1. Pre-Bid Conference: All prospective bidders are requested to attend a pre-bid conference for clarification on the Tenders' technical specifications and commercial conditions, besides discussions on any additional suggestion proposed by the bidders on the time, date and venue (in-person) / zoom meeting (online) mentioned in the NIT above & TIFRH Tenders webpage. If found necessary, a corrigendum to the tender documents would be issued and would be put up on TIFRH website for information of all contractors and thereafter no further query/condition shall be entertained.

4.2. Site visit by the tenderer: The tenderer is advised to visit the site of work, at his own cost, and examine it and its surroundings to himself collect all information that he considers necessary for proper assessment of the prospective assignment.

4.3. Sufficiency of Tender: The tenderer shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

4.4. Submission of Bids: Bids shall be submitted to Head, Technical Services, TIFR, Survey No. 36/P, Gopanpally (Village), Serilingampally (Mandal), Ranga Reddy Dist, Hyderabad- 500046 in a sealed Master envelope superscribed with Tender No. **TIFR/PD/CF25-85/250670**, Description: **“Retrofitting HVAC works for cleanroom located at ground floor left wing in FreT-B”** and **Due date: 13.08.2025**, containing two separate sealed covers clearly super-scribed as **“Technical Bid”** and **“Financial Bid”** before the closing date and time of submission in the following manner:

4.4.1. “Technical cum eligibility Bid (Part-I)”: This will contain Technical part, Eligibility Documents along with testimonials and Earnest Money Deposit (EMD) which shall be submitted in the form of Demand Draft/Pay Order/Banker’s cheque issued by a Scheduled Bank, drawn in favor of “TIFR Center for Interdisciplinary Sciences”, Payable at Hyderabad, (To be enclosed with the Technical Bid (Part-I)).

4.4.2. “Financial Bid (Part-II)”: This will contain the complete financial bidding document duly filled in Schedule of Financial Quote & Tender Drawings.

4.5. Evaluation of Technical Bids: The technical bids received will be opened first and examined for EMD, Eligibility Criteria, Conditions, etc. Tenders without EMD shall be summarily rejected.

4.6. Evaluation of Financial Bids: Financial Bids of technically qualified bidders will only be opened. The financial bids should contain the complete financial bid document duly filled in Schedule of Financial Quote of Financial Bid and signed along with Tender drawings. Work will be awarded to the lowest bidder (L1) based on the financial evaluation.

4.7. Payment Schedule:

4.7.1. The contractor shall submit the bills for payments along with a detailed statement showing the actual works carried out under different heads of items in the format specified by the TIFR. Minimum value of the work for interim payment (One Running Bill) shall be 50% of the work order value. All interim and final bills will be settled based on the joint measurements of each item of work and certified by TIFR Engineer. The bills for non-perishable materials on site may also be submitted and the payment by TIFR against the same shall be to the maximum extent of 80% of the value of these materials on production of sufficient documentary evidence i.e. Original invoice, Inventory, etc.

4.7.2. All interim bills will be paid within 30 days from the date of submission and Final Bill along with all relevant documents will be settled within 30 days from the date of submission with certification of TIFR Engineer.

4.8. Other Instructions:

4.8.1. The Contractor should adhere to the building bye-laws applicable for the area.

4.8.2. The submission of the bid by the bidder would imply that they have carefully read and agreed to the terms and conditions contained in this bid document.

4.8.3. This notice inviting bid document shall form a part of the contract document.

4.8.4. Canvassing, either directly or indirectly, in connection with the tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.

CHAPTER-II**TECHNICAL CUM ELIGIBILITY BID (Part-I):
TENDER ELIGIBILITY CRITERIA & INSTRUCTIONS TO BIDDERS****TECHNICAL CUM ELIGIBILITY BID
(PART-I)**

- (i) Earnest Money Deposit as stipulated.**
- (ii) “Eligibility Criteria” & “Schedules” for tender qualification.**

1. Earnest Money Deposit (EMD):

1.1. EMD shall be submitted in the form of Demand Draft/Pay Order/Banker's cheque issued by a Scheduled Bank, drawn in favor of "TIFR Center for Interdisciplinary Sciences", Payable at Hyderabad, (To be enclosed with the Technical Bid (Part-I)).

2. Eligibility Criteria: Contractors who fulfil the following requirements shall ONLY be eligible to apply:

2.1. The bidder should hold a valid labour license issued by appropriate authority and must be valid throughout the contractual period.

2.2. The bidder should provide copy of the following original certificates:

- PAN card from Income Tax Authority.
- GST registration document.

2.3. The bidder should submit IT Returns documents for the last three consecutive financial years ended on March 31, 2024 audited by the licensed Chartered Accountant.

2.4. Turnover: The bidder should have an average annual financial turnover (gross) of Rs.2.46 Lakhs during the immediate last three consecutive financial years ending March 31, 2024 (certificate from licensed Chartered Accountant to be provided, refer to Annexure-VII enclosed with this tender document in 'Chapter-VI: Annexures'). The value of annual turnover figures shall be brought to current value by enhancing the actual turnover figures at a simple rate of 7% per annum.

2.5. Profit/Loss : The bidder should not have incurred any loss (profit after tax should be positive) in more than two years during the immediate last five consecutive financial years ending 31st March, 2024 certified and audited by the Chartered Accountant.

2.6. Experience:

2.6.1. The bidder should have an experience of having successfully completed similar works in Research Institutes, Universities, Private Laboratories, R & D institutes, etc. in any Government /PSU/Private organizations of repute during the last seven years ending last day of the month previous to the one in which tender is invited.

- Three similar completed works each costing not less than Rs.3.28 Lakhs, or
- Two similar completed works each costing not less than Rs.4.92 Lakhs, or
- One similar completed work costing not less than Rs.6.56 Lakhs.
- The value of executed works shall be brought to current costing level by enhancing the actual value of work at a simple rate of 7% per annum; calculated from the date of completion to previous day of the last day of submission of tender.

2.6.2. The bidder should furnish copies of work orders and completion certificates in support of the aforementioned works information. "Annexure-VIII" is enclosed with this tender document in 'Chapter-VI: Annexures' for reference.

2.6.3. Important Notes:

- a) 'Similar work' shall mean: "AHU installation works".
- b) 'Cost of work' shall mean gross value of the completed work including the cost of materials supplied by the Client, but excluding those supplied free of cost. The applicant's performance for each work completed in the last seven years should be certified by an officer not below the rank of Executive Engineer or equivalent. Information.
- c) The bidder should have a full-fledged in-house project management team to undertake the jobs.
- d) Bidder's non-adherence to furnishing of information in the given format/schedule will lead to disqualification of the tender.

2.7. The bidder should submit the Local Content Certificate as per Annexure-III enclosed with this tender document in 'Chapter-VI: Annexures'.

2.8. The bidder should not be blacklisted by any office / department of Central / State Government / Public Undertaking etc. The bidder should submit the undertaking form as per 'Annexure-VI' enclosed with this tender document in 'Chapter-VI: Annexures'.

(On bidder/firm's letterhead)
SCHEDULE – A
PROFILE AND DETAILS OF THE BIDDER

1. Name of the firm :
2. a) Address of the firm :
- b) Telephone No. :
- c) Mobile No. of Contact Person :
- d) Valid email id:
- e) Branch Office if any, in Hyderabad. :
3. Type of Organization (Proprietorships / Partnership) Ltd. Co. / Co-Operative) (Copy of relevant document to be enclosed) :
4. Firm Registration Details: :
- a) Year of Establishment / Date of Incorporation
- b) Registration No.
- c) GST Registration No.
- d) Income Tax No. (PAN)
- e) Labour License Details
5. Nature of Business :
6. Experience as prime Agencies/ Contractors (in Yrs.) :
7. Name and address of Bankers :
8. Organization chart of the Company including names and positions of directors / key personnel :

SCHEDULE – B

DETAILS OF ELIGIBLE SIMILAR NATURE OF WORKS COMPLETED DURING THE LAST SEVEN YEARS ENDING PREVIOUS DAY OF LAST DAY OF SUBMISSION OF TENDERS

(I) Major Works:(Copies of work orders and completion certificates are to be provided)

- Three similar completed works each costing not less than Rs.3.28 Lakhs, or
- Two similar completed works each costing not less than Rs.4.92 Lakhs, or
- One similar completed work costing not less than Rs.6.56 Lakhs

Sr. No.	Name of work/ project and location	Description of work in brief	Name of the Engineer with full postal address.	Name of the client, also specify whether Govt. / Semi Govt. / Pvt. body with full postal address	Contract Amount in (Rs.)	Year of commencement	Date of Completion		Whether work was completed /uncompleted/ the contract was terminated from either side? Give Details.	Any other relevant information
							Stipulated Date	Actual Date		
1.										
2.										

(II) List of works / projects under execution above Rs.3.28 Lakhs.

Sr. No.	Name of work/ project and location	Description of work in brief	Name of the Engineer with full postal address.	Name of the Client, also specify whether Govt. or semi Govt. or Pvt. Body with full postal address	Contract Amount in (Rs.)	Stipulated date of work completion	Present stage of work; Slow progress if any, and reasons thereof	Any other relevant information
1.								
2.								
3.								

SCHEDULE – C**TECHNICAL PERSONNEL AND THEIR SPECIFIC EXPERIENCE**

1. List of technical personnel in your establishment and give details about their technical qualification and experience:

Sr. No.	Name	Age	Qualification	Project Experience	Nature of works handled	Name of the project Handled	Date of employment in your organization	Indicate specific experience in <u>“Retrofitting HVAC works”</u> which he/she was employed
1								
2								

2. Indicate other points if any, to show your technical and managerial competency to indicate any important points in your favour.

(On bidder/firm's letterhead)

SCHEDULE – D**FINANCIAL POSITION AND WORKING RESULTS**

		<u>2021-22</u>	<u>2022-23</u>	<u>2023-24</u>
1	Annual turnover	:	Rs.	
2.	Net Profit	:	Rs.	
3.	Credit Facilities from the Bank	:	Rs.	
	a) Cash Credit	:	Rs.	
	b) Overdraft Limit	:	Rs.	
	c) Guarantee	:	Rs.	
	d) Others	:	Rs.	
4.	Certificate from the Bankers regarding financial soundness of the applicant	:	Enclosed (Yes / No)	
5.	Solvency Certificate from the Bankers	:	Enclosed (Yes / No)	

(Authorised Signatory)

(On bidder/firm's letterhead)

SCHEDULE – E

MISCELLANEOUS INFORMATION

- | | | |
|---|--|---|
| 1 | Whether it would be possible to process Bank Guarantee for various advances during execution of the work. | : |
| 2 | Details of Civil Suits / Litigations arose during execution of the contracts in the last 5 years. | : |
| 3 | Latest Income Tax Clearance Certificate | : |
| 4 | Name of the two senior officials of Organizations preferably Govt./Semi Govt/ Autonomous/ Public Sector Organization for whom you have executed important and major process chillers and related works who may be directly contracted by TIFR to gather information about your ability, competence and capacity of your work/organization/etc. | : |
| 5 | Number of Supplementary sheets attached. | : |

CHAPTER- III**TERMS & CONDITIONS OF THE CONTRACT****1. Validity Period of Tender:**

1.1. The validity period for acceptance of tender shall be of 75 (Seventy Five) from the last day of receipt of technical bid, further

(a) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to TIFR within 7 days after the last date of submission of bids, then the TIFR shall without prejudice to any other right or remedy, be at liberty to forfeit 50% of earnest money absolutely irrespective of whether a letter of acceptance for the work is issued or not.

(b) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to TIFR after expiry of 7 days after last date of submission of bids, then TIFR shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of whether a letter of acceptance for the work is issued or not.

2. Acceptance of Tender:

2.1. The Competent Authority, on behalf of TIFR, Hyderabad reserves to itself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rates quoted. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest tender or any other tender.

2.2. "Letter of Intent": A "Letter of Intent (LOI)" will be issued as an intimation to the successful tenderer / contractor that his/her tender has been accepted and the successful tenderer / contractor should submit the requirements within the due date specified in the LOI.

3. Performance guarantee:

3.1. The successful tenderer / contractor shall submit an irrevocable Performance Guarantee (PG) amounting to 5% of the contract value within 7 (seven) working days from the date of issue of the "Letter of Intent (LOI)" in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement.

3.2. The performance guarantee shall be in the form of Demand Draft / Pay Order / Banker's cheque / Government Securities / Fixed Deposit Receipt (FDR) or Guarantee Bonds of any Scheduled Bank in accordance with the form as Annexure – I hereto. In case a fixed deposit receipt of any Bank is furnished by the contractor to TIFR as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to TIFR to make good the deficit.

3.3. The Performance Guarantee shall be initially valid up to the stipulated date of completion period plus 60 days beyond the date of completion of all contractual obligations of the contractor including warranty obligations. In case the time for completion of work gets enlarged, the

contractor shall get the validity of performance Guarantee extended to cover such enlarged time for completion of work.

3.4. The letter for commencement of work / work order shall be issued to the contractor only after he/she submits the performance guarantee in an acceptable form within 7 (seven) working days from the date of issue of the "Letter of Intent (LOI)".

3.5. The performance guarantee shall be returned to the contractor, without any interest, after recording of the completion certificate for the work by the competent authority.

3.6. The Engineer-in-Charge shall make a claim under the Performance guarantee except for amounts to which TIFR is entitled under the contract (notwithstanding and / or without prejudice to any other provisions in the contract agreement) in the event of:

(a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above (or) failure to attend and rectify the problems in the guarantee period, in which event the Engineer in-Charge may claim the full amount of the Performance Guarantee.

(b) Failure by the contractor to pay TIFR, Hyderabad any amount due, either as agreed by the contractor or determined under any of the Clauses / Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer-in-Charge.

3.7. In the event of the contract being determined or rescinded under provisions of any of the relevant clauses of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of TIFR, Hyderabad.

4. Security Deposit:

4.1. The successful tenderer / contractor shall also be required to submit a Security Deposit (SD) amounting to 2.5% of the contract value within 7 (seven) working days from the date of issue of the "Letter of Intent (LOI)" in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement.

4.2. The Security Deposit shall be in the form of Demand Draft / Fixed Deposit Receipt (FDR).

4.3. Security Deposit shall be initially valid up to one year from the date of completion of work. In case the time for completion of work gets enlarged, the contractor shall get the validity of Security Deposit extended to cover such enlarged time for completion of work. The Security Deposit shall be returned to the contractor, without any interest, after completion of defect liability period.

4.4. All compensation or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due to or may become due to the contractor by TIFR or any account whatsoever and in the event of his Security Deposit

being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by scheduled banks (if deposited for more than 12 months) endorsed in favor of the TIFR, HYDERABAD, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part Thereof.

5. Signing of Work Order and Contract / Agreement:

5.1. The Notice Inviting Tender (NIT) and all the documents including drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto shall form a part of the work order / contract document.

5.2. A 'Work Order' will be issued to the successful tenderer / contractor fulfilling the provisions contained / issued in the "Letter of Intent (LOI)".

5.3. The successful tenderer / contractor within 7 days from receipt of 'Work Order' shall provide his/her acceptance by signing the work order and contract / agreement as per the provisions/requirements issued in the 'Work Order'.

5.4. Each page of the Work Order and Contract / Agreement and all the documents attached to it shall be signed by both the Engineer-in-Charge or his authorized representative and the contractor, as per the conditions of the NIT and Work Order.

5.5. The Contractor shall commence work immediately after signing the Work Order and Contract / Agreement.

5.6. No payment for the work done will be made unless the Work Order and Contract / Agreement is signed by the contractor.

6. Levy / Taxes payable by contractor:

6.1. GST or any other tax, levy or Cess in respect of input for or output by this contract shall be payable by the contractor and TIFR shall not entertain any claim whatsoever in this respect.

6.2. The contractor shall deposit royalty and obtain necessary permits as required for supply of the sand, aggregate, stone etc. from local authorities.

7. Deduction of Income Tax: Income Tax deductions shall be made from all payments made to the Contractor as per rules and regulations in force, in accordance with the Income Tax Act, 1961 under section 194-C prevailing from time to time.

8. Work at Site:

8.1. Access to the works shall be allowed only to the Contractor/Supplier, Sub-Contractors or his duly appointed representatives. The Contractor/ Supplier shall not object to the execution of other works by other contractors or tradesmen and shall afford them every facility for execution of their several works simultaneously with his own.

8.2. Work at the TIFR, Hyderabad's premises shall be carried out at such time as the TIFR, Hyderabad may approve but the TIFR, Hyderabad shall give the Contractor/ Supplier all reasonable facilities for the same. The Contractor/Supplier shall provide sufficient fencing, notice boards etc. to guard the works and warn the public.

8.3. The Contractor shall obey Central, Local and State regulations and enactments pertaining to workmen and labor and the Engineer-in-Charge shall have the right to enquire into and decide all complaints on such matters. The Contractor should comply with the Minimum Wages Act and should also ensure that safe practices are followed by his people at site.

8.4. The contractor should follow safety precautions and maintain safety PPE's to their workmen throughout the project. Penalty will be imposed by TIFRH if violation of safety precautions.

9. Delays: The Contractor/Supplier shall not be entitled to claim any compensation for any loss suffered by him on account of delays in commencing or executing the work, including delays in procuring Government controlled or other materials and delay in obtaining instructions and decisions from the Engineer-in-Charge.

10. Taking Over: The equipment when erected at site shall be deemed to have been taken over by TIFR, Hyderabad when the Engineer-in-Charge will have certified in writing that the equipment has fulfilled the contract conditions.

11. Extension of Time: The time allowed for the execution of works as specified in para "Scope & Objective" above shall be the essence of the contract. If the work is hindered by the Contractor by any reasons, the Contractor should immediately give notice thereof in writing to the Engineer-in-Charge seeking extension of time within 14 days of the happening of the event causing delay in prescribed forms i.e. A form of application by the contractor for seeking extension of time (Annexure –V) to the authority is appended with this tender in "Chapter-VI: Annexures". The authority/Engineer-in-Charge shall, if justified, give a fair and reasonable extension of time for completion of work after due consideration of the same within 30 days of the date of receipt of such request from the Contractor in prescribed form.

12. Liquidated Damages:

12.1. For all delays, which do not merit any extension of time, the Contractor/ Supplier shall pay penalty or Liquidated Damages (LD) to the TIFR, Hyderabad at the rate of 1% of the contract value per week for delay in completion of work subject to the maximum 10 per cent of the contract value.

12.2. The amount of Liquidated Damages shall be recoverable from the payment due to the Contractor/Supplier up to maximum of 10% of value of contract. The deduction of Liquidated Damages shall not, however, absolve the Contractor/Supplier of his responsibility and obligations under the contract to complete the work in its entirety and shall also be without prejudice to action by the TIFR, Hyderabad under clause: 'Termination of Contract by the TIFR, Hyderabad'. After

that the same shall be completed by the TIFR, Hyderabad at the Contractor's/Supplier's risk and cost.

13. Other Damages and Insurance:

13.1. Contractor's workmen / employee's Insurance: The Contractor/Supplier/Manufacturer shall be responsible for providing insurance for his/her workmen / employees engaged in performance of the contract. TIFR, Hyderabad shall not be liable in respect of any damages or compensation payable at law in respect of or in consequence of any accident or injury to any workman or any other person employed by the contractor and the Contractor shall indemnify and keep indemnified TIFR, Hyderabad against all such damages and compensation and against all claims, demands, proceedings, costs, charges & expenses, whatsoever in respect of or in relation thereof.

13.2. The Contractor/Supplier/Manufacturer shall also indemnify the TIFR, Hyderabad against all claims which may be made upon the TIFR, Hyderabad whether under the Workmen's Compensation Act or any other statute in force during the currency of this contract or at common law in respect of any employee of the Contractor/Supplier or of any of his sub-contractor and shall at his own expense effect and maintain until the work has been 'Taken Over', with an approved office. The contractor shall furnish a copy of the labor license before commencement of work. If the aforesaid are not applicable, the contractor should furnish declaration to this effect and shall indemnify TIFR, Hyderabad, for violation of any such compliances.

13.3. "Contractor's All Risk (CAR)" insurance: The Contractor shall insure the work for a sum equivalent to the Contract value together with materials and plants for incorporation therein, to the full replacement cost by providing the CAR policy document before the commencement of work.

13.4. Any other Insurance(s) and Evidence: The Contractor/Supplier/Manufacturer shall also at his own cost carry and maintain any and all other insurance(s) which may be required for the Contractor's Equipment and other things brought onto the Site by the Contractor, for a sum sufficient to provide for their replacement at the Site.

13.5. The Contractor/Supplier/Manufacturer shall reinstate all damage of every sort mentioned in this clause, so as to deliver up the whole of the contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of the Owner/third parties.

13.6. The Contractor/Supplier/Manufacturer shall indemnify the TIFR, Hyderabad against all claims which may be made against the TIFR, Hyderabad, by any member of the public or other party, in respect of anything which may arise in respect of the works or in consequence thereof and shall, at his own expense, effect and maintain, until the work has been 'Taken Over'.

13.7. The Contractor/Supplier/Manufacturer shall be responsible for all injury to persons, animals or things and for all damage to the works, structure of, and decorative work in the property which may arise from operation or neglect of himself or any of his Sub-Contractor or of his or

Sub-Contractor's employees, whether such injury or damage may arise from carelessness, accident or any other cause whatever in any way connected with the carrying out of this contract. This clause shall be held to include any damage to buildings, whether immediately adjacent or otherwise, any damage to roads, streets, foot paths, as well as all damage caused to the works forming the subject of this contract by frost or other inclemency of weather. The Contractor/Supplier shall indemnify TIFR, Hyderabad and hold him harmless in respect of all and any expenses on property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of Government or otherwise and also in respect of any award of compensation or damages consequent upon such claim.

13.8. The TIFR, Hyderabad, with the concurrence of the Engineer In-Charge, shall be at liberty and is hereby empowered to deduct the amount of any damages compensation costs, charges and expenses arising or accruing from or in respect of any such claims or damages from any sums due to or become due to the Contractor/Supplier.

14. Guarantee and Defects Liability Period: The Contractor/Supplier/Manufacturer shall guarantee that all equipment shall be free from any defect due to the defective materials and bad workmanship and that the equipment shall operate satisfactorily and that the performance and efficiencies of the equipment shall be not less than the guaranteed values. The guarantee shall be valid for a period of 12 months after the date of commissioning as certified by the Engineer-in-Charge. Any parts found defective shall be replaced free of all costs by the Contractor/Supplier. The services of the Contractor's/Supplier's personnel if requisitioned during this period for such work shall be made available free of any cost to the TIFR, Hyderabad. If the defects are not remedied within a reasonable time, the TIFR, Hyderabad may proceed to do so at the Contractor's/Supplier's risk and expense without prejudice to any other rights.

15. Terms of Payment:

15.1. BILL FORMAT

Work Order Item No.	Description of Items (At least 2 lines)	Unit	Work Order Quantity	Executed Quantity	Rate	% of work done	Total Amount

NOTE:

- All quantities in the bill should be cumulative.

- All measurements should be in the order of tender or work order sequence and should be recorded in the measurement book. The Measurement should be provided strictly in the below mentioned format only.
- The contractor will be paid only Three Running Account (RA) Bills and Final Bill considering the progress of works based on measurement of works completed. The contractor shall submit the bills for payments along with a detailed statement showing the actual works carried out under different heads of items in the format specified by TIFR-, Hyderabad.

15.2. MEASUREMENT FORMAT

Work Order-Item No.	Description of Item & Location against each Measurement taken	Nos.	Length	Width	Height	Qty.	Remarks

NOTE:

- The works which have been certified for running bills will also be verified along with the final bill and any defects found need to be replaced / rectified by the contractor at his cost. Till the time, the site is handed over in full, it is the contractor's liability to safeguard the works done and completed at site. The Progress of work should not be affected in any way quoting the reason of non-availability of funds / materials / releasing of Running bill. The liability of the contractor is to complete all works in his scope in the scheduled time as per the terms of contract and will not relieve the contractors from his obligations once the Running bill is paid / kept pending.

15.3. Final Payment:

Payments of Final bill shall be made after rectifying all defects to the satisfaction of the TIFR, Hyderabad / E.I.C.

The acceptance of payment of the final bill by the Contractor would indicate that he would have no further claim in respect of the work executed.

16. Special conditions of Contract governing supplies of the Equipment of this Tender:

16.1. Scope:

16.1.1. This specification covers the supply of material as per the enclosed details and quantities and supervision of erection/installation, testing and commissioning of the material.

16.1.2. The Contractor/Manufacturer/Supplier shall quote for all the materials along with accessories as mentioned in the enquiry.

16.1.3. All the supply shall be in accordance with relevant I.S. Specifications and recognized standards.

16.2. Inspection & Testing and commissioning of Material:

16.2.1. Contractor/Manufacturer/Supplier shall submit the lists of Type Tests and Routine Tests to be conducted on the material in the Technical Data Sheet.

16.2.2. All the materials shall be tested at factory as per IS Specifications of material by TIFR, Hyderabad's Engineer-in-Charge/Engineers before dispatch at the cost of Contractor/Manufacturer/Supplier.

16.2.3. Contractor/Manufacturer/Supplier shall inform the concerned Engineer-in- Charge for inspection and testing in accordance and fix up a suitable date for the same.

16.3. Test Certificates: Contractor/Manufacturer/Supplier shall submit the Test Certificates of all materials.

16.4. Taxes & Duty:

16.4.1. Contractor/Manufacturer/Supplier shall quote the basic price of material. Excise Duty, Custom Duty, Sales Tax, GST, Octroi, Delivery Charges, Transit Insurance and/or any other charges, if any, must be indicated separately.

16.4.2. TIFR being a research institute of Govt. of India, is eligible for Excise Duty Exemption on equipment supplies. Necessary exemption certificate will be provided by TIFR.

16.4.3. Transit Insurance: The Transit Insurance from the point of dispatch to the site of erection shall be in the scope of Supplier and the cost shall be indicated separately.

16.5. Delivery of Material:

16.5.1. The Contractor/Manufacturer/Supplier shall be held responsible for loading of all equipment and for the stores being sufficiently and properly packed for transport by rail, road, sea or air so as to ensure their being free from any loss or damage on arrival at destination. The packing and marking of packages shall be done by and at the expenses of Manufacturer/Supplier. Each package shall contain a packing note quoting work order number and detail of the contents.

16.5.2. All the materials must be delivered at site i.e. TIFR at 36/P, Gopanpally Village, Serilingampally Mandal, Ranga Reddy District, Hyderabad-500046. The unloading and positioning of all equipment at the designated locations specified by the Engineer In-Charge shall be in the

scope of the Supplier. The Supplier shall arrange for handling equipment, labour for rigging, etc. as required.

16.5.3. Material must be delivered at site in all respects as mentioned in the work order prior approval of the respective technical data sheet /pre dispatch inspection report by TIFR, Hyderabad E.I.C.

16.6. Guarantee:

If during the period of guarantee any fault or defect arises, the material shall be replaced/repared immediately free of cost, as well as any replacement of accessories required shall be done free of cost.

16.7. Mistake in Drawing:

The Contractor/Supplier shall be responsible for and shall pay for any alterations in works due to any discrepancies, errors or omissions the drawings or other particulars supplied by him whether such drawings or particulars have been approved by the TIFR, Hyderabad or not.

16.8. Responsibility for Completeness:

Any fittings or accessories which may not be specifically mentioned in the specifications but which are usual or necessary are to be provided by the Contractor/Supplier without extra charge and the equipment must be complete in all details.

16.9. Extra/Deviation items & Variations in quantity

TIFR-Hyderabad has the right to omit/delete any of the items and also increase/decrease the quantities mentioned in the tender. No claim or any compensation in this regard will be accepted or paid to the contractor. However, if any new /additional items/deviated items are to be executed, the contractor is bound to execute such items with prior approval from TIFR-Hyderabad after furnishing the proper rate analysis for such extra/deviated items.

16.10. Rejection of Defective Equipment:

16.10.1. If the equipment after the acceptance thereof is discovered to be defective, notwithstanding that such defects could have been discovered at the time of inspection or found to have failed to fulfill the requirements of the contract or developed defects after the erection within a period of 12 months from the date of erection, even if such erection is done by the TIFR, Hyderabad, he shall be entitled to give a notice on the Contractor/Supplier setting forth details of such defects or failure and the Contractor/Supplier shall, provided such notice is given within a period of 14 months from the date of such erection or acceptance, forthwith make the defective equipment good or alter the same to make it comply with the requirements of the contract at his own cost and further if in the opinion of the TIFR, Hyderabad, the defects are of such a nature that the defects cannot be made good or required without impairing the efficiency or workability of the equipment or if in the opinion of the TIFR, Hyderabad the Equipment cannot be repaired or altered to make it comply with the requirements of the Contract, the Contractor/Supplier shall, provided a notice given by the TIFR, Hyderabad in this behalf within a period of 14 months from the date of erection or acceptance thereof, remove and replace the same with the equipment

conforming to the stipulated particulars, in all respects at the Contractor's/Supplier's own cost. Should he fail to do so within a reasonable time, the TIFR, Hyderabad may reject and replace, at the cost of the Contractor/Supplier, with equipment of the same particulars or if equipment conforming to the stipulated particulars are not in the opinion of the TIFR, Hyderabad readily procurable, such opinion being final, then with the nearest substitutes.

16.10.2. In the event of such rejection the TIFR, Hyderabad shall be entitled to use the Equipment in a reasonable and proper manner for a time reasonably sufficient to enable him to obtain replacement equipment as herein before provided.

16.11. Inspection and Final Tests:

All tests necessary to ensure that the Equipment complies with the particulars and guarantee shall be carried out at such place or places as may be determined by the Inspector. Should, however, it be necessary for the final test as to performance or guarantee to be held over until the Equipment is erected at site they shall be carried out within one month of completion of erection.

16.12. Intimation about Delivery:

If the TIFR, Hyderabad shall have notified the Contractor/Supplier in writing that the former is not ready to take delivery, no equipment or materials shall be forwarded until an intimation in writing shall have been given to the Contractor/Supplier by the TIFR, Hyderabad that he is ready to take delivery.

16.13. Delay in erection:

Wherever erection of an equipment or machinery is the responsibility of the Contractor/Supplier as a term of the contract and in case the Contractor fails to carry out the erection as and when called upon as to do within the period specified by the TIFR, Hyderabad, the TIFR, Hyderabad shall have right to get the erection done through any source of his choice. In such an event, the Contractor/Supplier shall be liable to bear any additional expenditure that the TIFR, Hyderabad may incur towards erection. The Contractor/Supplier shall, however not be entitled to any gain due to such an action by the TIFR, Hyderabad.

16.14. Definition of Equipment:

The work 'Equipment' wherever, it appears in these 'Special Conditions of Contract' governing supplier of Equipment in this Tender shall mean all switchgears, panels, etc. or parts thereof or what the Contractor/Supplier agrees to supply under Contract as specified in the work order.

16.15. Force Majeure:

Normally Force Majeure shall cover only acts of God, fire, wars, strike, riots and civil commotion, floods, epidemic, quarantine related strikes, freight embargoes, etc. The contractor shall not be liable for any liquidated damages for delay or any failure to perform the contract arising out of Force Majeure conditions, provided that the contractor shall within ten days from the beginning of such delay notify the department in writing the cause of delay along with convincing supporting

evidence. The department once convinced and accepted the reason may extend the supply completion period by a suitable / reasonable margin.

16.16. Termination of Contract by the TIFR, Hyderabad:

16.16.1. If the Contractor/Supplier commits any 'Act of Insolvency' or shall be adjudged an Insolvent or shall have an order for compulsory winding up made against him or pass effective resolution for winding up voluntarily, or if the Contractor/Supplier shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the Contractor/ Supplier, or shall assign the Contract without the prior consent in writing of the Engineer In-Charge, or shall charge or encumber this Contract or any payments due or which may become due to the Contractor/Supplier there under, or if the Engineer In-Charge shall certify in writing to the TIFR, Hyderabad that the Contractor/Supplier –

16.16.1.1. has abandoned the Contract, or

16.16.1.2. has failed to commence the works, or has without any lawful excuse these conditions suspended the progress of the works for seven days after receiving from the Engineer In-Charge written notice to proceed, or

16.16.1.3. has failed to proceed with the work with such due diligence and failed to make such due progress as would enable the works to be completed in accordance with the approved programme of work, or

16.16.1.4. has failed to remove materials from the site or to pull down and replace work for seven days after receiving from the Engineer In-Charge written notice that the said materials or work were condemned and rejected by the Engineer In-Charge under these conditions, or

16.16.1.5. has neglected or failed persistently to observe and perform all or any of the acts matters or things by this contract to be observed and performed by the Contractor for seven days after written notice shall have been given to the Contractor/ Supplier requiring the Contractor/Supplier to observe or perform the same, or

16.16.1.6. has to the detriment of good workmanship or in defiance of the Engineer In-Charge's instructions to the contrary sub-let any part of the contract, then and in any of the above said causes, the TIFR, Hyderabad with the written consent of the Engineer In-Charge may, notwithstanding any previous waiver, after giving seven days' notice in writing under the provisions of this clause to the Contractor/Supplier, determine the contract but without prejudice to the powers of the Engineer In- Charge or the obligations and liabilities of the Contract, the whole of which shall continue to be in force as if the contract has not been so determined and as if the work subsequently executed has been executed by and on behalf of the Contractor/ Supplier.

16.16.2. After the issue of such notice, the Contractor/Supplier shall not be at liberty to remove from site any equipment, tools and materials belonging to him which shall have been placed thereon for the purpose of the works and the TIFR, Hyderabad shall have lien upon such equipment, tools or materials to subsist from the date of such notice and until the notice shall have been complied with.

16.16.3. If the Contractor/Supplier shall fail to comply with the requirements of said notice for seven days after such notice has been given, the TIFR, Hyderabad shall have the power to enter upon and take possession of the works and site and all equipment, tools and materials thereon, and to engage any other person, firm or agency to complete the works, utilizing the equipment, tools and materials to the extent possible. The TIFR, Hyderabad shall not in any way be responsible for damage or loss of the tools, equipment and materials and the Contractor/Supplier shall not have any compensation therefore.

16.16.4. Upon completion of the works, the Engineer In-Charge shall certify the amount of expenditure properly incurred consequent on and incidental to the default of the Contractor/Supplier as aforesaid and such amount shall be deducted from the payments due to the Contractor/Supplier, including the Security Deposit. If the said amount exceeds the payment due to the Contractor/Supplier, the TIFR, Hyderabad shall be at liberty to dispose off any of the Contractor's/Supplier's materials, tools or equipment and apply the proceeds for the payments due from the Contractor/Supplier and recover the balance by process of law.

16.16.5. After the works have been completed after the amounts due to the Contractor/Supplier, the Engineer In-Charge shall give notice in writing to the Contractor/Supplier to remove the surplus equipment and material from site. If such equipment and materials are not removed within a period of 14 days after such notice, the TIFR, Hyderabad shall have the power to remove and sell the same holding the proceeds less the cost of removal and sale, to the credit of the Contractor/Supplier. The TIFR, Hyderabad shall not be responsible for any loss sustained by the Contractor/Supplier from the sale of the equipment and material.

16.17. Contractor's Representative:

The Contractor/Supplier shall employ at least one qualified representative (i.e. Air compressor work supervisor License with minimum 3 years of experience of similar works as stipulated by TIFR, Hyderabad in the work order) whose name shall have previously been communicated in writing to the Engineer In-Charge and approved by him to supervise the erection. Any written order or instructions given to the representative shall be deemed to have been given to the Contractor/Supplier. The Engineer In-Charge shall be at liberty to object to any particular representative/or any persons employed by the Contractor/Supplier on the work and the Contractor/Supplier shall remove the person objected to, on the receipt of the Engineer In-Charge, in writing, a request requiring him to do so and shall provide in his place another competent representative acceptable to the Engineer In-Charge. The Contractor's/Supplier's representative shall be a qualified electrical/ mechanical engineer possessing adequate site experience in similar nature of works.

16.18. Completion Time:

Unless otherwise agreed in writing between the TIFR, Hyderabad and the Contractor/Supplier, the work contract shall be completed within the stipulated period mentioned elsewhere in this tender document from the date of Work Order issued to Contractor/Supplier by the TIFR, Hyderabad.

16.19. Delivery of Material at Site:

The Contractor/Supplier/Manufacturer shall arrange for safe transit and delivery of material at site and unloading the material at site.

16.20. Measurements:

All joint measurements of quantities shall be done by the Contractor at his own cost in the presence of the Engineer In-Charge or any authorized person deputed by him who will certify the routes, length and quantities etc. for the purpose of determination of the amount payable.

16.21. Spare Parts & Manuals:

Manufacturer/Contractor/Supplier should submit operation, maintenance and spare part list and manuals for all equipment.

16.22. Training:

Manufacturer/Contractor/Supplier should provide training for operation and maintenance free of cost for equipment supplied.

16.23. Special Instruction for bidding process

This tender is a two part tender. The Part-I: Technical Bid and Part-II: Financial Bid. Bidders shall seal each bid separately with a clear label on the envelope about its content. Both the bids should be submitted in a single drop two cover method. Any pricing details must not appear in the Part-I: Technical Bid.

16.24. Drawings and Documentation:

Contractor should make and submit the drawing as per the site conditions and take approval from EIC. As-built drawings as specified in this technical specifications shall be submitted by the Contractor.

16.25. Permissions and Approvals:

All statutory permissions and approvals from Electricity authority as may be required for commissioning of the entire system shall be carried out by the contractor. All necessary documentation for obtaining such permissions and approvals shall be done by the contractor. TIFR, Hyderabad shall assist in providing required declarations. Statutory fees shall be paid by the TIFR, Hyderabad.

16.26. Guarantee (Equipment):

The equipment shall be guaranteed against all design and manufacturing defects, poor workmanship etc. for a period of 12 months from the date of commissioning or 15 months from the date of supply, whichever is earlier. Any defects discovered during this period shall be rectified by the vendor free of cost to the TIFR, Hyderabad.

CHAPTER-IV

SPECIFICATIONS AND ALLIED TECHNICAL DETAILS

1. FLOOR MOUNTED HORIZONTAL AIR HANDLING UNIT COIL:

1.1 CHILLED WATER COIL:

The scope of this section comprises removing of existing stand by DX cooling coil and supply, installation, testing & commissioning of new 8 row chilled water coils. Coil to be selected for Hyderabad conditions. Coil selection shall be submitted for review and approval. Existing AHUs and coils are of Zeco make.

1.2 CHILLED WATER COIL SPECIFICATION:

The proposed Chilled water coils shall be constructed from 12 / 16 mm OD copper tubes 24 gauge wall thickness, mechanically bonded to aluminum fins of 34 / 36 gauge thickness and assembled within a heavy gauge galvanized steel frame work. Coils shall be provided with air vent and drain plugs. Coil assembly shall be supported on slide frames for easy withdrawal.\

2. PIPING WORKS:

The scope of this section comprises the supply and laying of all piping works, chilled water piping, drain piping, allied works like fixing of valves and other accessories involved in this project.

2.1. MATERIAL:

PN-10 3 layer PP-R (Polypropylene Random Copolymer) Pipes conforming to IS-15801, UV stabilized & anti microbial fusion welded having thermal stability for hot water and cold water supply.

Outer Diameter(MM)	Thickness of Pipe(MM)	Mass in Kg/mt
25	2.3	0.164
32	2.9	0.261
40	3.7	0.412
50	4.6	0.638
63	5.8	1.01
75	6.8	1.41

2.2. FABRICATION AND INSTALLATION:

PPR (Polypropylene Random) pipes are fabricated through extrusion and molding processes, while installation involves careful planning, cutting, and heat fusion welding. PPR pipes are manufactured by heating plastic granules and forcing them through a die, while fittings are created by injection molding. Installation requires planning for expansion and contraction, proper trench preparation, and ensuring the pipes are supported to prevent damage.

PPR Fabrication:**➤ Heat Fusion Welding:**

PPR pipes and fittings are joined using a heat fusion welding machine, creating a strong and leak-proof connection.

➤ Support Installation:

Pipes require adequate support, especially in long runs, to prevent sagging or damage.

➤ Testing:

After installation, the system should be tested for leaks and proper water flow.

2.3.SUPPORT SPACINGS:

The following spacing is recommended for the pipe supports:

Pipe dia – mm	Spacing of Supports - Mtr
➤ 19 to 25 mm	1.80
➤ 32 to 150 mm	2.40
➤ 150 mm & above	2.40

2.4. CHILLED WATER PIPES INSULATION FOR ABOVE GROUND LEVEL:

Duly laminated aluminium foil of 25 mm thick mat finish closed cell nitrile rubber class 'O' insulation on PP-R pipe after applying suitable adhesive for nitrile rubber. The joints shall be sealed with 50mm wide and 3mm thick self adhesive nitrile rubber tape insulation.

3. DUCTING:

The scope of this section comprises Supply, Installation, Testing and Commissioning of 24G GSS ducting of Thickness 0.63 mm sheet square / rectangular Factory Fabricated Ducting (120GSM) complete with gaskets, elbows, splitters, vanes, cowls, supports arrangement

using GI full threaded rods and slotted rails as per drawings, air distribution specifications and requirements. Ducts are joined with ms angle frames with suitable nut, bolts, gaskets etc., Proper care shall be taken to avoid noise and vibrations. Sleeves shall be provided at wall crossings. Ducting shall be smoke tested before insulation. Ducting shall be designed for 1000 pascals ESP for supply air ducting and 500 pascals ESP for exhaust or return air ducting as per SMACNA-2005.

3.1.GSS DUCTING WITH MS ANGLE FRAMES:

GI sheets shall be as per IS 277 – 120 Grade. Fabrication shall be as per SMACNA 2005. Ducting shall be factory fabricated and delivered at site. Thickness of the sheet and type connector shall be as per the following table.

Duct Dimension (mm)	500 Pa	
	Sheet Gauge	Connector
0 - 450	26	TDF
451 - 750	26	TDF
751 - 900	24	TDF
901 - 1000	22	TDF
1001 - 1200	22	Slip-on
1201 - 1300	20	Slip-on
1301 - 1500	20	Slip-on
1501 - 1800	20	Slip-on
1801 - 2100	18	Slip-on
2101 - 2200	18	Slip-on
2201 - 2400	18	Slip-on
2401 - 2700	16	Slip-on

Duct Dimension (mm)	1000 Pa	
	Sheet Gauge	Connector
0 - 450	24	MS angle frame - 40x40x3 mm
451 - 750	24	MS angle frame- 40x40x3 mm
751 - 900	22	MS angle frame- 40x40x3 mm
901 - 1000	20	MS angle frame- 40x40x3 mm
1001 - 1200	20	MS angle frame- 40x40x3 mm
1201 - 1300	18	MS angle frame- 40x40x6 mm
1301 - 1500	18	MS angle frame- 40x40x6 mm
1501 - 1800	18	MS angle frame- 40x40x6 mm
1801 - 2100	16	MS angle frame- 40x40x6 mm
2101 - 2200	16	MS angle frame- 40x40x6 mm
2201 - 2400	16	MS angle frame- 40x40x6 mm

2401 - 2700	16	MS angle frame- 40x40x6 mm
-------------	----	----------------------------

For GSS ducting, rivets shall be of MS. The distance between the rivets shall not exceed 100mm. The distance between bolt & nuts shall not exceed 100mm.

4. VOLUME CONTROL DAMPERS:

Volume control dampers shall be made out of 18G/1.25 mm thickness galvanized steel sheet frame with 20G/1.0 mm thick blade. Blades should be double skinned aluminum aerofoil construction and opposed blades should be at 50mm pitch centers. The blades should be mounted in nylon bushes operated by an interior wheel gear system. The operating lever or knob shall have locking arrangement and markings of various positions including open and closed position. VCD shall be low leakage type and volume control of 0-100% complete with neoprene rubber gasket, nuts, bolts, screws, linkages, flanges etc.

5. VALVES:

5.1. BUTTERFLY VALVES:

Butterfly valves shall be of slim seal, short wafer type with standard finish. The valves shall be suitable for mounting between PPR flanges. The valve body shall be cast iron. The disc shall consist of Cast Iron, Bronze or Stainless Steel. The disc shall move in bearings on both ends with 'O' Ring to prevent leakage. The seat shall be either integral or Nitrile rubber. The valves shall be of PN 16 rating shall be complete with flow control lever and notches, factory machined companion flanges, bolts & nuts.

5.2. Y-STRAINERS:

"Y" strainers up to 50 mm shall be of gunmetal and above 50 mm shall be of cast iron body. Strainers shall have a removable bronze/ stainless steel minimum 1mm thick screen with 3 mm perforations and a permanent magnet. Strainers shall be provided with flanges or threaded sockets as required. They shall be designed to enable blowing out the accumulated dirt and facilitate removal / replacement of screen without disconnecting the main pipe. Strainers shall be provided with a flushing valve, nipple and dummy. "Y" strainers shall be of PN 16 rating. The valves shall be installed with threaded nipples with unions / flanges as required for easy removal. These valves shall have insulation with the same specifications of pipe insulation.

5.4. GATE VALVES / GLOBE VALVES / BALL VALVES:

Gate valves of smaller diameter shall be made of gun metal with screw ends. In case of ball valves, the rotating ball shall be made of SS. All such valves shall be supplied with I.S.I marking. Valves shall have Teflon seating. The valves shall be installed with threaded

nipples with unions / flanges as required for easy removal. These valves shall have insulation with the same specifications of pipe insulation. The pressure rating of the valves shall be PN 16.

5.5. FLANGES & UNIONS:

Sufficient number of PPR flanges and unions shall be provided as required to facilitate the maintenance work after the piping is installed. Necessary gaskets shall be used. These shall be insulated with the same specifications of pipe insulation.

5.6. PRESSURE GAUGES:

Pressure gauges shall not be less than 100 mm dia. Industrial type pressure gauges with gun metal/ brass valves. Chilled water pipe insulation shall not be damaged during removal and refixing of pressure gauge.

5.7. THERMOMETERS:

These shall not be less than 100 mm dia. The mercury in glass industrial type thermometer. Chilled water pipe insulation shall not be damaged during removal and refixing of the thermometer.

5.8. BALANCING VALVES:

Manual Balancing Valve with built in measuring facility with CI body flanged construction with EPDM coated disc with long pitch, with insulation, with matching flanges, gasket, bolt & nuts, insulation, etc. Duly insulated to the same specifications as the connected piping. Pressure rating shall be PN 16.

5.9. WAY MOTORIZED CONTROL VALVE:

2-way motorized Control Valve for chilled water application, having efficient flow characteristics with copper alloy metal gun body and disc must be copper alloy rod and bars EPDM diaphragm screw and unique connections. This includes smart actuator with provision of fail safe opening provision (manual operation button with lock), Actuator should be provided with appropriate enclosure to protect from rain, with required supports and accessories like flanges, bolts, nuts | gaskets, pressure rating PN 25. It should have a provision of an auto closing module able to set the valve to Zero signal position when the AHU motor is stopped which includes integrating cables between AHU starter, Actuator and thermostat. Consider that the starters are having one no spare NC point. The control cable

qty within 12 rmt per AHU to be included . Actuator Voltage either 24V AC/DC, control signal either 0-10 V DC or 4-20 ma. Vendor to submit the selection for approval. Necessary temperature controllers shall be provided for maintaining the required return air / exhaust air temperature.

6. HEATER CONTROLLER:

OUTDOOR+RH with PID and Thyristor Regulation and ODU Temp Control 415VAC / 12 KW upto B)Winter Heating With thyristor Regulation and PID controller using Duct Mounted T+RH Transmitter 415VAC / 12 KW upto.Heater bank shall be suitable for integration to the controller for monitoring and operation. Heater Bank shall be allowed to operate manually also and suitable for outdoor installation.

7.PAN HUMIDIFIER:

3KW capacity pan humidifiers with actuator, SS tank, fresh water connection, overflow connection, drain connection, humidistat for controlling the RH within $\pm 5\%$, supports, etc.,. A pan humidifier shall be suitable for integration with a stand alone controller. Shall be allowed to operate manually also. An air flow switch shall be provided to switch off the pan humidifier in case of no air flow.

8. CIVIL WORKS:

Core cutting wall openings with necessary cutting tools finishing the same with plastering, painting to match with the existing wall finish with primer coat and two coats of wall paint. This is for the chilled water pipes passing through the wall.

APPROVED MAKES

S.No.	ITEM	APPROVED MAKES
1	PPR PIPING	Prince/Sudhakar/KPT/Equivalent.
2	COIL	Zeco/Sagar Air/Equivalent
3	INSULATION	Armaflex/Kflex/Equivalent
4	BUTTERFLY VALVE	Advance / Audco/Honeywell/Equivalent
5	MANUAL BALANCING VALVE	Advance/Castle/Equivalent
6	2 WAY MOTORIZED VALVE	Danfoss/Belimo//Equivalent
7	Y-STRAINERS	Trishul/Sant/Equivalent
8	TEMPERATURE,PRESSURE GAUGES	HGURU/Emerald/Waree/Equivalent
9	AIR VENT	Leader/Anergy/Equivalent
10	HEATER CONTROLLER	Matrusree/KEPL/equivalent
11	PAN HUMIDIFIER	Matrusree/KEPL/equivalent
12	DUCTING	Ductofab/Ductoair/JSW/Equivalent
13	ADP PRODUCTS	Airmaster/Sagar Air/Equivalent
14	AXIAL FANS	Novenco/Aeronaut/Equivalent

STANDARDS

1. IS: 659 - Safety Code for A/C System
2. IS: 1239 Part I – MS Tubes & Pipes
3. IS: 1239 Part II – Pipe Fittings
4. IS: 15801 – PPR Piping
5. IS: 6392 – Pipe Flanges
6. IS: 5312 – Check Valves
7. IS: 8183 – Thermal Insulation
8. IS: 325 - 3 phase induction motor
9. IS: 2379 - Color code for identification of pipelines
10. IS: 3103 - Code of Practice for industrial Ventilation
11. ASHRAE Standards for Health Care
12. Carrier System Design Manual
13. JCI Standard for Hospitals.
14. ISO 14644 Cleanroom classification standards.

MEASUREMENTS METHODOLOGY

Mode of Measurement for payment of items of piping & their insulation shall be as follows:

1.PIPING:

- Shall be measured in units of length along the centerline of installed pipes including all pipe fittings, flanges (with gaskets and nuts and bolts for joining), unions, bends, elbows, tees, concentric and/or eccentric reducers, inspection pieces, expansion loops etc. The above accessories shall be measured as part of piping length along the centerline of installed pipes and no special rates for these accessories shall be permitted. The quoted unit rates for center line linear measurement of piping shall include all wastage, allowances, pipe supports includes hangers, MS channel, wooden bunches, nuts and check nuts, vibration isolator suspension where specified or required, and cost of excavation, bedding back filling and finishing as required to complete the piping installation as per the specification. None of these items will be separately measured and paid for. However, all valves (gate/ globe/butterfly/check -balancing/purge/drain etc.), strainers, orifice plates, temperature gauge, pressure gauges shall be separately measured and paid as per their individual unit rates, which shall also include their insulation as per specifications, piping measurements shall be taken before application of the insulation. The cost shall also include any excavations and making masonry valve chamber with steel cover etc.

2.PIPE INSULATION:

- Shall be measured in units of length along the centerline of the installed pipe, strictly on the same basis as the piping measurements described above. It may be noted that for piping measurements, all valves, orifice plates and strainers are separately measurable and their quoted unit rates shall include the insulation cost in the valve required and as specified.

TESTING PROCEDURE AT SITE

1.GENERAL:

- The Contractor must perform all inspections and tests of the system as a whole and of components individually as required, under the supervision of the Engineer, in accordance with the provisions of the applicable 'ASHRAE' standards or approved equal and as per site requirements. All tests shall be recorded in the format approved by the Consultant/Owner.

2.PIPING SYSTEM PRESSURE TESTING & CHMEICAL FLUSHING:

- In general pressure tests shall be applied to piping only before connection of equipment and appliances. In no case shall piping, equipment appliances be subjected to pressures exceeding their test ratings. Tests shall be completed and approved before insulation is applied. After tests have been completed, the system shall be drained and cleared of all dust and foreign material. All strainers, valves and fittings shall be cleaned of all dirt, fillings and debris. All water piping shall be tested and proven tight under hydrostatic pressure of 10 Kg/Sq cm, unless stated otherwise in the specifications. The prescribed pressure shall be maintained at least three complete days of 24 hours each.
 - Fill the system with clean water and drain the water after 30 minutes.
 - Refill the system with clean water and run the chilled water pump for 2 hours.
 - Open the drain valves in the main lines and drain the water completely. Clean the strainers.
 - During the flushing process the drain valves shall be kept open while the pump is running, until the water appears clean.
 - Close all the drain valves.
 - Refill the system with clean water and add chemicals in required quantities as per Specialist supplier's instructions).
 - Samples of solution shall be collected from various parts of the system to ensure the chemical solution has reached all parts of the system.
 - Run the pump and circulate the water (with chemicals added) for a minimum period of 24 hours as per specialist supplier's recommendations
 - .After the cleaning process is completed as described above the cleaning solution shall be flushed out.
 - The entire system is re-filled with fresh and clean water and treated with corrosion and scale inhibiting treatment chemicals as approved.

3.PERFORMANCE TESTS:

- The installation as a whole shall be balanced and tested upon completion and all relevant information shall be submitted to the owner. Electrical current reading in Amperes of full and average load running and starting together with name plate current in each electrical motor. Daily records should be maintained of hourly readings, taken under varying degrees of internal heat load and use and occupation, of wet and dry bulb temperatures, upstream 'ON-COIL' of each cooling coil. Also suction temperatures and pressures for each refrigerating unit. The current and voltage drawn by each machine. Any other reading shall be taken which the Engineer may subsequently specify.

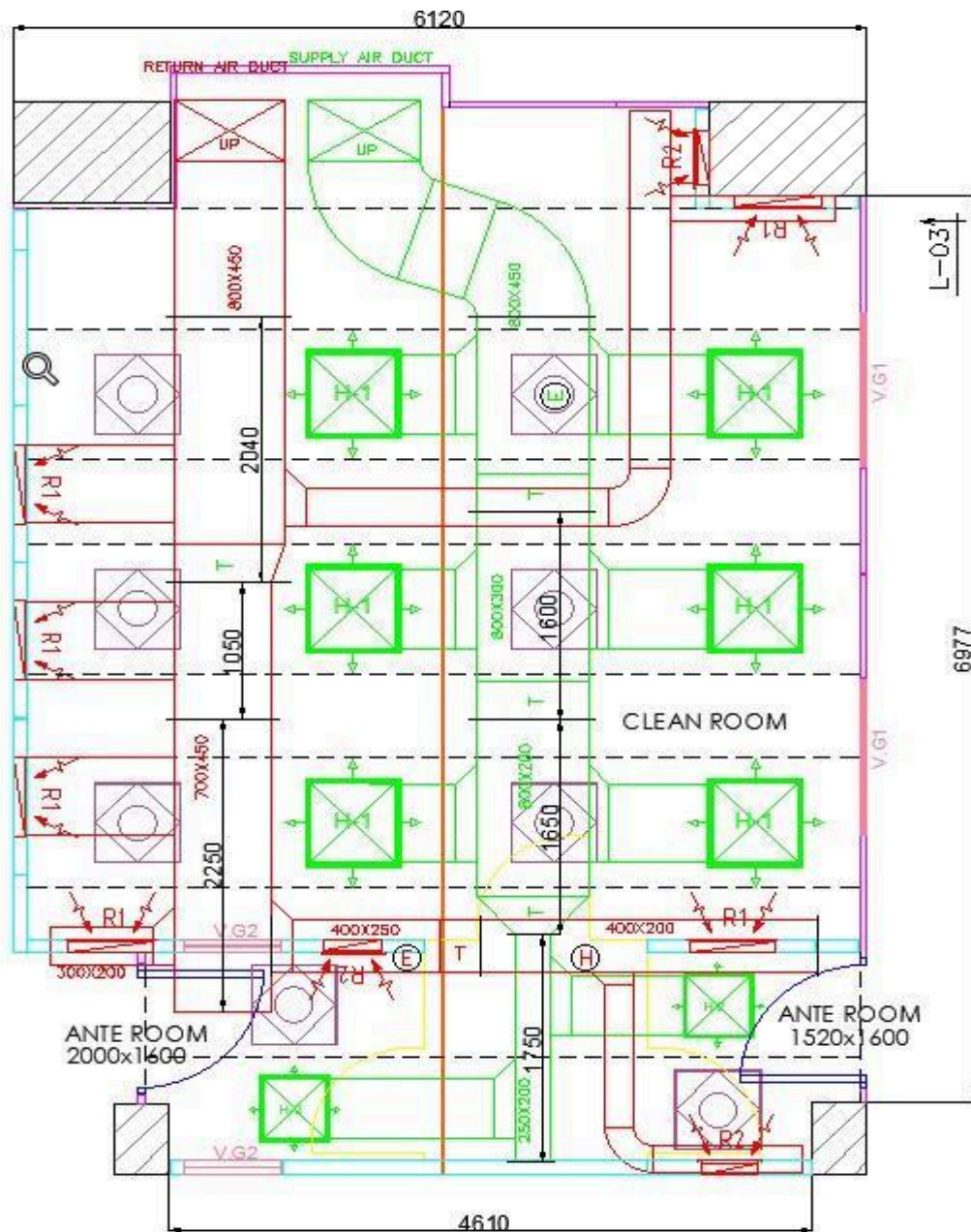
4.ACCEPTANCE TEST AND SEASONAL TESTS:

- After completing all installation works, commissioning, water balancing and air balancing, acceptance tests shall be conducted for 24 hours recording temperature, humidity, equipment inlet & outlet conditions, power consumption readings, etc. Necessary schedules with test formats shall be submitted for approval before starting the test.
- Seasonal test shall be done for 24 hours during warranty period when peak summer and peak monsoon occurs recording all the above readings.
- The above tests shall be repeated if major abnormality is observed during the tests in achieving the conditions or functioning of equipment.
- Sufficient manpower with tools and tackles shall be arranged for successful completion of the above tests. Necessary data loggers shall be used during the tests for recording various readings.

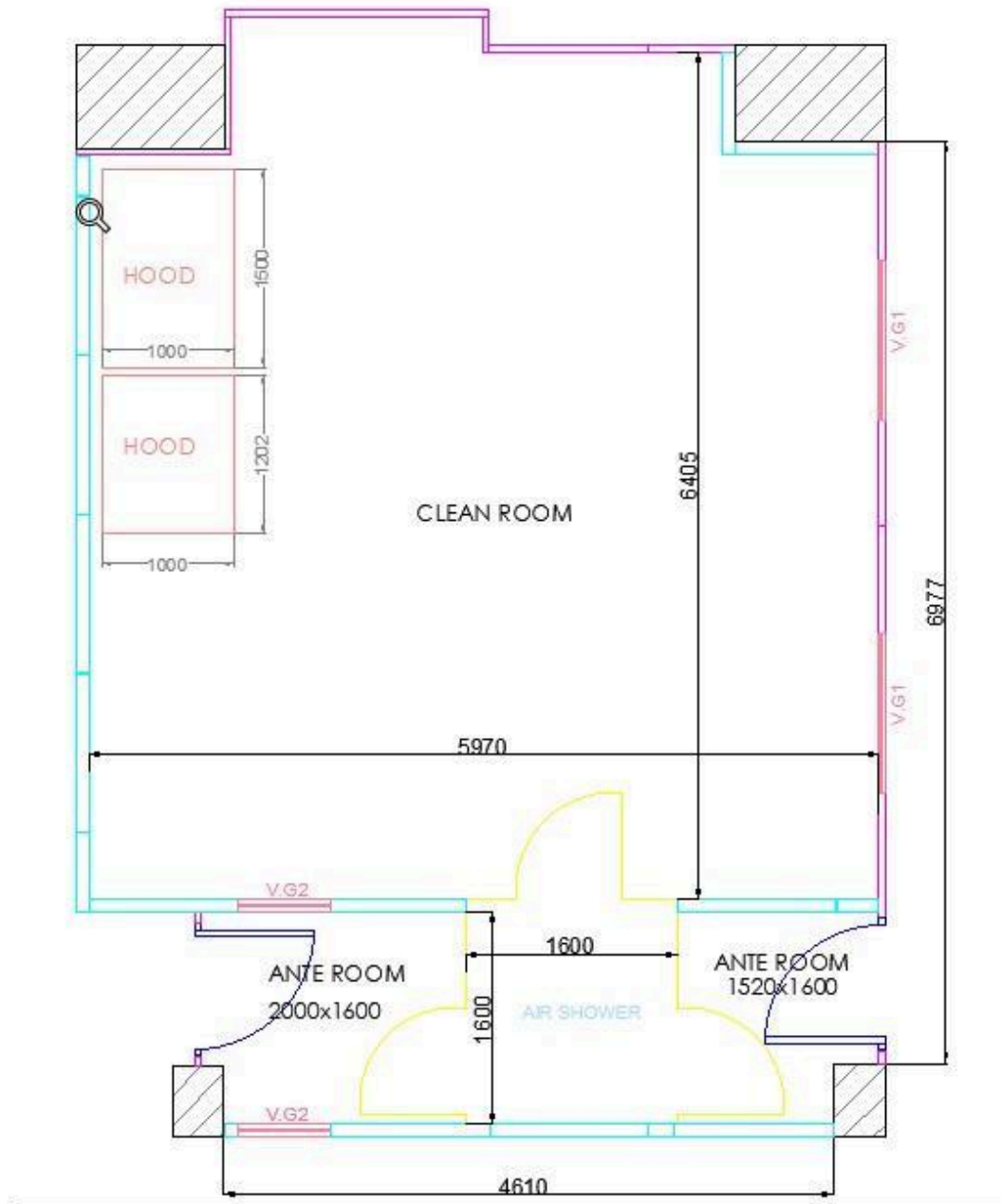
CHAPTER-V

DRAWINGS

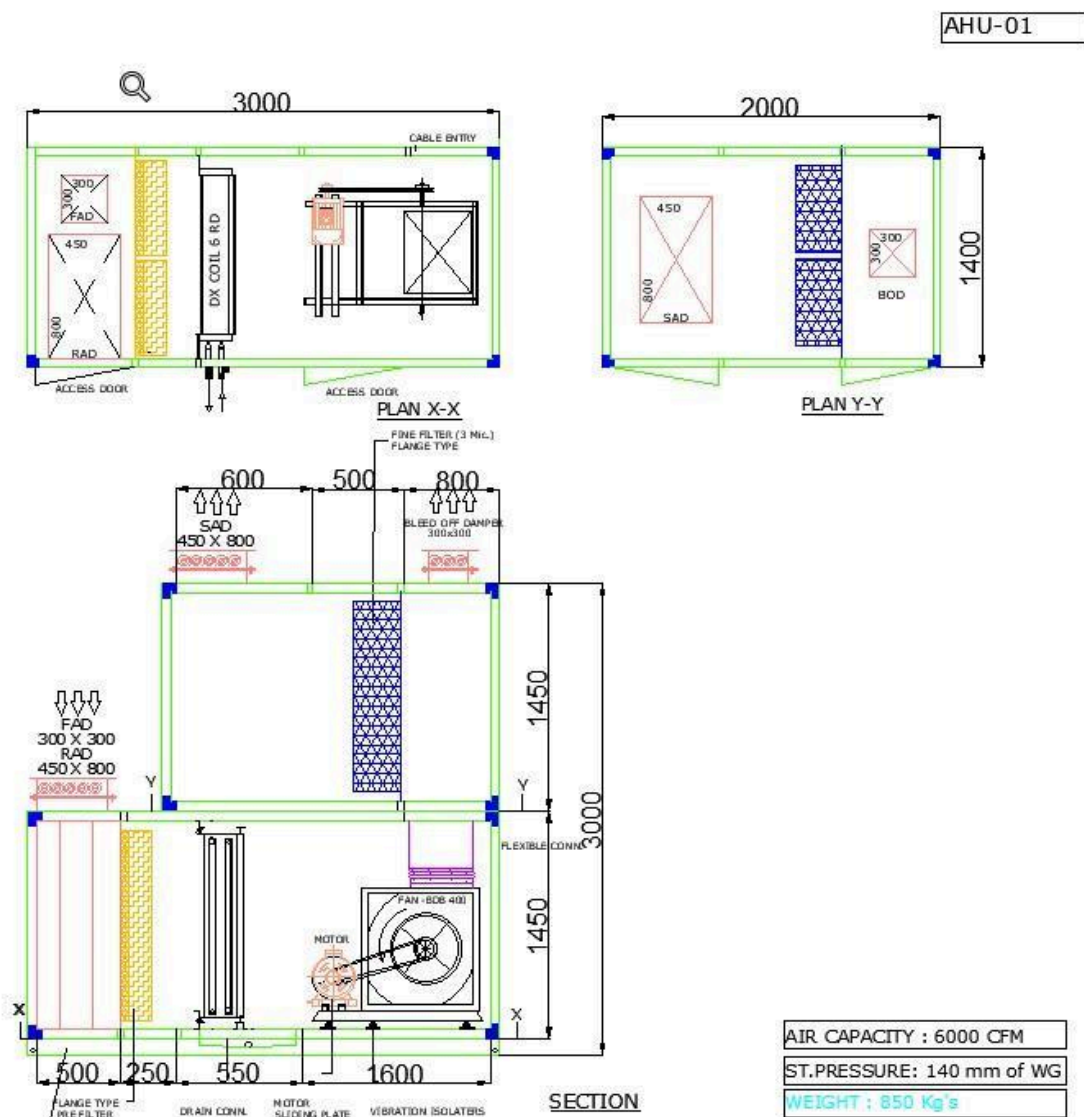
EXISTING CLEAN ROOM DUCTING DRAWING



EXISTING CLEANROOM DRAWING



AHU SECTION DRAWINGS



CHAPTER-VI

ANNEXURES

ANNEXURE-I

FORM OF PERFORMANCE GUARANTEE (BY BANK GUARANTEE)

1. In consideration of the TIFR-Hyderabad, Hyderabad having agreed under the terms and conditions of Letter of Intent / Agreement No..... dated..... made between and..... (Here in after..... called "the said Contractor{s}" for the work..... (Here in after called "the said Letter of Intent / Agreement") having agreed to production of a irrevocable bank Guarantee for Rs..... (Rupees only), as a security / guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement, we(Indicate the name of the Bank) (hereinafter referred to as "the Bank") Hereby undertake to pay to TIFR an amount not exceeding Rs. (Rs only) on demand by TIFR.
2. We..... (indicate the name of Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from TIFR stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees..... only).
3. We, the said bank, further undertake to pay to TIFR any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.
4. We (indicate the name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of TIFR under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-charge on behalf of the TIFR certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.
5. We (indicate the name of Bank) further agree with TIFR that TIFR shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by TIFR against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of TIFR or any indulgence by TIFR to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).
7. We..... (indicate the name of Bank) lastly undertake not to revoke this guarantee except with the previous consent of TIFR in writing.
8. This guarantee shall be valid up to, unless extended on demand. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs (Rupees only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Signed and sealed

Dated the day of..... for..... (indicate the name of Bank) *(Note: The Letter of Intent shall form part of the Agreement)

ANNEXURE-II

(To be submitted on bidder / firm's letter head)

UNDERTAKING BY THE TENDERER

I / We have read and examined the Tender document including terms & conditions, specifications, Schedule of quantities, drawings and designs, general rules & directions, General Conditions of Contract, Special Conditions of Contract and all relevant other documents, publications and rules referred to in the Conditions of Contract and all other contents in the tender documents for the work.

I / We, hereby tender for execution of the work specified for the TIFR-Hyderabad, Hyderabad within the time specified and in accordance in all respects with the specifications, designs, drawings and instructions in writing.

We agree to keep the tender open for seventy five (75) days from the last date of its submission and not to make any modifications in its terms and conditions. A sum of Rs..... has been deposited in cash / receipt treasury challan / deposit at call receipt of scheduled bank / fixed deposit receipt of scheduled bank / demand draft of a scheduled bank / Bank Guarantee issued by a Scheduled Bank as earnest money. If I / we, fail to furnish the prescribed performance guarantee within prescribed period, I / we agree that the said TIFR-Hyderabad, Hyderabad or its authorized officer shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I / we fail to commence work as specified, I / we agree that the TIFR-Hyderabad, Hyderabad shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by TIFR-Hyderabad, Hyderabad towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein.

Further, I / We agree that in case of forfeiture of earnest money or both Earnest Money & Performance Guarantee as aforesaid, I / We shall be debarred for participation in the re-tendering process of the work.

I / We hereby declare that I / We shall treat the tender documents, drawings and other records connected with the work as secret / confidential documents and shall not communicate information derived there-from to any person other than a person to whom I / We am / are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Seal & Signature of Contractor Postal Address

Dated

Witness Address Occ

ANNEXURE-III

(To be submitted on bidder / firm's letter head)

CERTIFICATE OF LOCAL CONTENT

***We [name of manufacturer] hereby confirm in respect of quoted item(s) that local Content is equal to or more than 50% and come under 'Class-I Local Supplier' Category. As being 'Class-I Local Supplier', we are eligible for Purchase Preference under 'Make in India' Policy vide Gol Order No.P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 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 come under 'Class-II Local Supplier' Category.**

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

1.
2.

**Date:
Bidder**

Seal & Signature of the

NOTE:

- **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.**
- **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.**

ANNEXURE-IV

Site Visit Declaration Certificate (To be submitted on bidder / firm's letter head)

CERTIFICATE OF TENDERER'S VISIT TO SITE

1. This is to certify that I _____(Name of bidder or his Representative) am from _____(Name of Firm of tendering) visited the site at TIFR, Hyderabad in connection with the Tender for Construction of AHU Support Structure for Petawatt Building, TIFR, Survey No. 36/P, Gopanpally (Village), Serilingampally (Mandal), Ranga Reddy Dist., Hyderabad-500046, Telangana, India.
2. Having previously studied the contract documents, I carefully examined the site.
3. I have made myself familiar with all the local conditions likely to influence the works and the cost thereof.
4. I further certify that I am satisfied with the description of the work and the explanations given by the said Representative and that I understand perfectly the work to be done as specified and implied in the execution of the contract.

Signed by tendering firm representative and name:

Signed by tenderer and name:

Date:

ANNEXURE-V

(To be submitted on bidder / firm's letter head)

FORM OF APPLICATION BY THE CONTRACTOR FOR SEEKING EXTENSION OF TIME

1. Name of contractor: _____
2. Name of work as given in the work order: _____
3. Work Order No. & Date: _____
4. Work Order Value: _____
5. Period allowed for completion of work as per the work order: _____
6. Date of commencement of work: _____
8. Period for which extension of time if has been given by authority previously:

S. No.	Letter No. and Date	Reasons for which extension have been previously given (copies of the previous applications should be attached)	Extension granted	
			Months	Days
(a) 1st extension				
(b) 2nd extension				
Total extension previously given				

10. Period for which extension is applied for at present : _____ and Reason: _____

Submitted to the Authority with a copy to the Engineer-in-charge.

Signature of Contractor: _____

Dated: _____

ANNEXURE-VI

(To be submitted on bidder / firm's letter head)

UNDERTAKING REGARDING BLACKLISTING / NON – DEBARMENT

To

The Head,
Department of Technical Services.
TATA INSTITUTE OF FUNDAMENTAL RESEARCH
Plot No.36/P, Gopanpally Village, Serilingampally Mandal, Ranga Reddy District. Hyderabad -
500046,
Telangana, India.

We hereby confirm and declare that we, M/s -----, is
not blacklisted/ De-registered/ debarred by any Government department/ Public Sector
Undertaking/ Private Sector/ or any other agency for which we have Executed/ Undertaken the
works/Services during the last 5 years.

Authorised Signatory

Date:

ANNEXURE-VII

(To be submitted on bidder / firm's letter head)

Audited Annual Turnover

S.No.	Financial/ Accounting Year	Profit (Rs.)	Loss (Rs.)	Annual Turnover (in INR)
1.				
2.				
3.				

**Authorized Signatory
with Seal****Note:**

(i) This Audited Annual Turnover for the last 3 years should be certified by Chartered Accountant (CA) as per the format given above duly signed and stamped by the CA on their letterhead.

(ii) The bidder should have an average annual financial turnover (gross) of Rs.2.46 Lakhs during the immediate last three consecutive financial years ending March 31, 2024.

ANNEXURE-VIII
CLIENT's CERTIFICATE REG. PERFORMANCE OF CONTRACTOR
TO WHOM IT MAY CONCERN

This is to certify that M/s. _____

has executed the following works at _____ (Name & address of the Client)

1	Name of work with brief particulars	
2	Work order No. and Date	
3	Work Order Value (Rs.)	
4	Date of Commencement of Work	
5	Stipulated Date of Completion of Work	
6	Actual Date of Completion of Work	
7	Details of compensation levied for delay (indicate amount), if any	
8	Name and address of the authority under whom works executed	
9	Amt. of work paid on reduced rates, if any.	
10	Did the contractor go for arbitration? (Yes/No) If yes, i) Total amount of claim iii) Total amount awarded	

11	Comments on the capabilities of the contractor:	
	a) Quality of Work	Outstanding / Very Good / Good / Satisfactory / Poor
	b) Financial Soundness	Outstanding / Very Good / Good / Satisfactory / Poor
	c) Technical Proficiency	Outstanding / Very Good / Good / Satisfactory / Poor
	d) Mobilization of adequate T&P	Outstanding / Very Good / Good / Satisfactory / Poor
	e) Mobilization of manpower	Outstanding / Very Good / Good / Satisfactory / Poor
	f) General behaviour	Outstanding / Very Good / Good / Satisfactory / Poor

“Countersigned”

Signature of the
Reporting Officer
with Office Seal

Note:

- i) All columns should be filled in properly.
- ii) Signing Authority: Officer of the rank of Superintending Engineer or equivalent.

ANNEXURE-IX

(To be submitted on bidder / firm's letter head)

List of Documents to be enclosed along with the bid submission:

Sr. No.	Documents	Attached (Yes / No)
1	Proof of Firm Registration	
2	GST & PAN of the Firm	
3	A valid Labour License	
4	Earnest Money Deposit (EMD)	
5	Annual Turnover during three previous financial years ending March 31, 2024 duly certified by the licensed Chartered Accountant. Reference: ANNEXURE-VII	
6	Income Tax returns for the last three consecutive financial years ended on March 31, 2024 audited by the licensed Chartered Accountant.	
7	Profit/Loss statements for the last five consecutive financial years ending March 31, 2024 duly certified by the licensed Chartered Accountant.	
8	'Undertaking by the Tenderer as per the specified format in Annexure-II	
9	'Site Visit Declaration Certificate' as per the specified format in Annexure-IV	
10	'Undertaking by the Tenderer' regarding Blacklisting / Non-Debarment as per the specified format in Annexure-VI	
11	'Local Content Certificate' by the Tenderer as per the specified format in Annexure-III	
12	Work Completion Certificates along with Work Orders and BOQs as specified the eligibility criteria. Reference: Annexure-VIII	
13	Acceptance of Terms and Conditions of the tender by the tenderer by signing every page of the tender document with stamp.	

CHAPTER-VII

**FINANCIAL BID (Part-II)
INSTRUCTIONS TO BIDDERS & SCHEDULE OF QUANTITIES (BOQ):**

FINANCIAL BID (PART-II)

Tender No. TIFR/PD/CF25-85/250670

Work: Retrofitting HVAC works for the cleanroom located at ground floor left wing in FreT-B

Location: TIFR, Survey No.36/P, Gopanpally (Village), Serilingampally (Mandal), Ranga Reddy Dist., Hyderabad – 500 046.

INSTRUCTIONS:

1. Tenderer needs to submit the signed copy of the Financial Bid quoting amount in the stipulated format and signed copies of the tender drawings.
2. Rates must be filled both in words and figures. The amount should be worked out for all the items.
3. The bidder shall quote his rates keeping in mind the specifications, terms & conditions, additional and special conditions etc. and nothing extra shall be payable unless otherwise specified.

SCHEDULE OF QUANTITIES (BOQ)

Work: "Retrofitting HVAC works for the cleanroom"

S.No	Description	Unit	Qty (A)	Rate (B)	Total Amount (C=A*B)
1	Supply , Installation, Testing & Commissioning of 16 TR @6500CFM New 8 row chilled water coil with copper tubes aluminum hydrophilic coated fins replace with existing DX cooling coil place.Coil to be selected for Hyderabadconditions.Existingcoilsize:1200mmWidth*1200mmLength.	Nos	1		
2	Supply, Installation, Testing and Commissioning of round inline mixed flow fan 800 CFM with 15 mm WC Static Fresh Air Fan with supports, speed regulator, etc.Fans suitable for outdoor installation.	Nos	2		
3	Supply, Installation, Testing and Commissioning of 75mm Outer Diameter size PN-10 3 layer PP-R(Polypropylene Random Copolymer)Pipes conforming to IS-15801,UV stabilized &anti microbial fusion welded having thermal stability for hot water and cold water supply,including all PP-R plain and brass threaded polypropylene random fittings and including MS supports,testing of joints complete as per direction of Engineer in charge.	Rmt	40		
4	Supply and fixing of duly laminated aluminium foil of 25 mm thick mat finish closed cell nitrile rubber class 'O' insulation on 75mm Outer Diameter PP-R pipe after applying suitable adhesive for nitrile rubber.The joints shall be sealed with 50mm wide and 3mm thick self adhesive nitrile rubber tape insulation.	Sqmtr	10		
5	Supply, Installation, Testing and Commissioning of 65mm Inner Diameter Manual Balancing Valve with built in measuring facility with CI body flanged construction with EPDM coated disc with long pitch with protected outpipe insulation with matching flanges with PP-R piping, gasket, bolt & nuts, insulation, etc. Duly insulated to the same specifications as the connected piping. Pressure rating shall be PN 16.	Nos	1		
6	Supply, installation, testing and commissioning of 65mm Inner Diameter 2 way motorised valve to control the chilled water flow based on room temperature. Valves shall be supplied with actuator,thermostat, transformer if required, control and power cabling, etc. Valve shall be suitable to maintain temp within +/- 5%. Valve shall be capable of integrating with BMS.Duly insulated to the same specifications as the connected piping. Pressure rating shall be PN 16.	Nos	1		
7	Supply, Installation, Testing and Commissioning of 65mm Inner Diameter Butterfly valve (Manual) with CI body SS Disc,Nitrile Rubber Seal & O-Ring with matching flanges with PP-R piping, bolt & nuts, extended stem etc. Duly insulated to the same specifications as the connected piping. Pressure rating shall be PN 16.	Nos	4		

8	Supply, Installation, Testing and Commissioning of 65mm Inner Diameter Y Strainers of Ductile CI Body flanged ends with SS strainer matching flanges with PP-R piping, gasket, bolts & nuts, insulation, etc. Duly insulated to the same specifications as the connected piping. Pressure rating shall be PN 16.	Nos	1		
9	Supply, Installation, Testing and Commissioning of 4 inch dia dial type thermometers with copper thermo well mounting box, extend capillary, etc. The thermometer shall be of complete SS. All internals, casing, etc. Pressure rating shall be PN 16.	Nos	2		
10	Supply, Installation, Testing and Commissioning of 4 inch dia dial type pressure gauge with isolating ball valve with insulation. Pressure gauge shall be of complete SS. All internals, casing, etc. Pressure rating shall be PN 16.	Nos	2		
11	Supply, Installation, Testing and Commissioning of 25mm Dia Ball valve for equipment connections, drain with necessary fitting, threaded nipples, dummy caps, etc. Pressure rating shall be PN 16.	Nos	2		
12	Supply, Installation, Testing and Commissioning of 3/4th inch dia auto air vents with isolating ball valves.	Nos	2		
13	Supply, Installation, Testing and Commissioning of A)OUTDOOR+RH with PID and Thyristor Regulation and ODU Temp Control 415VAC / 12 KW upto B)Winter Heating With thyristor Regulation and PID controller using Duct Mounted T+RH Transmitter 415VAC / 12 KW upto. Heater bank shall be suitable for integration to the controller for monitoring and operation. Heater Bank shall be allowed to operate manually also and suitable for outdoor installation.	Nos	1		
14	Supply, Installation, Testing and Commissioning of 3KW capacity pan humidifiers with actuator, SS tank, fresh water connection, overflow connection, drain connection, humidistat for controlling the RH with in $\pm 5\%$, supports, etc.,. Pan humidifier shall be suitable for integration with a stand alone controller. Shall be allowed to operate manually also. Air flow switch shall be provided to switch off the pan humidifier in case of no air flow.	Nos	1		
15	Supply, Installation, Testing and Commissioning of 24G GSS ducting of Thickness 0.63 mm sheet square / rectangular Factory Fabricated Ducting (120GSM) complete with gaskets, elbows, splitters, vanes, cowls, supports arrangement using GI full threaded rods and slotted rails as per drawings, air distribution specifications and requirements. Ducts are joined with ms angle frames with suitable nut, bolts, gaskets etc., Proper care shall be taken to avoid noise and vibrations. Sleeves shall be provided at wall crossings. Ducting shall be smoke tested before insulation. Ducting shall be designed for 1000 pascals ESP for supply air ducting and 500 pascals ESP for exhaust or return air ducting as per SMACNA-2005 & specifications of the following gauges.	Sqm	20		

16	Supply, Installation, Testing and Commissioning of low leakage aerofoil blade volume control damper (VCD) or Back Draft Damper (BDD) with opposed blades as per the tender specification, frame shall be made of 18 G GI. Blades shall be made of aluminium double skin. VCD shall have locking arrangement with knob or handle. VCD open and close marking shall be provided.	Sqm	3		
17	Supply, Installation, Testing and Commissioning of 25 mm thk. Class 'O' Nitrile rubber insulation for supply air ducting as per the specification. Insulation shall have factory laminated glass cloth. All joints shall be sealed with self adhesive tape. All exposed ducting shall be insulated with Class 'O' Nitrile rubber following thickness for supply & return ducts running in non-air conditioned areas and outside the building. The insulation shall be finished with polythene paper and 24G chicken wire mesh and finished with 24G aluminium cladding.	Sqmt	5		
18	Supply, fabrication, installation and painting MS I-beams / Channels / Angles with supports, chequered plate, grouting, grouting fasteners, etc for piping near AHU. All shall be painted finally with one coat of primer and two coats of finish paint with approved colour shade.	Kgs	200		
19	Charges for Dismantling of portion of AHU, Removing, Lifting, Shifting of DX unit, Dx coil and its accessories from the units position mezzanine floor left wing location to SB2. After installation of chilled water coil re-assemble the AHU portion normal.	Lot	1		
20	Core cutting wall openings with necessary cutting tools finishing the same with plastering, painting to match with the existing wall finish with primer coat and two coats of wall paint. This is for the chilled water pipes passing through the wall.	Nos	4		
21	Supply, Installation, Testing and Commissioning of 6500 CFM 125MM external static IE5 axial fan with VFD in the place of conventional blower and motor in the existing AHU inclusive of all M.S supporting for the fan, canvas connections between fan and AHU mouth.	Nos	R/O		

Sub-Total (D)	
GST 28% for S.no:1 (E)	
GST 18% for S.no:2-20(F)	
GRAND TOTAL (D+E+F)	
Total Amount in Words Rs	
Only	

Note:

1. TIFR Hyderabad has the right to delete any of the above items from scope of work or may increase/reduce quantities as per its requirement during execution of work. No claim or compensation for such deletion/increase/decrease will be accepted/paid to the contractor.
2. Payment will be made as per actual quantities executed at tender rates.
3. Unit rate must be quoted in figures as well as in words.
4. Rates are all inclusive of Transport, Loading & Unloading, Shifting Taxes, Etc.
5. Site must be clean and remove all the debris after completion of work.
6. Manufacturer's warranty of respective supply items are to be provided.
7. For any deviating items, the contractor shall take prior approval from TIFR Engineer-in-Charge with proper rate analysis.