



Report on Achieving Sustainable Concrete Infrastructure - A Reality Check

by Ir. Siow Yun Tong

Ir. Siow Yun Tong is presently a committee member of CSETD.

The Civil and Structural Engineering Technical Division (CSETD) organized an evening talk on Achieving Sustainable Concrete Infrastructure. A Reality Check. The talk was held on 16th August 2016 at Auditorium Tan Sri Prof Ching Fung Kee, Wisma IEM. The speaker was Professor Steve Garrity, University of Leeds, Leeds, UK. Professor Steve Garrity is a chartered engineer with over 35 years experience in the planning, design, supervision of construction and repair or strengthening of a variety of civil and structural engineering works.

This talk was chaired by Ir. Siow Yun Tong, the committee member of CSETD and was attended by 29 participants who come from engineering consultants, contracting firms, government agencies and local authorities as well as faculty members from local institutions of higher learning.

Professor Steve started his talk by introducing himself to the participants. He is currently the Hoffman Wood Professor of Architectural Engineering at the University of Leeds, UK. His current academic work includes teaching at undergraduate and postgraduate levels and research into the performance of concrete and masonry structures.



Figure 1: Delivery of talk by Prof. Steve Garrity

Professor Steve continued his slides presentation by explaining the meaning of ‘Sustainable Development’. It is the development that meets the needs of the present without compromising the ability of future generations to meet their needs. Sustainable Development also is a balance between the effective protection of the environment and the prudent use of natural resources. There are four basic elements in Sustainable Development which are Society, Environment, Natural Resources and Economics. He elaborated on global warming issues and the factors that contributes to increasing of sea levels which lead to coastal and in-land flooding, storm damage and coastal erosion.

Professor Steve also gave a short presentation on overview of problems with reinforced concrete. The most common types of problems are poor compaction, leaking at joint, use of excessively corroded rebars, low cover etc. The poor quality of construction practices resulted in various defects such as plastic cracking, early thermal cracking and shrinkage cracking. In his presentation, he suggested several methods for concrete repairing. Before the end of the talk, Prof. Steve once again emphasized the importance of designing reliable, robust, resilient and durable forms of construction. During the Q&A session, some questions were raised by the participants and were answered by Prof Steve. The talk ended at 7.30pm.



Figure 2: Presentation of token of appreciation by Ir Siow to Pro.Steve Garrity