



భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

**NOTICE INVITING TENDER
(NIT)**

Name of work: Supply, Installation, Testing and Commissioning (SITC) of Heat Pumps with associated Plumbing and Electrical enabling works for upgradation of existing Solar Water Heating System in Old Hostels, IIT Hyderabad campus, Kandi, Sangareddy.


18.07.2026
**Executive Engineer -Electrical
IIT Hyderabad**

INDIAN INSTITUTE OF TECHNOLOGY (IIT) HYDERABAD**NOTICE INVITING TENDER****NIT No. IITH/CMD/ELE/NIT/2026-27/09**

The Indian Institute of Technology (IIT) Hyderabad invites on behalf of the President of India online bids (e-tenders) in Item rate/ ~~Percentage rate~~ in **Two Bid (Technical Eligibility + Financial) system**, from the approved and eligible Electrical contractors of CPWD and those of appropriate list of M.E.S. / BSNL/ Railways/ State P.W.D./Central PSUs/State PSUs/State Govt. departments/Central Govt. Departments/Eligible Specialized agencies/Eligible contractors for the following work as per the stipulated terms and conditions mentioned below:

Copy of valid Registration of Firm (ROF) certificate, PAN card, GST Registration certificate & GSTIN should accompany the Technical Bid and those certificates should be valid on the last date of submission of bid.

1.1	NIT No.:	IITH/CMD/ELE/NIT/2026-27/09	
1.2	Name of Work:	Supply, Installation, Testing and Commissioning (SITC) of Heat Pumps with associated Plumbing and Electrical enabling works for upgradation of existing Solar Water Heating System in Old Hostels, IIT Hyderabad campus, Kandi, Sangareddy.	
1.3	Location of work	Indian Institute of Technology (IIT) Hyderabad campus, Kandi-502284, Sangareddy, Telangana, India.	
1.4	Estimated Cost: (given merely as a rough guide)	Rs.1,83,33,818/- only	
1.5	Earnest Money Deposit (EMD):	Rs.3,66,680/-only	
1.6	Period of Completion:	120 days	
1.7	Date of Online Publication/Download of Tender	18/07/2026 @17:00Hrs.	
1.8	Last Date & Time for receiving of Pre-Bid Queries and to email ID	Date & Time	25/07/2026 @18:00hrs
		email ID	ee.electrical@iith.ac.in
1.9	Date and Time of Pre-bid meeting at Conference Hall/Online, CMD, IIT Hyderabad	27/07/2026 @11:00hrs	
1.8	Last Date for Submission of Bids	10/08/2026 @17:00Hrs.	
1.9	Date and time of Opening of Technical Bids	11/08/2026 @17:30Hrs.	
1.10	Date and time of Opening of Financial Bids	To be decided	
1.11	Cost of Bid Document:	Nil	
1.12	Website	https://eprocure.gov.in/eprocure/app	

Executive Engineer (Electrical)
IIT Hyderabad

Instructions to the Bidders for Online Bid Submission

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, preparing their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link "Online bidder Enrollment" on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email addresses and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black-and white option which helps in reducing the size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates, etc.) has been provided to the bidders. Bidders can use the “My Space” or “Other Important Documents” are available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

SUBMISSION OF BIDS

- 5) Bidder should log into the site well in advance for bid submission.
- 6) Bidder should ensure that they can upload the bid in time i.e., on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 7) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 8) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument.
- 9) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date and time of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise, the uploaded bid will be rejected.

- 10) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 11) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc., The bidders should follow this time during bid submission.
- 12) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 13) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 14) Upon the successful and timely submission of bids (i.e., after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 15) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgment may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 16) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 17) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact details of the helpdesk are 0120-4711508, 0120-6277787, 0120-4001002, 0120- 4001005 and support-eproc@nic.in.

NOTICE INVITING TENDER
NIT No. IITH/CMD/ELE/NIT/2026-27/09

Technical Eligibility Criteria:

1. Bidders shall produce definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:

Experience of having successfully completed similar works during the last 07 years ending last day of the month previous to the one in which tenders are invited.

Three similar completed works each costing not less Rs.73,33,528.00/- only or

Two similar completed works each costing not less than Rs.1,10,00,291.00/- only or

One similar completed work costing not less than Rs.1,46,67,055.00/- only.

The value of executed works shall be brought to current costing level by enhancing the actual value of work done at the simple rate of 7% per annum, calculated from the date of completion to the last date of submission of tender.

“Similar work” shall mean the work of Supply, Installation, Testing and Commissioning (SITC) of Solar Water Heating Systems with Heat Pumps backup, Water Heating Systems with Heat Pumps, including associated plumbing works, electrical works, piping, insulation, control panels, pumps, storage tanks, interconnecting accessories in any Research laboratories/ Educational Institutions/ Universities/ Hospitals/Hostels/Housing Complexes/ Commercial complexes/PSUs/Residential complexes/IT companies/Pharma companies/ Power Plants/Banks /Any other reputed organizations.

(For private works TDS certificate or Form-26 AS in support of value of work done.)

2. **Turnover:** Average annual financial turnover on works should be at least **Rs.55,00,145/- only** during the immediate last **three (03)** consecutive financial years ending **31st March 2025 or ending 31st March 2026**. The value of annual turnover figures shall be brought to current value by enhancing the actual turnover figures at simple rate of 7% per annum. The annual turnover certificate from the chartered accountant need to be enclosed by the bidder.
3. **Banker's Certificate or Net worth Certificate** (as per the prescribed format given in NIT): The bidder shall submit the Banker's certificate or Net-worth certificate as per the below:

Banker's Certificate of the amount equal to **Rs.73,33,527/- only** issued by any scheduled bank, UDIN as per format enclosed as **Form-B**.

or

Net worth certificate of minimum **Rs.18,33,382/- only** issued by certified Chartered Accountant with UDIN as per format enclosed as **Form-C**.

4. The bidder shall submit the **Indemnity bond** as per format provided as **Annexure-II**.

5. The bidder shall submit the **Manufacturer Authorization Certificate** from the approved OEM of Heat Pumps and Approved OEM of Circulation pump as per the format enclosed as **Annexure-IV**.
6. The bidder shall have **Employees Provident Fund (EPF) enlistment** and proof of the same shall be attached along with the Technical Bid clearly showing the Provident Fund Code number.
7. To become eligible, the tenderer shall have to furnish an affidavit as per **Form 'J'** of the NIT.
8. The bidder shall submit the details of **eligible similar nature of works** completed during the last seven years ending previous day of last date of submission of tender as per the format enclosed as **Form-D**.
9. The bidder shall submit the **Performance report of works** as per the format enclosed as **Form-E**.
10. The bidder shall submit the **Acceptance of tender terms & conditions** as per the format enclosed as **Annexure-III**.
11. Agreement shall be drawn with the successful tenderer on prescribed Form which is available in the website: https://www.iith.ac.in/assets/files/tenders/General_Conditions_of_Contract_GCC_for_Works_2026.pdf **(with up to date correction slips/amendments if any in accordance with the CPWD guidelines/GOI orders)** Tenderer shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
12. The time allowed for carrying out the work will be as stated at para 1 from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.
13. **The site for the work is available.**
14. **The Intending Bidders are strongly advised to visit the site before quoting their bids to have actual critical assessment and understanding of existing site conditions and this work requirements, scope etc.**
15. Tender documents consisting of plans, specifications, the schedule of quantities of the various classes of work to be done and the set of terms & conditions of contract to be complied with by the contractor whose tender may be accepted, and other necessary documents can be seen for information at the above-mentioned website.
16. Applicants are advised to keep visiting the above-mentioned website from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respects including updates thereof, if any. An incomplete application may be liable for rejection.
17. The contractor whose tender is accepted, will be required to furnish a **Performance Guarantee of 5% (Five Percent)** of the tendered amount within the period specified in **Schedule F**. This guarantee shall be in the form of Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any scheduled bank or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F'. including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.

18. The description of the work is as follows:

Supply, Installation, Testing and Commissioning (SITC) of Heat Pumps with associated Plumbing and Electrical enabling works for upgradation of existing Solar Water Heating System in Old Hostels, IIT Hyderabad campus, Kandi, Sangareddy.

The bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

19. Tenders with any condition including that of conditional rebates shall be rejected forthwith.

20. Cost of **Bid document cost** and **EMD** may also be remitted to Institute's account number as per bank particulars given below:

Name of the Account Holder	: Indian Institute of Technology Hyderabad
Account Number	: 30412797764 (Current Account)
Name of the Bank	: State Bank of India
Address of the Bank	: IIT Kandi, IIT Hyderabad Campus, Kandi, Sangareddy, Telangana - 502284
Branch code	:14182
IFSC code	: SBIN0014182
MICR code	:502002528
SHIFT code	: SBININBB762

21. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.

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

23. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.

24. The contractor shall not be permitted to tender for works if his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Institute.
25. No Engineer of gazette rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.
26. The tender for the works shall remain open for acceptance for a period of Ninety (90) days from the date of opening of tenders/Sixty days from the date of opening of financial bid in case tenders are invited on 2/3 envelop system (strike out as the case may be) if any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the retendering process of the work.
27. ***(A) All taxes, Labor Cess etc., as applicable shall be borne by the contractor himself. The contractor shall quote his rates considering all such taxes including GST on works. Any recovery towards GST is notified by the competent authority, the same shall be effected and no claim what so ever shall be entertained by IITH. The contractor shall quote his rates accordingly.***
- (B) 2% as TDS amount of GST amount payable on the bills will be deducted as per the Govt. of India, Ministry of Finance, Department of Revenue notification vide No.65/39/2018-DOR, dtd: 14-09-2018.**
28. **GST registration certificate of the state in which the work is to be taken up, if already obtained by the bidder.**

If the bidder has not obtained GST registration in the state in which the work is to be taken up or as required by GST authorities, then in such a case the bidder shall scan and upload following under taking along with other bid documents.

"If the work awarded to me, I/We shall obtain GST registration certificate of the state, in which work is to be taken up, within one month from the date of receipt of award letter or before release of any payment by IIT Hyderabad, whichever earlier, failing which I/We shall responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by IIT Hyderabad or GST department in this regard."

29. This Notice inviting Tender shall form a part of the contract document. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of :-

- a) The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
- b) Standard Contract form (General Conditions of Contract) as posted in the website of the Institute. The bidder is deemed to have gone through and understood the Standard Contract Form and the General Conditions of Contract.


18.07.2026
Executive Engineer-Electrical
IIT Hyderabad

(Signature of bidder)

1. EVALUATION METHODOLOGY:

The Procurement Process:

The activities leading to the procurement of the services of the well-established, experienced and innovative companies/contractors for the **Supply, Installation, Testing and Commissioning (SITC) of Heat Pumps with associated Plumbing and Electrical enabling works for upgradation of existing Solar Water Heating System in Old Hostels, IIT Hyderabad campus, Kandi, Sangareddy** will consist of the following key activities:

Invitation for Tender: The IIT Hyderabad invites intending bidders to submit the bids for consideration in the subsequent tendering process for selection of well-established, experienced and innovative company/firm for the **Supply, Installation, Testing and Commissioning (SITC) of Heat Pumps with associated Plumbing and Electrical enabling works for upgradation of existing Solar Water Heating System in Old Hostels, IIT Hyderabad campus, Kandi, Sangareddy**. A Notice inviting Tender will be published in the Central Public Procurement Portal (CPP Portal) of Govt. of India (www.eprocure.gov.in) and also will be uploaded on the IIT Hyderabad website (www.iith.ac.in), as per the standard procedure of IITH. This document with key details of the project and response formats is available for all potential and interested bidders through aforesaid websites.

1. Receipt of bids: The bids from the potential bidders who are interested in participating in the selection process will be received in online mode, on a designated date and time as specified in this document.

2. Evaluation of bids: The information provided by the potential bidders in their bids, as part of the response to this tender will be evaluated against the eligibility criteria specified in the tender to qualify for the subsequent processes of selection. Based on this evaluation, the potential bidders who meet the qualifying (eligibility) criteria will be shortlisted.

The eligibility conditions have been formulated to assess the competence and capability of the potential bidding firms to meet the requirements of IIT Hyderabad for providing the required services.

The financial bids of the above-shortlisted cum technically qualified bidders as per the above criteria will be opened at the designated date and time and accordingly evaluated further for award of work to the successful eligible bidder.

3.1 RIGHT TO TERMINATE THE PROCESS:

- IIT Hyderabad makes no commitments, explicit or implicit, that this process will result in a business transaction with anyone.
- This NIT does not constitute any offer by IIT Hyderabad. The bidder's participation in this process may result in IIT Hyderabad selecting the bidders to engage in further responses, discussions and negotiations towards execution of a final contract. The commencement of any subsequent procurement activity resulting out of this NIT does not signify a commitment by IIT Hyderabad either to continue the activities or to culminate such activities with a definitive contract.
- IIT Hyderabad reserves the right to withdraw this tender if it determines that such action is in the best interest of the organization without assigning any reason whatsoever.

3.2 Authenticity of the Information and Right for Verification:

- IITH reserves the right to verify all statements, information and documents submitted by the potential bidder in response to the NIT. Any such verification or lack of such verification by the IIT Hyderabad shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the IITH thereunder.
- In case it is found during the evaluation of the responses or at any time during the subsequent procurement process or before signing of the contract or after its execution and during the period of project execution resulting out of the contract thereof, that one or more of the pre-qualification conditions have not been met by the bidder, or the bidder has made material misrepresentation or has given any materially incorrect or false information, the bidder shall be disqualified forthwith if not yet awarded the contract either by issue of the letter of intent or entering into a contract.

3.3 Additional Conditions:

- Timing and sequence of events resulting from this tender shall be as determined by IITH.
- Responses are subject to rejection if they limit or modify any of the terms and conditions or specifications of this tender.
- Neither the bidder nor any of bidder's representatives shall have any claims whatsoever against IITH or any of its respective officials, agents, or employees arising out of or relating to this NIT or these procedures (other than those arising under a definitive service agreement with the bidder in accordance with the terms thereof).
- The Bidder shall not bid under any Consortium or Joint Ventures. Bids from a Consortium/Joint venture shall be summarily rejected.
- The bidder should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by Government of India or any State Governments in the country of India.
- The bidder must not have any history of defaulting in execution of work orders issued by Government of India or any State Government in the country of India. A self-declaration certificate to this effect should be enclosed.
- The bidder hasn't been blacklisted by any Central/State Government institution and there has been no pending litigation with any government department on account of similar services.
- No Criminal Proceedings in any Court of Law should pending against the bidding Firm Or its Promoters Or its Directors Or its Executives.

2. TECHNICAL SPECIFICATIONS

PE-AL-PEX COMPOSITE PIPES FOR HOT & COLD-WATER SUPPLY

1. Scope

The work shall comprise the supply, installation, testing and commissioning of PE-AL-PEX composite piping system complete with fittings, supports, insulation (where specified), accessories and all incidental works required for a complete hot and cold-water distribution system.

The contractor shall provide all materials, labour, tools, testing equipment and accessories necessary for satisfactory completion of the work in accordance with the specifications, approved drawings and directions of the Engineer-in-Charge.

2. Applicable Standards

The piping system shall conform to the latest editions of the following standards or equivalent internationally recognized standards:

- ASTM F1281-11 – Cross-linked Polyethylene/Aluminium/Cross-linked Polyethylene (PEX-AL-PEX) Pressure Pipe
- ISO 21003 – Multilayer Piping Systems for Hot and Cold Water Installations
- IS 15450
- DIN 16836 / DIN 4726 (Oxygen Barrier)
- ISO 15875 (PEX)
- ISO 17484 (Metallic Press Fittings)

In case of conflict, the more stringent requirement shall prevail.

3. Pipe Construction

The pipe shall be a factory-manufactured composite pipe consisting of:

- Inner layer – Cross-linked Polyethylene (PEX)
- Inner adhesive layer
- Aluminium Layer
- Outer adhesive layer
- Outer UV stabilised PE layer of composite pipe
- PE foam layer
- UV stabilised skin layer (protective layer)
- Longitudinally butt-welded or laser-welded aluminium tube

The aluminium layer shall be continuously welded and bonded to the polyethylene layers to ensure dimensional stability and provide a complete oxygen barrier.

4. Material Requirements

Inner Layer

- Cross-linked Polyethylene (PEX)
- Smooth internal surface
- Resistant to scaling and corrosion
- Suitable for potable water
- Hygienic and non-toxic

Aluminium Layer

- High-grade aluminium alloy
- Laser welded or butt welded
- Uniform thickness
- 100% oxygen diffusion barrier

Outer Layer

- High-density Polyethylene (PE)
- Resistant to abrasion

5. Performance Requirements:

Parameter	Requirement
Working Pressure	Minimum 10 bar
Test Pressure	1.5 times operating pressure or minimum 10 bar
Continuous Operating Temperature	Up to 95°C
Short Duration Temperature	Up to 110°C
Minimum Temperature	0°C
Design Life	Minimum 50 years
Linear Expansion	$\leq 0.026 \text{ mm/m/}^{\circ}\text{C}$
Thermal Conductivity	Approximately $0.04 \text{ W/m}\cdot\text{K}$
Internal Surface Roughness	$\leq 0.007 \text{ mm}$

6. Pipe Dimensions

Pipe sizes shall be as indicated in the BOQ.

Wall thickness shall comply with the manufacturer's pressure rating and applicable standards.

7. Fittings

All fittings shall be supplied by the same manufacturer as the pipe.

Fittings shall be:

- Brass CW617N/CW602N (dezincification-resistant preferred)
- Nickel plated where specified
- Press-fit type using stainless steel sleeves or approved compression fittings
- EPDM O-rings suitable for potable hot water

Mixing of fittings from different manufacturers shall not be permitted without prior approval.

8. Installation Requirements

Installation shall be carried out strictly as per the manufacturer's recommendations.

The contractor shall ensure:

- Proper alignment of piping.
- Adequate supports and clamps.
- Protection against mechanical damage.
- Isolation from sharp edges.
- Expansion compensation wherever required.
- No twisting during installation.
- Minimum bending radius as recommended by the manufacturer.
- Proper sleeves at wall and slab crossings.
- Fire stopping at service penetrations.

Only manufacturer-approved pressing tools shall be used.

9. Supports

Pipe supports shall comply with manufacturer Specifications and as per the directions of Engineer-In-Charge.

Supports shall be:

- Galvanized steel clamps with rubber lining
- Corrosion resistant
- Properly anchored
- Installed at manufacturer-recommended spacing

10. Testing

After installation the piping system shall be subjected to hydraulic pressure testing.

Testing requirements:

- Flush the complete system.
- Remove entrapped air.
- Test pressure shall be 1.5 times the working pressure.
- Pressure shall be maintained for not less than 2 hours.
- No leakage or pressure drop shall be permitted.
- Any defective portion shall be replaced and retested.

12. Quality Assurance

The manufacturer shall possess:

- IS 15450

The contractor shall submit:

- Product catalogue
- Technical data sheets
- Third-party test certificates (If applicable)
- Factory quality certificates
- Hydrostatic pressure test reports (If applicable)
- Material conformity certificates (If applicable)
- Warranty certificates

TECHNICAL SPECIFICATIONS FOR AIR SOURCE HEAT PUMP (12 kW TO 18.5 kW)

1. Scope of Work

The work shall include the supply, installation, testing, commissioning, and performance testing of Air Source Heat Pumps (ASHP) for hot water generation, complete with all accessories, refrigerant piping (if applicable), electrical panel, controls, safety devices, interconnecting piping, insulation, supports, vibration isolators, and associated works as required for a complete operational system.

The unit shall be factory assembled, factory tested, and suitable for continuous outdoor operation under Indian climatic conditions.

2. Applicable Standards

The Heat Pump shall comply with the latest editions of the following standards or equivalent:

- IS 1391 – Electric Storage Water Heaters (where applicable)
- IS 302 (Relevant Parts)
- IEC 60335-2-40
- ISO 5151
- EN 14511 – Air Conditioners, Liquid Chilling Packages and Heat Pumps
- EN 14825
- ISO 9001 Certified Manufacturing Facility
- ISO 14001
- CE Certification
- RoHS Compliance
- BEE Guidelines (where applicable)

3. General Technical Requirements

Parameter	Requirement
Type	Air Source Heat Pump
Heating Capacity	12 kW to 18.5 kW
Application	Hot Water Generation
Installation	Outdoor
Refrigerant	R410A
Compressor	Scroll or Rotary Inverter Compressor
Power Supply	415 V $\pm$ 10%, 3 Phase, 50 Hz (or 230 V, Single Phase for smaller capacities if specified)
Noise Level	$\leq$ 60 dB(A) at 1 metre
Protection Class	Minimum IPX4
Ambient Operating Temperature	-10°C to +48°C
Water Outlet Temperature	Adjustable up to 60°C
Maximum Water Temperature	55–60°C
COP	Minimum 4.40
Refrigerant Charge	Factory Charged
Heat Exchanger	Titanium / Microchannel / Copper Tube with Aluminium Fin
Water Heat Exchanger	Stainless Steel 316L Plate Heat Exchanger or equivalent
Fan	Axial Flow Variable Speed

4. Compressor

The compressor shall be:

- Hermetically sealed
- Scroll compressor preferred
- Low vibration
- Low noise
- Factory mounted on vibration isolators
- Overload protected

5. Refrigerant

The refrigerant shall:

- Be environmentally friendly
- Non-ozone depleting
- Low Global Warming Potential (GWP)

Preferred refrigerants:

- R410A (acceptable where specified)

6. Heat Exchanger

Air Side

- Copper tubes with hydrophilic aluminium fins

Water Side

- Stainless Steel SS316 Brazed Plate Heat Exchanger
Or
- Titanium Heat Exchanger

The heat exchanger shall withstand:

- Water pressure: Minimum 10 bar
- Corrosion resistance suitable for potable water

7. Fan Assembly

The fan shall be:

- Axial flow type
- Dynamically balanced
- Direct driven
- Aluminium or engineering plastic blades
- Low noise design

8. Cabinet Construction

The cabinet shall be:

- Powder-coated galvanized steel
- UV resistant
- Weatherproof
- Corrosion resistant
- Suitable for outdoor installation

Minimum enclosure protection shall be **IPX4**.

9. Electrical Panel

Factory wired electrical panel comprising:

- MCB/MCCB
- Contactor
- Phase failure protection
- Terminal blocks
- Earthing terminals

10. Controls

The Heat Pump shall have a microprocessor-based controller with:

- LCD Display
- Digital Temperature Display
- Water Temperature Control
- Auto Restart
- Timer
- Error Codes
- Compressor Delay Protection

11. Safety Devices

The Heat Pump shall include:

- High Pressure Switch
- Low Pressure Switch
- Compressor Overload Protection
- Phase Failure Protection
- Water Flow Switch
- Temperature Sensors

12. Performance Requirements

Parameter	Requirement
COP	≥ 4.40
Energy Efficiency	High Efficiency Inverter Technology
Water Heating Time	As per manufacturer design
Standby Power	Less than 10 W
Continuous Duty	Suitable for 24×7 operation

13. Hydraulic Connections

The contractor shall provide:

- Isolation Valves
- Non-return Valve
- Y Strainer
- Pressure Gauge
- Temperature Gauge
- Drain Valve
- Air Vent
- Expansion Tank (where required)
- Safety Relief Valve

14. Testing

The Heat Pump shall be factory tested for:

- Refrigerant leakage
- Pressure test
- Electrical safety
- Functional testing
- Performance testing

Site tests shall include:

- Insulation resistance
- Earth continuity
- Water circulation test
- Heating performance test
- COP verification
- Trial run for minimum 8 hours

15. Documentation

The contractor shall submit:

- Technical Data Sheet
- GA Drawings
- Wiring Diagram
- Foundation Details
- Operation Manual
- Maintenance Manual
- Spare Parts List
- Factory Test Certificates
- Warranty Certificate

STAINLESS STEEL (SS 316L) HOT WATER STORAGE TANK:

1. Scope

The work shall comprise the supply, installation, testing, and commissioning of a vertical/horizontal Stainless Steel (SS 316L) insulated hot water storage tank, complete with all accessories, supports, nozzles, valves, instrumentation, insulation, cladding, testing, and commissioning as required for a complete operational hot water storage system.

The tank shall be suitable for continuous operation with heat pump, solar hot water, electric heater, or boiler-based hot water systems.

2. Applicable Standards

The tank shall be designed, manufactured, inspected, and tested in accordance with the latest editions of:

- IS 2825 – Code for Unfired Pressure Vessels
- ASME Section VIII Division 1 (preferred)
- IS 2062 (for structural supports)
- ASTM A240 / ASTM A276 (SS 316L material)
- ASTM A312 (Stainless Steel Pipe Nozzles)
- IS 875 (Loading)
- IS 1367 (Fasteners)
- Relevant CPWD Specifications

3. Construction

The storage tank shall be fabricated entirely from AISI SS 316L stainless steel.

The tank shall be:

- Vertical or horizontal type (as specified)
- Cylindrical with dished ends
- Factory fabricated
- Fully welded construction
- Suitable for potable hot water storage

4. Material Specifications

Component	Material
Shell	SS 316L
Top Dish End	SS 316L
Bottom Dish End	SS 316L
Internal Baffles (if required)	SS 316L
Nozzles	SS 316L
Flanges	SS 316L
Supports	MS Hot Dip Galvanized / SS 304 as specified
Fasteners	SS 304/SS 316L

5. Tank Thickness

The minimum plate thickness shall be:

Component	Minimum Thickness
Shell	6 mm SS 316L
Dish Ends	6 mm SS 316L
Reinforcement Pads	As per design calculations
Nozzle Neck	Minimum 6 mm

The successful bidder shall submit design calculations to justify the final thickness based on the design pressure, tank diameter, corrosion allowance (if any), and applicable code requirements. Where calculations require a greater thickness than specified, the higher thickness shall be provided.

6. Design Parameters

Parameter	Requirement
Design Pressure	Minimum 10 bar
Operating Pressure	10 bar
Hydrostatic Test Pressure	15 bar (1.5 × operating pressure)
Operating Temperature	Up to 120°C
Design Temperature	Minimum 125°C
Fluid	Potable Hot Water

7. Tank Capacity

Capacity shall be as specified in the BOQ.
or as approved by the Engineer-in-Charge.

8. Thermal Insulation

The tank shall be insulated using:

- 50–75 mm thick PUF (Polyurethane Foam)
- Density: $40 \pm 2 \text{ kg/m}^3$
- Thermal Conductivity $\leq 0.025 \text{ W/m}\cdot\text{K}$
or
- Rock Wool (where specified)

Outer cladding shall consist of:

- 0.6–0.8 mm SS 304 sheet
or
- Aluminium cladding

properly finished with sealed joints.

9. Tank Connections

The tank shall be provided with SS 316L nozzles for:

- Cold Water Inlet
- Hot Water Outlet
- Return Water Connection
- Drain Connection
- Vent
- Temperature Sensor Pocket
- Pressure Gauge Connection
- Safety Valve Connection
- Electric Heater Provision (if required)
- Level Sensor Connection
- Air Vent

Nozzle sizes shall be as per approved drawings.

10. Manhole

The tank shall be provided with:

- Minimum 450 mm diameter manhole
- SS 316L cover
- EPDM food-grade gasket
- Stainless Steel fasteners

11. Instrumentation

The tank shall be supplied with:

- Temperature Gauge
- Pressure Gauge
- Thermowell
- Level Indicator
- Safety Relief Valve
- Air Release Valve
- Drain Valve

12. Welding

All welding shall be carried out by qualified welders.

Requirements:

- TIG welding preferred
- Continuous welding
- Smooth internal finish
- Pickling and passivation after welding
- No sharp projections
- Leak-proof joints

13. Surface Finish

Internal surface:

- Pickled and Passivated
- Smooth hygienic finish
- Suitable for potable water

External surface:

- Matte Finish
- No rust
- No scaling

14. Supports

The tank shall be supplied complete with:

- Structural support frame
- Anchor bolts
- Anti-vibration pads where required

Support design shall withstand:

- Full water load
- Wind load
- Seismic load (where applicable)

15. Testing

The tank shall undergo:

Factory Tests

- Material Verification
- Weld Inspection
- Dye Penetrant Test (DPT)
- Hydrostatic Test at **15 bar**
- Dimensional Inspection
- Visual Inspection

Site Tests

- Hydrostatic Test
- Leakage Test
- Insulation Inspection
- Functional Testing
- Performance Testing

No leakage or permanent deformation shall be permitted.

16. Documentation

The contractor shall submit:

- GA Drawings
- Fabrication Drawings
- Material Test Certificates (MTC)
- SS 316L Chemical Composition Certificate
- Pressure Test Certificate
- Weld Qualification Records
- Inspection Reports
- Warranty Certificate

17. Other Conditions

- The tank shall be designed and certified for 10 bar operating pressure and 120°C operating temperature.
- The minimum SS 316L plate thickness shall be 6 mm for the shell and dished ends. If the applicable design code and calculations require a greater thickness, the higher thickness shall be provided without any additional cost.
- All wetted components shall be manufactured from **AISI SS 316L** to ensure corrosion resistance and suitability for potable hot water.
- The manufacturer shall submit detailed design calculations, fabrication drawings, hydrostatic test certificates, and material test certificates for approval before manufacture.

3.LIST OF APPROVED MAKES FOR VITAL ITEMS

The contractor shall strictly supply only the following approved make list of items as specified below;

SR. NO	MATERIAL / ITEMS	APPROVED MAKE
1	Heat pump	Jaquar / AO Smith/ Racold
2	Circulation Pump	Xylem /Grundfos/ Kirloskar/Wilo
3	PE-AL-PEX composite pipe	Kitec/Jindal/Approved Equivalent
3	CIRCUIT BREAKER (HT / LT)	SCHNEIDER-ELECTRIC/SIEMENS/ ABB/ L&T (Lauritz Knudsen)/ALSTOM
4	PROTECTION RELAY FOR SWITCHGEAR (Numeric type only)	ABB/ALSTOM/ SCHNEIDER ELECTRIC/ L&T/SIEMENS
5	METER	CONZERV/ RISHAB/ ELMEASURE/SECURE
6	CABLE LUGS	COMET/ COSMOS/ DOWELL'S (BILLER INDIA) / JAINSON
7	CABLE GLANDS (DOUBLE COMPRESSION)	COMET /COSMOS/ DOWELL'S /JAINSON
8	HT AND LT PANEL BOARDS	CPRI APPROVED SYSTEM INTEGRATORS & PANEL MANUFACTURERS
9	PUSH BUTTONS	ABB/ L&T/ SCHNEIDER-ELECTRIC/ RISHABH
10	MULTIFUNCTION METERS	CONZERV/ RISHAB/ ELMEASURE/SECURE
11	PROTECTION CT	ECS/ERICON/VIDYUT
12	METERING CT	ECS/ERICON/PRAGATI
13	METERING PT	ECS/ERICON/PRAGATI
14	INDICATING LAMPS	L&T/ SIEMENS/ SCHNEIDER ELECTRIC/ ABB, RASS CONTROL/TEKNIC
15	CABLE LUGS	COMET/ COSMOS/ DOWELL'S (BILLER INDIA) / JAINSON
16	CABLE GLANDS (DOUBLE COMPRESSION)	COMET /COSMOS/ DOWELL'S /JAINSON
17	MCB /RCCB	LEGRAND/HAVELLS/SCHNEIDER/LAURITZ KNUDSEN (L&T)/ABB/Honeywell
18	DISTRIBUTION BOARD	LEGRAND/SCHNEIDER/ABB/ LAURITZ KNUDSEN (L&T)/Honeywell
19	INDUSTRIAL PLUG AND SOCKET	LEGRAND/SCHNEIDER/NEPTUNE/HAGER
20	MODULAR SWITCHES AND SOCKETS	LEGRAND (Arteor)/HAVELLS/ABB/MK/Honeywell
21	Power and Control cables/wires	POLYCAB/FINOLEX/HAVELLS

Note: The contractor shall take a Prior approval from the EIC before any procurements of above items on site. Also, if any items are not listed then it has to be got approved from the EIC with TDS and Sample submission.

4. APPENDIXES

APPENDIX - I

Cover Letter from the Bidder

(On Company letter head)

Date :

To

**The Executive Engineer-Electrical,
Construction and Maintenance Division,
IIT Hyderabad, Kandi, Sangareddy,
Telangana-502284.**

Name of work: **Supply, Installation, Testing and Commissioning (SITC) of Heat Pumps with associated Plumbing and Electrical enabling works for upgradation of existing Solar Water Heating System in Old Hostels, IIT Hyderabad campus, Kandi, Sangareddy.**

Dear Sir,

This is to notify you that our company intends to submit a response to this NIT for the **Supply, Installation, Testing and Commissioning (SITC) of Heat Pumps with associated Plumbing and Electrical enabling works for upgradation of Solar Water Heating System in Old Hostels, IIT Hyderabad, Kandi, Sangareddy.**

Primary and Secondary contacts for our company are:

Primary Contact Secondary Contact

Name:

Designation:

Address:

Mobile No.

e-mail ID

We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to IITH is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the IITH in its short listing process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short listing process or offering or accepting unduly favors from our company in the short listing process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so, for undertaking the installation of said Project at IITH.

It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company/firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this Day of 2026

(Signature) (In the capacity of)

Duly authorized to sign the NIT Response for and on behalf of:

Sincerely,

[SYSTEM INTEGRATOR'S NAME]

Name

Title

Signature

Date

(Name and Address of Company) Seal/Stamp of System Integrator

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, certify that I am of the, and that
..... who signed the above response is authorized to bind the
corporation by authority of its governing body.

Date:

(Seal Here)

APPENDIX – II

LITIGATION IMPACT STATEMENT

On Company letterhead

Date

To
The Executive Engineer-Electrical,
Construction and Maintenance Division,
IIT Hyderabad, Kandi, Sangareddy,
Telangana-502284.

Reference: Notice Inviting Tender for Supply, Installation, Testing and Commissioning (SITC) of Heat Pumps with associated Plumbing and Electrical enabling works for upgradation of existing Solar Water Heating System in Old Hostels, IIT Hyderabad campus, Kandi, Sangareddy.

Dear Sir,

We have read and understood the contents of the Notice Inviting Tender and pursuant to this hereby confirm that we satisfy the eligibility criteria laid out therein. We hereby confirm that save as may be set out in the schedule attached to this statement, there is no litigation (including court, arbitration and other proceedings), inquiry or order from any regulatory authority, current or pending against us, which if adversely determined might have material adverse impact on our ability to carry on our business or pay our debts as they fall due or on our ability to enter into any of the transactions contained in or contemplated in respect of the *Supply, Installation, Testing and Commissioning (SITC) of Heat Pumps with associated Plumbing and Electrical enabling works for upgradation of existing Solar Water Heating System in Old Hostels, IIT Hyderabad campus, Kandi, Sangareddy.*

(Signature) (In the capacity of)

Duly authorized to sign the NIT Response for and on behalf of:

Sincerely,

[BIDDER NAME]

Name

Title

Signature

Date

(Name and Address of Company) Seal/Stamp of System Integrator

5.Special Conditions of Contract

1. Before tendering, the agency shall inspect the site of work and shall fully acquaint himself about the conditions prevailing at site, availability of materials, availability of land and suitable location for construction of godowns, stores and camp, transport facilities, the extent of lead and lifts involved in the work (over the entire duration of contract) including local conditions, as required for satisfactory execution of the work and nothing extra whatsoever shall be paid on this account.
2. The Agency shall at his own expense and risk arrange land for accommodation of labour, setting up of office, the storage of materials, erection of temporary work- shops, and construction of approach roads to the site of the work including land required for carrying out of all jobs connected with the completion of the work. In any case. IIT Hyderabad (Institute) shall not permit setting up of labour camps within its premises. If during construction it becomes necessary to remove or shift the stored materials shed workshop, access roads, etc. to facilitate execution of any other work by any other agency, the contractor shall do as directed by the Engineer-in-charge and no claim whatsoever, shall be entertained on this account.
3. It shall be deemed that the contractor shall have satisfied himself as to the nature and location of the work, transport facilities, availability of land for setting up of camp etc. The department will bear no responsibility for lack of such knowledge and the consequences thereof.
4. The Agency shall have to make approaches to the site, if so required and keep them in good condition for transportation of labour and materials as well as inspection of works by the Engineer-in-charge. Nothing extra shall be paid on this account.
5. The Agency shall at his own cost submit samples of all materials sufficiently in advance and obtain approval of the Engineer-in-charge. Subsequently, the materials to be used in the actual execution of the work shall strictly conform to the quality of samples approved by the Engineer- in-charge and nothing extra shall be paid on this account. The acceptance of any sample or material on inspection shall not be a bar to its subsequent rejection, if found defective.
6. The contractor shall at his cost, make all arrangements and shall provide necessary facilities as the Engineer-in-charge may require for collecting, preparing, packing forwarding and transportation of the required number of samples for tests for analysis at such time and to such places as directed by the Engineer-in-charge, and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The cost of tests shall be borne by the contractor/Institute in the manner indicated below (except for water):
 - a) By the contractor, if the results show that the material does not conform to relevant specifications and BIS codes or any other relevant code for which conformity test is carried out.
 - b) By the Institute, if the results show that the material conforms to relevant specifications and BIS codes or any other relevant code for which conformity test is carried out.
7. Materials used on work without prior inspection and testing (where testing is necessary) and without approval of Engineer-in-charge are liable to be considered unauthorized,

defective and not acceptable. The Engineer-in-charge shall have full powers to require removal of any or all of the materials brought to site by contractor which are not in accordance with the contract, Specifications or do not conform in character or quality to the samples approved by the Engineer-in-charge. In case of default on the part of the contractor in removing rejected materials, the Engineer-in-charge shall be at liberty to have them removed at the risk and cost of the contractor.

8. The work shall be carried out in such a manner so as not to interfere/or effect or disturb other works being executed by other agencies, if any.
9. Any damages done by the contractor to any existing work or work being executed by other agencies shall be made good by him at his own cost.
10. The work shall be carried out in the manner complying in all respects with the requirement of relevant rules and regulations of the local bodies under the jurisdiction of which the work is to be executed and nothing extra shall be paid on this account.
11. The contractor shall maintain in good condition all work executed till the completion of the entire work entrusted to the contractor under this contract and nothing extra shall be paid on this account.
12. No payment will be made to the contractor for damage caused by rain, floods and other natural calamities whatsoever during the execution of the works and any damage to the work on this account shall have to be made good by the contractor at his own cost and nothing whatsoever shall be paid on this account.
13. The Item Rates or Percentage Rates for all items of work, unless clearly specified otherwise shall include the cost of all labour for materials, de-watering and other inputs involved in the execution of the items.
14. No claim whatsoever for idle labour, additional establishments, costs of hire and labour charges for tools and plants etc. would be entertained under any circumstances.
15. For the safety of all labour directly or indirectly employed in the work for the performance of the contractor's part of this agreement, the contractors shall, in addition to the provisions of Safety code and directions of the Engineer-in-charge make all arrangements to provide facility as per the provisions of Indian Standard Specifications (Codes) listed below and nothing extra shall be paid on this account.
 - (a) IS 3696 Part I Safety Code for scaffolds and ladders
 - (b) IS 3696 Part II Safety Code for scaffolds and ladders Part II ladders
 - (c) IS 764 Safety Code for excavation work
 - (d) IS 4081 Safety Code for Blasting and Drilling operations,
 - (e) IS4138 Safety Code for working in compressed air.
 - (f) IS 7293 Safety Code for working with construction machinery
 - (g) IS 7969 Safety Code for storage and handling of building materials
 - (h) IS 5216:1982 code of safety procedures and practices in electrical works
16. The contractor shall take all precautions to avoid all accidents by exhibiting necessary caution boards and by providing red flags, red lights and barriers. The contractor shall be responsible for any accident at the site of work and consequences thereof.

17. Water & Power : The contractor shall make his own arrangements for the water and power required for discharging his obligations under the scope of this tender. In case the Institute supplies water and or power, the contractor shall be liable to pay the charges on actual consumption basis at the same prevailing rates that the local authorities charge the Institute.
18. The ESI and EPF Contribution on the part of the employer in respect of the contract shall be paid by the contractor.
19. The contractor shall obtain a valid licence under the contract labour (R A) Act, 1970 and the contract labour (Regulation and Abolition) Central Rules, 1971 before the commencement of the work, and continue to have a valid licence until the completion of the work. The contractor shall also comply with provision of the Inter- State Migrant Women (Regulation of Employment and conditions of service) Act 1979.
20. All tools, tackles, safety equipment and labours required for maintenance and testing works / AMC at all levels and heights shall have to be provided by the tenderer at no extra cost.
21. Spare parts used by vendor should conform to IS specifications as applicable.
22. Any damaged due to mishandling by the person deputed by the vendor shall have to be restored back to its original condition by the vendor at their own cost. The compressor shall carry a minimum 5 years warranty on the compressor and also, Also, the storage tank shall carry a minimum 5 years comprehensive warranty against manufacturing defects, leakage, weld failure, and corrosion.
23. **Inspection before Dispatch:** All routine tests shall be conducted before dispatch of equipment's. No equipment (**mainly Heat Pumps, Circulation Pumps**) shall be dispatched out from the manufactures premises before such tests are conducted and test result recorded. These test certificates shall be given along the supply of equipment. The Engineer-in-charge shall, if he so desires inspect and witness the pre-delivery tests. For this purpose, the agency shall give 15-day advance notice. The contractor shall arrange for inspection/Factory Acceptance Test (FAT) of the department authorized personnel. The main contractor has to organize the FAT inspections with IITH personnel by intimating them in advance. However, the inspection shall be done at the discretion of the Engineer-In-charge without any additional cost implication by the contractor to IITH for FAT but ROUTINE TEST & TYPE TEST Certificates shall have to be submitted for equipment.

Prior to dispatch, all equipment's shall be adequately protected & insured for the whole period of transit, storage and erection against corrosion and incidental damages etc. from the effect of vermin, sunlight, rain, heat, humid climate and accidents etc.

24. Payment of Running bills

The running bills shall be submitted by the contractor as per the progress of work done at site. However, to commensurate with the Progress of work and related to this Project specific requirements, the following terms will be the basis of payment for the items claimed under running bills:

- a) Gross Payment to be made on supply of material at site: **70% of Item Rate quoted.**
- b) Gross Payment to be made on installation of material at site: **15% of Item Rate quoted.**
- c) Gross Payment to be made on satisfactory Testing & Commissioning of material at site: **15% of Item rate quoted.**

After receipt of running bill at IITH, the contractor shall get the work executed/claimed in bill checked and verified from the Engineer-In-charge within 02 weeks' time and after satisfactory verification of work executed at site, the payment to the contractor shall be released.

25. Defect-liability period (DLP)/Warranty Period:

The DLP/Warranty period shall be **36 (Thirty Six) months** from the date of Handing over of the works after successful commissioning. If the contractor or his working people or servants shall break, deface, injure or destroy any part of equipment in which they may be working, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work **within Thirty six months** after a certificate final or otherwise of its completion shall have been given by the Engineer In Charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer In charge cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of thirty- six months after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later.

6. FORMS

FORM-A

FINANCIAL INFORMATION

Name of Bidder:

- I. Financial Analysis Details to be furnished duly supported by figures in balance sheet/ profit loss account for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

Fig in Lakhs Rs.

Sl. No.	Particulars	Financial Years				
		2021-22	2022-23	2023-24	2024-25	2025-26
i)	Turnover of construction Works					
ii)	Profit /Loss					

- II. Financial arrangements for carrying out the proposed work.

- III. Net worth Certificate from Bankers of the bidder in the prescribed Form B.

Signature of Chartered Accountant with Seal

Signature of Bidder(s)

FORM – B

FORM OF BANKERS' CERTIFICATE" FROM A SCHEDULED BANK

To
The Executive Engineer -Electrical
Construction and Maintenance Division,
IIT Hyderabad.

This is to certify that to the best of our knowledge and information that Ms.....
having marginally noted address, a customer of our bank are/is respectable and can be treated as
good for any engagement up to a limit of Rs.....(Rupees.....).

This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature with seal of Branch Manager)

For the Bank NOTE:

- (1) In case of partnership firm, certificate should include names of all partners as recorded with the Bank.
- (2) The banker's certificate should be on letter head of the bank

FORM - C

FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

It is to certify that as per the audited balance sheet and profit & loss account during the **financial year 2025-26**, the Net Worth of M/s _____ (Name & Registered Address of contractor/ Individual/firm/company), as on _____ (the relevant date) is Rs. _____ after considering all liabilities. It is further certified that the Networth of the company has not eroded by more than 30% in the last three years ending on **31st March 2025 or 31st March 2026**.

Signature of Chartered Accountant

Name of Chartered Accountant

Membership No. of ICAI

Date and Seal

NOTE: The Turnover Certificate and Networth certificate shall be submitted by the Intending bidder for the same set of consecutive 03 financial years only as per below mentioned options:

Form -D

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

Sl. No.	Name of work/project and Location	IITH or sponsoring Organization	Cost of work (in Crores)	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation / arbitration pending / in progress with details*	Name and address (Postal & email)/ contact no of officer	Whether the work was done on back to back basis. Yes / No
1	2	3	4	5	6	7	8	9	10

***Indicate gross Amount Claimed and Amount Awarded by the Arbitrator.**

SIGNATURE (S) OF BIDDER (S) (WITH STAMP)

FORM “E”

LIST OF THE PROJECTS UNDER EXECUTION OR AWARDED

Sl. No.	Name of work/ project and Location	IITH or sponsoring Organization	Cost of work (in Crores)	Date of commenceme nt as per contract	Stipulated date of completion	Present Progress (Financial & Physical)	Litigation/ arbitration pending / in progress with details*	Name and address (Postal & email)/ contact no of officer	Whether the work being done on back to back basis. Yes/No

***Indicate gross Amount Claimed and Amount Awarded by the Arbitrator.**

SIGNATURE (S) OF BIDDER (S) (WITH STAMP)

FORM 'F'**PERFORMANCE REPORT OF WORKS REFERRED IN FORM –B& C:**

(Bidder may suggested to submit the Performance Report with the details covering in this Form-F)

1.	Name of work / Project & Location	
2.	Agreement No.	
3.	Estimated Cost	
4.	Tendered Cost	
5.	Actual Value of work done.	
6.	Date of Start	
7.	Date of completion i) Stipulated Date of Completion (as mentioned in work order)	Yes / No.
8.	ii) Actual Date of Completion	
9.	i) Whether case of levy of compensation for delay has been decided or not	
	ii) If decided, amount of compensation levied for delayed completion, if any.	
	1) Quality of Work	Outstanding / Very Good / Good / Poor
	2) Financial Soundness	Outstanding / Very Good / Good / Poor
	3) Technical Proficiency	Outstanding / Very Good / Good / Poor
	4) Resourcefulness	Outstanding / Very Good / Good / Poor
	5) General Behaviour	Outstanding / Very Good / Good / Poor
Dated:		Executive Engineer or Equivalent with office stamp

FORM "G"
STRUCTURE ORGANISATION

1. Name address of the bidder:
2. Telephone no./Telex no./Fax no.:
3. Legal status of the bidder (attach copies of original document defining the legal status):
 - (a) An Individual
 - (b) A proprietary firm
 - (c) A firm in partnership
 - (d) A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy):

Organization/Place of registration	Registration No.
i.	
ii.	
iii.	
5. Names and titles of Directors Officers with designation to be concerned with this work:
6. Designation of individuals authorized to act for the organization:
7. Was the bidder ever required to suspend construction for a period of more than six months continuously after he commenced the construction? If so, give the name of the project and reasons of suspension of work:
8. Has the bidder, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment:
9. Has the bidder, or any constituent partner in case of partnership firm, ever been debarred/black listed for tendering in any organization at any time? If so, give details:
10. Has the bidder, or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details:
11. In which field of Civil Engineering construction the bidder has specialization and interest?:
12. Any other information considered necessary but not included above.:

Signature of Bidder(s)

FORM "H"

**DETAILS OF TECHNICAL & ADMINISTRATIVE PERSONNEL TO BE
EMPLOYED FOR THE WORK**

S.No.	Designation	Total Number	Number available for this work	Name	Qualifications	Professional and experience details of work carried out	How these would be involved in this work	Remarks

Signature of Bidder(s)

FORM - I

DETAILS OF CONSTRUCTION PLANT AND EQUIPMENT LIKELY TO BE USED IN CARRYING OUT THE WORK

Sl. No.	Name of equipment	No.	Capacity or Type	Age	Condition				Current location	Remarks
						Presently owned	Leased	To be Purchased		

Signature of Bidder(s)

FORM 'J'

AFFIDAVIT

I/we undertake and confirm that our firm/partnership firm has not been blacklisted by any state/Central Departments/PSUs/Autonomous bodies during the last 7 years of its operations. Further that, if such information comes to the notice of the department then I/we shall be debarred for bidding in IIT Hyderabad in future forever. Also, if such information comes to the notice of IIT Hyderabad on any day before date of start of work, the Engineer-in-charge shall be free to cancel the agreement and to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee (Scanned copy of this notarized affidavit to be uploaded at the time of submission of bid)

NOTE: Affidavit to be furnished on a 'Non-Judicial' stamp paper worth Rs.100/-

Signature of Bidder(s) or an authorized Officer of the firm with stamp

Signature of Notary with seal

7.PROFORMA OF SCHEDULES

SCHEDULE 'A'

Schedule of quantities (Enclosed): Volume -2 (Price Bid)

SCHEDULE 'B'

Schedule of materials to be issued to the contractor

Sl. No.	Description of item	Quantity	Rates in figure & words at which the material will be charged to the Contractor	Place of issue
..... NIL				

SCHEDULE 'C'

Tools and plants to be hired to the contractor.

Sl. No.	Description	Hire Charges per day	Place of issue
..... NIL			

SCHEDULE 'D'

Extra schedule for specific requirements/documents for the work, if any.

--- NIL ---

SCHEDULE 'E'

Reference to General Condition of Contract.: *Posted in the website of the Institute.*

Name of work	: Supply, Installation, Testing and Commissioning (SITC) of Heat Pumps with associated Plumbing and Electrical enabling works for upgradation of existing Solar Water Heating System in Old Hostels, IIT Hyderabad campus, Kandi, Sangareddy.
Estimated cost of work	: Rs 1,83,33,818.00 only
Earnest money	: Rs.3,66,680/- only
Performance Guarantee	: 5.0% of the accepted tendered value or ECPT, whichever is higher

Security Deposit : *2.5% of the tendered value*

SCHEDULE 'F'

GENERAL RULES AND DIRECTIONS:

Officer inviting tender: : *Executive Engineer-Electrical, IITH*

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3 :
1) Electro-Mechanical works...100%
2) Civil works...0%

Definitions:

(v) Engineer -in- Charge : *Executive Engineer- Electrical, Indian Institute of Technology, Hyderabad*

2(viii) Accepting Authority : *Superintending Engineer, Indian Institute of Technology, Hyderabad*

2(x) Percentage on cost materials and Labour to cover all overheads and profit : *15% (Fifteen) per cent.*

2(xi) Standard Schedule of Rate : *CPWD, Delhi Schedule of Rates (DSR) 2025 E& M, with up to date correction slips.*

Standard Contract Form : *IITH General Conditions of Contract for Construction Works*

Clause 1

- i) Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable licenses, registration with EPFO, ESIC and BOCW: *15 (Fifteen) Days*
- Welfare Board or proof of applying thereof from the date of issue of letter of acceptance, in days
- ii) Maximum allowable extension beyond the period provided in (i) above: *07 (Seven) Days*

Clause 1A

Whether Clause 1A is applicable : *Yes*

Clause 2

Authority for fixing Compensation under Clause 2 : *Superintending Engineer, Indian Institute of Technology, Hyderabad*

Clause 3(VII): If the contractor had secured the contract with Government as a result of wrong tendering or other non-bonafide methods of competitive tendering or commits breach of Integrity Agreement-will be made ineligible.

Number of days from the date of issue of letter of acceptance for reckoning date of start : *15 Days from the date of issue of LOA or handing over of site, whichever is later*

Milestones : *Not Applicable*

Time allowed for execution of work	:	120 Days
Authority to give fair and reasonable Extension of time for completion of work (Web based hindrance register)	:	<i>Superintending Engineer, IITH</i>
Rescheduling of mile stones	:	<i>Superintending Engineer, IITH</i>
<u>Clause 6:-</u> Measurement Book Clause applicable, 6	:	(i) <i>For works having estimated cost more than Rs 15 Lakh – Clause 6</i> (ii) <i>For works having estimated cost Rs. 15 Lakh or less – Contractor's option of Clause 6 or to be exercised at the time of Tender Submission</i>

Clause 7:

Gross work to be done together with net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	:	<i>Rs. 5 Lakhs/-</i>
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Clause 7A:

Whether Clause 7A is applicable	:	<i>Yes. No running account bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-charge.</i>
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Clause 10A:

List of testing equipment to be provided by the contractor at site lab	:	<i>As given in additional specifications</i>
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Clause 10B (i)- Secured advance on Materials:

Whether Clause 10 B (i) shall be applicable	:	<i>NA</i>
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Clause 10C:

Component of labour expressed as percent of value of work	:	<i>NA</i>
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Clause 10CA

: *Not Applicable*

Clause 10CC

: *Not Applicable*

Clause 10D

: *Applicable*

Clause 11:

Specification to be followed for execution of work :

For ELECTRICAL WORKS

CPWD General Specifications for Electrical works:

- Heating, Ventilation & Air-Conditioning (HVAC)-2024
- Part I Internal and Part II External
- Particular Specifications in the NIT docs.
- As per instructions of the Engineer-in-Charge

Clause 12:

12.2 & 12.3: Deviation limit beyond which Clause 12.2 & 12.3 shall apply for building work : 100% (One hundred per cent)

12.5 : Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for foundation work : 100% (One hundred per cent)

Clause 14: : Yes.
Whether Clause 14 is applicable

Clause 16 : Superintending Engineer, IIT
Competent Authority for Hyderabad up to 5% of tendered amount, beyond deciding reduced rates. which, Director, IITH.

Clause 18:
List of mandatory machinery, tools & plants to be deployed by the contractor at site : As required for the work.

Clause 25:
Settlement of disputes by Conciliation and Arbitration:

Conciliator : Dean (Planning)
Authority to appoint arbitrator : Director, IIT Hyderabad
Place of arbitration : Hyderabad
Venue of arbitration : IIT Hyderabad
Type of Arbitration Tribunal : Sole Arbitrator

Note: Provisions of Arbitration and Conciliation Act 1996 with latest amendments in force shall be applicable.

Clause 32: As required for the work.

Clause 38

(i) : Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates : Not Applicable
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