



OFFICE OF INDUSTRIAL CONSULTANCY AND SPONSORED RESEARCH
INDIAN INSTITUTE OF TECHNOLOGY MADRAS
CHENNAI – 600 036

Advertisement No.: ICSR/PR/Advt.205/2026 Dated: 05/10/2026

Applications are invited for the temporary full-time position of **Project Technician** (High-Temperature/High-Pressure Reactor Operations), Centre for Sustainable Energy, IIT Madras.

Co-ordinator: Prof. Satyanarayanan Seshadri, Professor – Department of Applied Mechanics and Biomedical Engineering, IIT Madras

Duration: Initially for one year, later extendable based on performance.

Number of Vacancies: 01

S. No	Post	Qualification and Experience	Pay
1	Project Technician (HT-HP Reactor Operations)	• B.E./B.Tech, Chemical Engineering Process Engineering, Petrochemical Engineering, Mechanical Engineering, or a closely related discipline from a recognized institution. • Sound understanding of chemical/process systems and safe operation of laboratory or pilot-scale equipment. Hands-on experience with HT-HP reactors, pressure vessels/autoclaves, hydrothermal or supercritical-fluid systems, or similar pressurized process equipment is strongly preferred. • Working knowledge of valves, pumps, pressure gauges/transducers, thermocouples, temperature controllers, tubing and fittings, pressure-relief devices and associated process instrumentation. • Demonstrated awareness of laboratory and process safety, particularly hazards associated with high temperature, high pressure, hot fluids, pressurized gases and chemical handling. • Ability to follow written SOPs, checklists and operating limits carefully; maintain accurate records; and communicate clearly with researchers, faculty, students, vendors and service personnel. • Basic computer proficiency for electronic logbooks, equipment records, inventory tracking and preparation of routine operational reports.	Rs. 21,500 to Rs. 75,000) Based on the qualifications and experience

Job Description:

About the Centre

The Centre for Sustainable Energy at IIT Madras is a premier research initiative dedicated to developing and deploying technologies to drive India's shift to a low-carbon economy, while securing energy for the future. Established in strategic partnership with Coal India Limited, the Centre initially focuses on solutions for the utilization of coal and coal mines as a resource. It will operate on a hub-and-spoke model, coordinating large-scale projects with PSUs, government bodies, and industry partners to drive India's Net Zero goals.

Role

The Centre for Sustainable Energy is seeking a responsible and safety-conscious technician to manage the day-to-day operation and upkeep of its shared high-temperature/high-pressure (HT-HP) reactor facility, with operation extending up to supercritical conditions. The technician will support multiple research groups and work with the laboratory in-charge and faculty PI to ensure safe, consistent and well-documented reactor operation.

- Operate the HT-HP reactor for approved experiments up to supercritical conditions in accordance with established SOPs, approved operating envelopes, risk assessments and laboratory safety requirements.
- Carry out pre-run checks, including inspection of the reactor vessel, closures, seals/gaskets, valves, tubing, fittings, gauges, sensors, pressure-relief devices, heating system and associated utilities before every run.
- Perform safe charging/loading, start-up, heating and pressurization, parameter monitoring, controlled cooling, depressurization, sample recovery and shutdown of the reactor system.
- Continuously monitor temperature, pressure and other relevant operating parameters during runs, recognize abnormal conditions promptly, and initiate safe shutdown or stop a run when SOP, safety or equipment-integrity concerns arise.
- Maintain a clear reactor usage log for every experiment, including user/research group, date and time, sample/material, operating conditions, start-up/shutdown observations, deviations, alarms, maintenance actions and any incident or near-miss.
- Work with the laboratory in-charge and faculty PI to manage the shared-facility schedule and coordinate reactor access with faculty, research staff and students so that experiments are conducted only after required information, approvals and safety checks are complete.

- Maintain an up-to-date inventory of reactor consumables and critical spares such as seals, O-rings/gaskets, filters, tubing, fittings and other routinely replaced components; initiate replenishment sufficiently in advance to avoid downtime and communicate this clearly with the laboratory in-charge and faculty PI.
- Carry out routine cleaning, inspection and first-line preventive maintenance of the reactor and its associated components after use, and maintain the equipment in a clean, safe and ready-to-operate condition.
- Track calibration, certification and preventive-maintenance requirements for pressure/temperature instrumentation, safety devices and associated equipment; coordinate servicing, repairs and vendor visits when required.
- Maintain equipment manuals, SOPs, checklists, calibration/service records, consumables records and maintenance history in an organized and auditable manner.
- Support safe sample handling, chemical handling, pressurized-gas use, waste segregation and housekeeping around the reactor area in accordance with IIT Madras laboratory safety practices.
- Provide basic operational orientation to authorized users while retaining operational control of the HT-HP reactor during experiments; untrained or unauthorized users must not independently operate the reactor.
- Communicate equipment faults, recurring operating issues, safety concerns, incidents/near-misses and anticipated maintenance or consumable requirements promptly to the laboratory in-charge and faculty PI.
- Work effectively in an interdisciplinary shared-facility environment and perform other reactor-facility duties assigned by the laboratory in-charge, faculty PI or Centre.

The last date for submission of online application is 25.10.2026

General Instructions to the candidates

- 1) All the positions are on purely contract basis.
- 2) The completion of the period of contract will not confer any right for further extension, regularization, permanency at the Institute.
- 3) Candidates should apply online only in the website https://icandsr.iitm.ac.in/careers/current_openings.php - **(Please check the advertisement number Advt.205/2026 displayed and submit the application for the relevant position).**
- 4) Separate application has to be filled for each post.

- 5) The system will accept single application only with the registered login ID (email) for an advertisement, hence the candidate is requested to select the multiple positions (In case, the candidate wishes to apply for more than one position) before the submission of application.
- 6) The application cannot be edited, reverted once it is submitted.
- 7) Candidates should not attempt to apply twice for the same post. If multiple applications are received from a candidate for the same post, the candidature will be liable to be rejected.
- 8) Candidates should follow the prescribed procedure for submission of online application.
- 9) Candidates are advised to fill their correct and active e-mail addresses in the online application as all correspondence will be made by the Institute through e-mail only.
- 10) The candidates applying for any post should ensure that they fulfil all the eligibility conditions for the post. Their admission to any stage of the selection process will be purely provisional subject to confirmation that they satisfy the prescribed eligibility conditions. Mere issue of registration certificate / call letter to the candidate will not imply that the candidature has been found eligible.
- 11) After successful online submission of application, a printout of the application form must be obtained and submitted when called for test. It will be required at the time of document verification/test/interview. Hard copy of the application is NOT to be sent to the Institute.
- 12) Candidates must be citizens of India. Persons who have migrated from Pakistan with the intention of permanently settling in India or subjects of Nepal are also eligible, but in their case a certificate of eligibility from the Government of India will be necessary for appointment. Such candidates should apply to the Government of India in the Ministry of Home Affairs for necessary certificate and furnish satisfactory proof of having so applied.
- 13) The prescribed qualifications are minimum and unless specified, they are required for consideration for the post, even if higher qualification has been acquired and the mere fact that a candidate possesses the same will not entitle them for being called for interview.
- 14) Relevant experience gained after the minimum qualifying degree will only be taken into consideration. Minimum requirements of qualifications and/or experience can be relaxed in respect of exceptionally outstanding candidates.
- 15) The experience required is relaxable at the discretion of the Institute in the case of candidates belonging to the Scheduled Caste / Scheduled Tribe, if at any stage of selection, the competent authority is of the opinion that sufficient number of candidates from these communities possessing the requisite experience are not likely to be available to fill up the vacancy reserved for them.
- 16) The Institute reserves the right to restrict the number of candidates for written / skill test / interview to a reasonable limit on the basis of qualifications, level and relevance of experience higher than the minimum prescribed in the advertisement and other academic achievements. The Institute also reserves the right of rejecting any or all the applications without assigning any reasons, therefore.
- 17) Calling a candidate for test/interview merely indicates that it is felt that the candidate with others may be suitable for the post and conveys no assurance whatsoever that they will be recommended or selected or their conditions specified in the application will be accepted.

- 18) Candidates will be short-listed for Test/Interview on the basis of the information provided by them in their online applications. They must ensure that such information is true. If at any subsequent stage or at the time of Test/Interview any information given by them or any claim made by them in their online applications is found to be false, their candidature will be liable to be rejected.
- 19) The Institute shall verify the antecedents or documents submitted by a candidate at any time at the time of appointment or during the tenure of the service. In case, it is detected that the documents submitted by the candidates are fake or the candidate has clandestine antecedents/background and has suppressed the said information, then their services shall be liable to be terminated.
- 20) In case of any inadvertent mistake in the process of selection which may be detected at any stage even after the issue of appointment letter, the Institute reserves the right to modify/ withdraw/ cancel any communication made to the candidates.
- 21) Applicants who are working in **any one of the Project at IIT Madras**, must apply through proper channel otherwise they will be required to produce No-Objection Certificate at the time of document verification/Test/Interview. Candidates without NOC will not be permitted to appear for Test/Interview.
- 22) Candidates may send testimonials from persons intimately acquainted with their work and character. If the applicant is in employment, the candidate should submit testimonials from the most recent employer or immediate superior as a referee.
- 23) The Institute has a right to decide the mode of screening and testing the applicant for short listing and selection.
- 24) The Institute solely reserves the right not to fill any advertised position without assigning any reason
- 25) Only shortlisted applicants will be contacted.
- 26) No correspondence whatsoever will be entertained from candidates regarding conduct and result of test/interview and reasons for not being called for interview. Canvassing in any form will be a disqualification.
- 27) The crucial date for determining the eligibility criteria for all candidates in every respect shall be the prescribed closing date for submission of online application.
- 28) The Institute strives to have a workforce which reflects gender balance and women candidates are encouraged to apply.
- 29) Any corrigendum/clarifications on this advertisement, if necessary, shall be uploaded on website and no separate communication will be sent for this purpose.
- 30) If there is any issue to submit the application please send E-mail to : icsrrecruitment@icsrpis.iitm.ac.in / icsrrecruitment6@icsrpis.iitm.ac.in **Contact: 044- 2257 9796** on all working days from **9.00 AM to 05.30 PM (Monday to Friday – except National Holidays)**. (Please note, only technical issues will be accepted – No interim correspondence with reference to the selection process will be considered).
- 31) **Instructions to apply online:-**Eligible applicants would require to register and apply online through https://icandsr.iitm.ac.in/careers/current_openings.php and submit the application.

Sd/-

CM–HR
Office of IC&SR
IIT Madras