

A separate hostel building has been constructed entirely for female TASAR apprentices. Efforts are being made to furnish the dormitory accommodation. Efforts are also being made to create hostels for male apprentices by repurposing existing infrastructure.

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N.10: Industrial and radiation safety in RRCAT

The Fire and Safety Section, RRCAT is putting efforts for a safe work environment to prevail in the Centre. The important activities carried out during this period are:

Illumination survey in RRCAT: Illumination Survey or Light Assessment survey in workshops is conducted to check the intensity of light in the high bay or working area. This survey is done to access the High-Intensity Bright Light, Glare, Low-Intensity Light, or Flickering Light, in order to avoid potential hazards and evaluation of risks to improve employee safety.

Sufficient and optimum lighting arrangement has a major impact on the performance and efficiency of the employees at the workplace. It helps them to read labels and safety instructions clearly without any hurdles. Therefore it is essential that the appropriate intense light must fall on the desks or work areas of the employees. To ensure good lighting a regular survey is being conducted by the fire and safety section of RRCAT using a lux meter.



Illumination level survey in workshop.

Noise Level Survey: A noise level survey is conducted for occupational hygiene purposes, the sound pressure level is measured to determine noise exposures. Measuring noise levels and technician's noise exposures is essential in workshop and process plant buildings. It helps in identifying the work locations where there are noise problems and where additional noise measurements need to be made. This data also helps to determine appropriate noise control measures that need to be put in place.

The employees may be exposed to noise levels that can cause hearing loss.

A regular noise level survey is being conducted by the Fire and Safety Section in various buildings and laboratories of RRCAT.



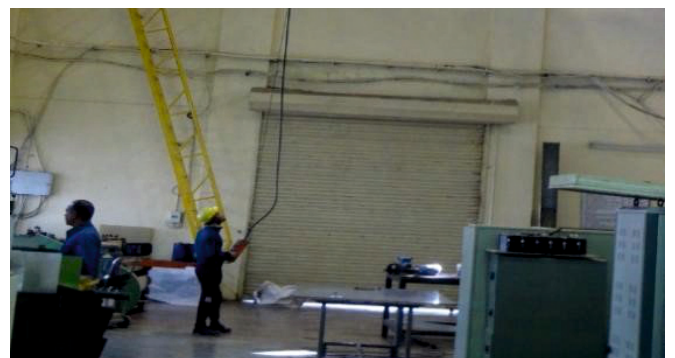
Noise level survey in workshop.

Other developmental activities:

1. Laser R & D Block-I building has been equipped with fire detection & alarm system and its all signals are communicated and displayed at fire control room with the help of RS-485 communication. All commands are also executed with panel and industrial PC installed at fire control room.
2. Planning and layout work was done for the installation of Fire Detection & Alarm System at Incubation Centre building of RRCAT.

Maintenance of EOT Cranes and Hoists installed in RRCAT: An Annual maintenance contract of 58 no. of EOT Cranes, Jib cranes and Lifting Hoists is being carried out in coordination with C&S division. The periodic inspection is being done during the regular maintenance activity to identify and address the preventative and breakdown maintenance problems.

A regular crane load test is also being performed to verify the safe functioning of the cranes or hoists of RRCAT



Crane load testing in lab.

Radiation safety: Radiation surveillance was provided to all radiation facilities to ensure radiation safety of staff and workers. During this period (July to Dec., 2022) radiological surveillance was provided during the operation of the synchrotron radiation facilities and their beamlines. Induced radioactivity measurement on accelerator components and performance check of area radiation monitors & survey meters were carried out during Indus shutdown. Personal dosimetry for 511 workers (including temporary) was carried out during the period. The biometric data of 40 new radiation workers was uploaded on National Occupational Dose Registry System. From the dose data, the maximum individual dose recorded is 0.20 mSv, which is well within acceptable limit. Quarterly testing of various equipment /instruments of Radiation Emergency Response Centre was carried out and kept in a preparedness state for responding to any radiological emergency. Lectures were delivered to Training Qualification and Licensing Programme (TQLP) Trainees (Level-3, 4 & 5) for Indus operation during the period. Elementary training on radiations protection were imparted to 160 users of synchrotron radiation source of Indus-1 and Indus-2. Training programme on radiation safety to ARP staff was delivered at ARP complex on 20th December 2022. The environmental radiation monitoring data from 11 locations of RRCAT campus and ARP site indicated no increase in radiation level due to operation of the radiation facilities.

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N.11: Fire safety activities at RRCAT

The following important fire safety promotional activities were carried out during July to Dec., 2022:

First-aid firefighting training: First-aid firefighting training along with Breathing Apparatus donning & doffing were conducted and the training was given to 97 RRCAT Employees at Fire Station.



First-aid firefighting training program for RRCAT employees.

On job Fire Fighting Training for Technical Qualification and Licensing Program (TQLP): During Technical Qualification and Licensing Program (TQLP), a lecture on Indus fire emergency procedures and on job firefighting training were conducted. 46 round-the-clock shift employees were trained for fire emergencies.



On job firefighting training to RRCAT employees.

Fire mock drill: Three fire mock drills were conducted at MDL building, Chemical Treatment Facility and R&D Block-C in the scenario of electrical fire, spillage of sulphuric acid and fire set by terrorist, respectively.



Fire mock drill at Chemical Treatment Facility.