Report on 'BS EN 1504 products and systems for the protection and repair of concrete structures, definition, requirements, quality control and evaluation of conformity'

by Ir. Low Kai Wah

Ir. Low Kai Wah is currently the Deputy chairman in Civil and Structural Engineering Technical Division (CSETD).

The Civil and Structural Engineering Technical Division (CSETD) organized an evening talk on 'BS EN 1504 products and systems for the protection and repair of concrete structures, definitions, requirements, quality control and evaluation of conformity'. The talk was held on 25th November 2019 at Malakoff Auditorium, Wisma IEM.

The speaker was Dr Payam Shafigh and Mr. Kuan You Wai. Dr Payam Shafigh is the senior lecturer in the Department of Building Surveying, Faculty of Built Environment, University of Malaya and he has the highest research records in 'Lightweight Aggregate Concrete' based on the Scopus database. Mr. Kuan You Wai has 19 years of experiences in repair work in concrete repair, waterproofing, cracking, leaking and mould remediation. He also has 10 years of experiences in non destructive testing and inspection in dampness and concrete.

This talk was chaired by Mr. Yong, committee member of CSETD and was attended by 79 participants. The 79 participants included engineers from engineering consultants, contracting firms, government agencies and local authorities as well as faculty members from local institutions of higher learning.

Mr. Kuan started the talk by introducing the BS EN 1504 code and requirement of Street, Drainage and Building Act 1974 Section 85A (periodic inspection). Then he handed over to Dr Payam to talk on the common causes of deterioration for concrete and reinforcement. For concrete, the deterioration causes can be divided into mechanical, chemical, physical and fire whereas for reinforcement can be divided into carbonation and corrosive contaminants.

Dr Payam reiterated that concrete cover is the greatest single factor that can influence the premature corrosion of reinforcement. So for durable marine concrete structures, the most important is the good quality and thickness of concrete cover.

Dr Payam delivering the talk

Mr. Kuan delivering the talk

Dr Payam handed over the floor back to Mr. Kuan for him to continue on the preliminary assessment of concrete structures. There are 6 strategies for the preliminary assessment i.e. do nothing for a certain time, re-analysis of sructural capacity, prevention of further degradation, strengthening and improving, reconstruction of part or all structures and demolition of part or all structures.

At the end of the talk, there were questions raised by the audience which Dr Payam and Mr Kuan answered and clarified in more details. At the end of the event, the CSETD chairman, Ir Chong presented a token of appreciation to Dr Payam and Mr Kuan.

Presentation of memento by Ir. Chong to Dr Payam

Presentation of memento by Ir. Chong to Mr. Kuan