Applications from Indian nationals are invited for Project Appointment under the following project. Appointment shall be on contractual basis with consolidated pay, renewable yearly or upto the duration of the project, whichever is earlier.

Introduction In recent past some underground structures were proposed to be installed in these locations which could be effective and efficient to meet the demand of temperature and relative humidity for storing the vegetables for the local population. However, there is a need to carry out the detailed study on thermal losses/gains mainly from the roof, walls and underground thermal gain from the soil (floor) through analysis and simulation. Accordingly, further modifications with the appropriate thickness of insulations at the roof and walls is to be worked out for maintaining the suitable humidity and temperature range. Besides, there is a need for controlling, monitoring and maintaining the temperature and humidity inside the storage units during winter months which ultimately effect the shelf life of the stored crop.

Job Profile Under this project, there is a need to carry out the detailed thermal analysis of underground vegetable storage structure for both cold and hot conditions, while the ambient temperature vary from -25 to +25 0C and the relative humidity (RH) may vary from 10 to 85%. This also includes passive heating and cooling concepts to maintain the required temperature inside the vegetable storage structure under varying ambient conditions. This will help in meeting the objective of prolong storage of the vegetables during winter and fulfilling the demand of the local population during the winter and early summer periods.

Skill Required: Heat Transfer Analysis, Simulation, Writing of Research Articles, etc. The selected candidate should be able to carry out detailed studies of underground vegetable storage structure for both heating and cooling requirements using passive heating and cooling concepts. This includes data collection at the site(s) and data analysis, simulation using suitable software such as, EnergyPlus, TRNSYS, etc. for prolonged storage of fresh produce during winter and summer conditions. The study also includes possible interventions such as PCM based thermal energy storage for maintaining the required temperature inside the underground vegetable storage structure and other technical work related to the project.

<table>
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<tr>
<th>Title of the Project</th>
<th>Thermal Analysis of Underground Structures in Leh-Ladakh (under CARS) (RP04277G)</th>
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</thead>
<tbody>
<tr>
<td>Funding Agency</td>
<td>D.I.H.A.R., DRDO</td>
</tr>
</tbody>
</table>
| Name of the Project Investigator | Prof. S.K. Tyagi  
  (email ID: sudhirtyagi@yahoo.com; tyagisk@iitd.ac.in) |
| Deptt./Centre        | Department of Energy Science and Engineering                                    |
| Duration of the Project | Upto: 21/03/2023                |

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<tr>
<th>Post(s)</th>
<th>Consolidated fellowship / Pay-slab</th>
<th>Qualifications</th>
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</table>
| Jr. Research Fellow (1) | Rs. 31,000/-p.m. (consolidated)         | M. Tech in (Thermal/Mechanical Engineering/Energy having min 75% of marks at B. Tech and M. Tech. level) with qualifying GATE* exam. Preferably having some experience in Simulation and Numerical Heat Transfer. Candidate willing to do Ph. D. in the similar area/topic will be encouraged to do so.  
  *The requirement of qualifying NET/GATE examination for the selection to the post of JRF/SRF may be relaxed for the candidates who have graduated from Centrally Funded Technical Institutes (CFTIs) with a CGPA of more than 8.000 (80% aggregate marks). |

The candidates who are interested to apply for the above post should download Form No. IRD/REC-4 from the IRD Website (http://ird.iitd.ac.in/rec) of IIT Delhi and submit the duly filled form with complete information regarding educational qualifications indicating percentage of marks/division, details of work experience etc. by e-mail with advertisement No. on the subject line to Prof. S.K. Tyagi at email id: sudhirtyagi@yahoo.com; tyagisk@iitd.ac.in

Contd....
IIT Delhi reserves the right to fix higher criteria for short-listing of eligible candidates from those satisfying advertised qualification and requirement of the project post and their name will be displayed on web link (http://ird.iitd.ac.in/shortlisted) along with the online interview details. Only short-listed candidates will be informed for online interview. In case any clarification is required on eligibility regarding the above post, the candidate may contact Prof. S.K. Tyagi at email id tyagisk@iitd.ac.in. 5% relaxation of marks may be granted to the SC/ST Candidates. The last date for submitting the completed applications by e-mail is 04/07/2022 by 5.00 p.m.

**वितरण**

- Head of the Deptt./Centres/Units
- Webmaster, IRD
- Notice Boards
- Advertisement file
- Prof. S.K. Tyagi, PI, Department of Energy Science and Engineering
- Copy to Chairperson, DRC/CRC
- Dr. Harshita Bhatnagar, RD Coordinator, (R&D) Wing

निर्देशना

- सहायक कूलसचिव, आईआईटी दिल्ली