

WEBINAR

“DESIGN RECOMMENDATIONS FOR POST INSTALLED REBARS IN CONCRETE-TO-CONCRETE CONNECTION”

Wednesday | 24 June 2020 | 3.30 p.m. – 5.30 p.m.

SYNOPSIS

Concrete-to-concrete connection is very common in Malaysia construction industry. Post-installed rebar (PIR) is one of the technologies used to connect new reinforced concrete elements with existing members. PIR is drilled and installed into cured concrete, bonded by a qualified adhesive system in the existing concrete, and usually served as starter-bars and/or to create lap splicing with the reinforcements in new concrete structures on the other side of the interface. Despite the common adoption of PIR in the construction industry in Malaysia, there is no holistic design provision for PIR explicitly given in the modern international RC design codes.

Thus, this seminar is to provide an update and insights into the design recommendation of PIR as per Eurocode practice. Strut-and-tie method can be recommended to anchor actual design force, rather than assuming rebar yield strength for PIR anchorage design. Qualification documents for PIR under static loading, e.g. EOTA EAD 330087 (2018) and the product ETA will be highlighted. A new connection design method TR 069 (2019) to harmonise the rebar anchorage design method and anchor theory, considering the realistic bond-splitting behaviour of a PIR system under static loading (assessed in accordance with the EAD 332402, 2019) will be briefly elaborated with examples.

SPEAKER

Dr. DANIEL LOOI TING WEE

Dr. Daniel LOOI is a Civil Engineering Lecturer and Course Coordinator at Swinburne University of Technology (Sarawak campus), Malaysia. He is a Chartered Professional Engineer (Structural) of IEAust and a frequent speaker for IEM seminars. He specialises in the field of structural and earthquake engineering. He is a key contributor to the development of the National Annex to Eurocode 8 on the seismic design of building structures for Malaysia. His research in concrete structures was recognised by the HKIE Outstanding Paper Award for Young Researcher/Engineer (2015).



Daniel has been researching in the design methods for post-installed reinforcement when he was a Post-doctoral Fellow at The University of Hong Kong in 2018. He authored a design guidebook on post-installed reinforcement for Hong Kong engineers (in press) which will be published by end of 2020.

Daniel worked as a structural application engineer in a multi-national company, specialised in structural analysis and design computation for building and plant structures. He was trained by the late Ir. MC Hee in his early career as a structural engineer. He is an alumnus of the Civil Engineering Department, University of Hong Kong (PhD in 2017) and University of Malaya (BEng in 2006).