

Standing Committee on Concrete Technology
Annual Concrete Seminar 2005
Venue: Hong Kong Central Library Lecture Theatre
Date: 3 February 2005

Durability of Reinforced Concrete Structures

Morning Session

Session Chairman: Mr. Y C Chan (DH (P&S))

Speaker's Introduction

Programme

Speaker

Opening Address

Mr. Y C Chan
Chairman, SCCT

Durability of R C Structures, Theory vs Practice

Prof. Albert Kwan
HKU

Professor Kwan graduated in 1978 and obtained his PhD in 1982 at the University of Hong Kong. After working with Scott Wilson Kirkpatrick & Partners for a number of years, he joined the University of Hong Kong in 1989. He is now an Associate Dean of the Faculty of Engineering. Professor Kwan maintains good contact with the industry through his consultancy services on concrete technology and structural engineering. He is Deputy Chairman of the Learned Society Board and Exco Member of the Structural Division of HKIE.

Alkali-Aggregate Reaction of Concrete Structures

Ir Steven Chak
PWL, CEDD

Engineer (Ir) Steven Chak is Senior Engineer Concrete/Laboratory with the Public Works Central Laboratory of Civil Engineering Development Department. He oversees testing operation of the chemical, general materials and concrete units. He is also actively involved in the research and development of new testing techniques, particularly in the field of alkali-aggregate reaction of concrete. He leads a sub-working-group formed under SCCT in the review of concrete related standards.

Use of Special Chemicals to Enhance the Durability of Concrete

Mr. Alan Wu
Mr. Jaime S K Yeung
Concrete Producers Association

Mr Alan Wu has more than 20 years of working experience in the field of concrete technology. He is a member of the Institute of Concrete Technology and Canadian Chartered Institute of Business Administration.

Mr Jaime Yeung has more than 20 years of working experience in the ready mix concrete and dry mix materials industry. He is a member of the Canadian Institute of Industrial Engineers.

Assessment of the Resistance of the Stainless Steel Clad Bars to Chloride-Induced Corrosion in Concrete

Dr. Gerardo G. Clemena
Virginia Transportation Research Council,
USA

Dr Clemena is a Research Scientist with the Virginia Transportation Research Council in the United States of America. He received his PhD in analytical chemistry and MSc in physical chemistry at the University of Virginia. His research interests include mitigation of steel corrosion in existing concrete bridges using electrochemical treatment, use of corrosion-resistant bars in new concrete bridges, application of non-destructive evaluation techniques and structural integrity monitoring.

Use of Galvanized Rebars in R C Structures

Prof. Stephen Yeomans
University of New South Wales, Australia

Professor Yeomans is an Associate Professor with the University of New South Wales at the Australian Defence Force Academy in Sydney. His research interests include welding of aluminium alloys, corrosion of reinforcement in concrete, galvanized and epoxy-coated reinforcement, and duplex coated reinforcement. He also contributed to some 40 short courses in welding science and technology, metallurgy and heat treatment in Australia, New Zealand, England, Hong Kong and Singapore. His publications include numerous refereed journals and conference materials.

Afternoon Session

Session Chairman: Mr. W K Pun (CGE/S&T)

Programme

Speaker

Durability assurance of concrete in marine environments based on project example in HK-Shenzhen Western Corridor

Ir Tony Read
Ove Arup Partner

Engineer (Ir) Tony Read is a Chartered Materials Engineer, a Fellow of the Institute of Materials, Minerals and Mining and a Council Member of the Materials Division of HKIE. His particular skills and interests include assessment of building materials, management of test programmes, investigation of failures, high strength concrete and deterioration of concrete. He conducted durability assessment of many infrastructures in Hong Kong including MTR Lantau and Airport Line, West Rail, Route 8, Stonecutters Bridge and Deep Bay Link.

The effect of Marine Environment on the Durability of CEDD's Pier Structures

Mr. Miki Funahashi
Corrpro Co. Ltd

Mr Funahashi is a Senior Technical Manager with Corrpro Companies, Inc in West Chester, Pennsylvania, USA. He has been a cathodic protection engineering consultant for CEDD for 5 terminal piers in Hong Kong. He is a Registered Professional Corrosion Engineer and holds a Master degree in Engineering at Florida Atlantic University. He is well recognized in the field of corrosion control for reinforced concrete structures, particularly the cathodic protection. He published more than 25 technical papers and gave lectures in more than 15 countries.

The effect of Fire on the Durability of R C Structures

Dr Y L Wong
HKPolyU

Dr Wong Yuk-lung received his Diploma in civil engineering at the Baptist College, Hong Kong, MEng in structural engineering at the Asian Institute of Technology, Thailand, and PhD in civil Engineering at the University of Canterbury, New Zealand. He is an Associate Professor with the Department of Civil and Structural Engineering of the Hong Kong Polytechnic University. His research covers concrete technology, earthquake engineering, seismic design of R C buildings and composite steel-concrete structures.

Durability of Concrete using Recycled Aggregates

Ir W K Fung
ArchSD

Engineer (Ir) W K Fung is Assistant Director (Structural Engineering) with the Architectural Services Department. He served as Chairman of the Standing Committee on Concrete Technology between 1997 and 2002, and it was during that time that SCCT developed the specification for concrete containing recycled aggregates. He retains interest in concrete technology and continues to see wider use of recycled aggregates in demonstration projects. Engineer Fung is now Chairman of the Materials Division of HKIE.

Carbonation and Chloride Penetration of Concrete Structures

Dr Tommy Lo
HKCityU

Dr Tommy Lo is an Associate Professor with the Department of Building and Construction of the City University of Hong Kong.. He is also a Chartered Civil Engineer, Registered Professional Engineer, Registered Safety Officer and Registered ISO9000 Assessor. He is a specialist in concrete materials, and his research interests include high strength-high performance concrete, lightweight concrete, microscopic study of construction materials, safety and quality management.