NATIONAL INFORMATION CENTER OF EARTHQUAKE ENGINEERING
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A NICEE Seminar on

Achieving Seismic Safety in Manipur through Confined Masonry Construction

Imphal

Programme

15 April 2016 (Friday)
at PWD Conference Room, Imphal

10:30 am :: *Welcome & Inauguration*
Chief Guest,
Mr Lokendro Singh,
Chief Engineer, PWD, Manipur
Guest of Honour,
Mr Kh. Temba Singh
ACE, PWD, Manipur
Convener,
Professor Durgesh C Rai
Co-ordinator, NICEE

10:45 am :: *Group Photograph & Tea*

11:00 am :: ***Growing Seismic Risk due to Vulnerable Structures***
Professor Durgesh C Rai, IIT Kanpur

12:00 am :: ***Effects of M6.7 January 4, 2016 Imphal Earthquake***
Professor Hemant B Kaushik, IIT Guwahati

1:00 pm :: *Lunch Break*

1:30 pm :: ***Confined Masonry as Earthquake-resistant Building Typology***
Professor Durgesh C Rai, IIT Kanpur

2:30 pm :: ***Design and Construction Details of Confined Masonry***
Professor Vaibhav Singhal, IIT Patna

3:30 pm :: *Tea*

3:40 pm :: *Q&A, Feedback and Valedictory*

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Achieving Seismic Safety in Manipur through Confined Masonry Construction

Imphal, 15 April 2016

CONFINED MASONRY

Speakers:
Prof. Durgesh C. Rai, IIT Kanpur
Prof. Hemant B. Kaushik, IIT Guwahati
Prof. Vaibhav Singhal, IIT Patna

Programme:
Date: **15 April 2016**
Time: **10:30 am to 4:30 pm**
Venue: **PWD Conference Room, Imphal**

The 6.7 magnitude earthquake that occurred in Manipur on 04 January 2016 showed the seismic vulnerability of reinforced concrete buildings in Manipur. Poor workmanship and material quality resulted in several collapses and severe damage to buildings during the earthquake. The damage occurred to reinforced concrete building was alarming as earthquake of this magnitude are frequently expected in this area that falls in the highest seismic zone V. The buildings designed and constructed in this area should be able to resist such earthquakes without severe damage or collapse. Significant amount of technical skill and workmanship is required in design and construction of reinforced concrete framed buildings for satisfactory performance which is usually difficult to procure. As an alternative, the Confined Masonry type of construction will be beneficial for Manipur because it is less expensive, and requires lesser involvement of engineers in design and construction. Confined Masonry buildings have performed excellently during past earthquakes in several other countries, and if constructed properly, confined masonry construction will help in reducing loss and damages due to earthquakes in the region.

This seminar will provide an insight into the existing problems in construction practice in Manipur as envisaged during the post-earthquake reconnaissance of the earthquake affected area in Imphal and adjoining areas. The seminar participants will be exposed to various aspects of design and construction of confined masonry construction.

All interested are welcome.

Prof. Durgesh C Rai
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