



Skill Development Cell
Outreach & Dissemination Services Office
CSIR – Central Building Research Institute
Roorkee – 247667 (UK)



Skill Development Training Programme on
‘Repair & Retrofitting of Buildings’
for the Engineers of Himachal Pradesh Government during May 08-12, 2023

Five days Skill Development Training Programme on **‘Repair & Retrofitting of Buildings’** was organized under the aegis of CSIR Integrated Skill Initiative during May 08-12, 2023 sponsored by *Himachal Pradesh Council for Science, Technology & Environment, Himachal Pradesh (HIMCOSTE)*. This training program was aimed at enhancing latest knowledge & skills of the participants using innovative tools & techniques in the area of repair & retrofitting of buildings through assessment of Building Bye Laws & Seismic Vulnerability, Green Retrofitting Techniques, Seismic Retrofitting of Masonry Buildings, RCC Structures and Non Structural Elements, Repair & Retrofitting of Foundations and Vernacular Construction, Construction Cost Management & DPR Preparation, Non-Destructive Testing of Concrete Structures, Understanding of Cracks in Buildings and Quality Assurance & Techno-legal Regime of Building Construction etc. This skill development training programme was attended by 32 Engineers of Himachal Pradesh Government.

This training programme was inaugurated by **Dr. S.S. Randhawa**, Principal Scientific Officer, HIMCOSTE and training Coordinator’s **Ar. S.K. Negi**, **Dr. R. Dharmaraju** & **Dr. Ajay Chourasia**, Chief Scientists of CSIR-CBRI. Initially, **Ar. S.K. Negi**, Chief Scientist and Course Coordinator welcomed the participants and other colleagues and briefed about the five days’ activities of the training programme. Subsequently, **Dr. R. Dharmaraju** emphasized on CSIR-CBRI contributions in building construction for providing appropriate and economical solutions to the problems of Building Materials, Health Monitoring and Rehabilitation of Structures, Disaster Mitigation, Fire Safety, Energy Efficient Rural and Urban Housing etc. He also highlighted the importance of this training programme for better learning of latest knowledge related to building construction especially in hilly areas. Several scientists & technical staff namely Dr. S.R. Karade, Dr. Navjeev Saxena, Er. Ashish Pippal, Dr. Kishor Kulkarni, Dr. Chandan Meena, Ar. Naveen Nishant, Er. Saksham Bhardwaj, & Er. Abhinav etc. were also present during inaugural session.

The participants have been made to understand the latest tools & techniques on repair & retrofitting of buildings through technical presentation and discussions on Building Bye Laws & Seismic Vulnerability and quality control to ensure the safety of structures; which will lead to minimization of resources, cost, maintenance and maximization of service life of buildings during the programme. In addition, participants have also witnessed the R&D facilities and technologies showcased in the institute for better understanding of the new construction technologies by visiting *R&D Laboratories, Rural Technology Park & Construction Technology Demonstration Park* etc. A total of 15 lectures were presented to the participants by various CSIR-CBRI scientists. In the end, participants have also given their feedback and expressed the usefulness of the present skill training to their professional career. The training was thus concluded with the distribution of certificates and other relevant materials of the course content.

List of Participants

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Glimpses of the Training Programme



Inaugural Ceremony



Group Photo



View of Participants