

**TECHNICAL TALK ON**  
**“CORROSION OF STEEL IN REINFORCED CONCRETE AND**  
**PREVENTION BY CATHODIC PROTECTION”**

Organised by the Civil and Structural Engineering Technical Division (CSETD)  
**BEM Approved CPD/PDP: 2 Hours**      **Ref : IEM19/HQ/416/T**

**Date** : **04 NOVEMBER 2019 (Monday)**  
**Time** : **5.30 p.m. – 7.30 p.m.**  
**Malakoff Auditorium**  
**Venue** : **Ground Floor, Wisma IEM,**  
**Petaling Jaya, Selangor**  
**Speaker** : **Mr KANG KIM ANG**

**SYNOPSIS**

Concrete reinforced with steel has been common method in civil construction for many years. It is recognised as cheap, high structural strength, mouldability, fire resistance and its imperviousness to external environment, while requiring little or no maintenance. Until the 1950s, it was assumed that when steel encased in the alkaline concrete matrix, neither would suffer from any degradation for the infinite future. This has been proven to be true in several cases, with structures reaching their design lives without any evidence of structural degradation. However, it is now evident that in areas where there is an aggressive atmosphere, the concrete can be damaged or the steel can corrode in a dramatically shorter time period than that specified as a design life.

Various effects, man-made or by nature, have been increasingly causing premature degradation of steel reinforced concrete. Conventional concrete repairs, such as patching and reforming of concrete, often results in re-occurrence of concrete failure over very short period. The corrosion related failures shall be better understood in order for the repair to last as specified.

Cathodic protection, a corrosion protection method, has been recognised as the one of the most effective methods to control corrosion of steel reinforcement inside concrete hence extended life of the structures.

This technical talk covers various factors of reinforced steel corrosion which shorten service life of steel reinforced concrete structures. Basic principal of cathodic protection will be presented and the applications of cathodic protection to control the concrete corrosions will be discussed.

**ANNOUNCEMENT TO NOTE**  
**FEES**

**(Effective 1<sup>st</sup> October 2017)**

**Members**

Registration Fee : No Charge  
Administrative Fee :  
**Online** RM15  
**Walk In** RM20

**Non-Members**

Registration Fee : RM50  
Administrative Fee : RM20

- Limited seats are available on a "first come first served" basis (maximum 100 participants).
- **To secure your seat, kindly register online at [www.myiem.org.my](http://www.myiem.org.my)**

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**“IEM reserves the right to alter or cancel the programme due to unforeseen circumstances at its discretion”.**  
**For intending participants who choose to ‘walk in without prior registration’, IEM SHALL NOT be responsible for any direct or consequential losses”.**

## **SPEAKER BIODATA**

**Mr KANG KIM ANG**, Graduated with Diploma in Materials Engineering of Tunku Abdul Rahman (TAR) College and MSc. in Corrosion SC and Engineering of University of Manchester.

A Corrosion Specialist and Cathodic Protection Specialist accredited by National Association of Corrosion Engineer (NACE), USA and the Institute of Materials, Malaysia (IMM). A Chartered Engineer registered with Engineering Council, UK.

Over 29 years in Corrosion Control, Cathodic Protection, Pipeline Integrity Inspection by MTM technology, Heavy-duty Coatings, Passive Fire Protection, and Corrosion Inspection in the Oil & Gas, Marine, Petrochemical, Construction and Industrial Sectors in Malaysia, South East Asia, Middle East and Africa.

Over 8 years in part-time lecturing of Corrosion Engineering subject at higher learning institutions in Malaysia. Over 22 years as invited trainer for Institute Materials, Malaysia for the cathodic protection training & certification programme. Currently, NACE cathodic protection certifications for CP1 & CP2 since 2014. Over 7 years as invited trainer for Petronas Skill Group 15 for Level 3 Cathodic Protection. Over 4 years as industrial advisory panel member for UTAR/KTAR.

He is currently the Managing Director of CORRTRON Group of companies

**Ir. CHONG CHEE MENG**

**Chairman**

**Civil and Structural Engineering Technical Division**