

Title: Session 1 - Important aspects of cement according to MSEN 197-1

Synopsis: Cement is a commonly used product in construction. It is so common that people take it for granted that cement is just cement – a grey powder. Do you know what standards the cement that you use comply to? Are you aware that there are 27 types of common cement in our Malaysian Standard? What are the differences in these cement types and how are they tested, produced, and applied? Probably you have heard of cement strength class but what exactly is that?

This talk seeks to share insight of the important aspects of cement that you need to know as user / specifier and help you answer the above questions. Cement is more than just a grey powder, each type of cement has its own unique properties and the talk will bring you from how cement is manufactured, to its standards and applications.

Speaker Name: Ms. Serina Ho Chia Yu

Biodata: Ms Serina Ho is the Technical and Products Manager of Hume Cement Sdn Bhd. She holds a Chemistry degree from University of Malaya and a Master of Business Administration from University of Hull, UK. She is the Chairman of Technical Committee in Cement & Concrete Association Malaysia (C&CA) and the committee member of Technical Committee on Cement in Standard Malaysia. She is also a member of Malaysian Institute of Chemistry (IKM) and Past President of American Concrete Institute, Malaysia Chapter (ACI-Malaysia Chapter).

Serina has a vast experience in both cement and concrete industry. She started her career as QA/QC in a ready-mixed company and later ventured out to be the chemist in cement plant, in charge of quality and R&D of cement products. She also worked as Product Manager in ready-mixed company, responsible for developing and marketing of ready-mixed concrete products before she came back to the Cement Industry in 2012. Her journey in the construction industry is driven by her unrelenting passion for cement and concrete.

Title: Session 2 - Ground Granulated Blastfurnace Slag for Structural Concrete Production (MS EN15167)

Synopsis: The primary technical guidelines (MS EN 15167) for the production and use of ground granulated blast furnace slag (GGBS) in the manufacturing of structural concrete are deliberated. The specific chemical and physical requirements of the GGBS materials to be fulfilled to qualify the materials to be used as supplementary cementitious materials are elaborated. The seminar also covers the primary technical, economic, and environmental advantages derived from large-scale concrete production. The key benefits relating to the use of the materials in concrete production, such as thermal evolution control and improvement of concrete's rheological performance, are also covered.

Speaker Name: Associate Professor Ir. Dr. Cheah Chee Ban

Biodata: Associate Professor Ir. Dr Cheah Chee Ban is a distinguished researcher in construction materials specialising in cementitious and non-cementitious inorganic composites. He has more than 60 research papers published in established international journals such as the Journal of Construction and Building Materials, Journal of Building Engineering, Composite Part B, Resources Conservation and Recycling, Journal of Cleaner Production and other renowned international journals. Dr Cheah is known for his vast experience characterising calcareous and siliceous mineral binder materials and aggregate for concrete production. The outcome of his laboratory and in-situ investigation provides essential knowledge to the stakeholders of the concrete manufacturing sector in materials selection and quality assessment. His binder materials characterisation specialisation covers physical properties assessment, chemical properties examination and material quality monitoring. These aspects of the application of concrete binder are of utmost importance to ensure the quality and longevity of the concrete material in long term service duration.

Title: Session 3 - Cost-saving concrete mix design according to the latest EN 206

Synopsis: EN 206 covers the technical rules that applied to the production of concrete for structures designed in accordance with EN 1992-1-1. It is applied to ready-mixed, site mixed and pre-cast concrete. A better understanding of the standard may help in optimising the mix design. Therefore, EN 206 is essential knowledge for producers, engineers, and contractors.

Speaker Name: Mr. Yeo Shih Horng

Biodata: Mr Yeo Shih Horng has a Master's Degree in Engineering Sciences from University of Malaya in 2013. He obtained his Bachelor's Degree in Engineering in 2009 from University of Malaya. Mr Yeo is the director of YSH Concrete Technology Sdn. Bhd. mainly specializing in designing high-performance concrete, high strength concrete and low heat concrete.

Mr Yeo had worked on numerous projects with various companies. Since 2015, Mr Yeo works as a concrete technical expert for TUV SUD PSB (Malaysia) Sdn. Bhd. In the same year, he had completed a project on high early strength and mass concrete mix design in Dalian, Liaoning, China. He also advised Coco Project, Singapore regarding Grade 75 high early strength concrete with low heat properties.

He had involved in forensic investigations such as building structural integrity assessment, cracks in concrete sleeper, investigation of delayed ettringite formation in mass concrete, cracks in tunnel lining after heat treatment, cracks in industrial floors, defects in precast elements, etc.

Mr Yeo is also very active in associations and various activities. He is a committee member of the American Concrete Institute – Malaysia Chapter from 2010 till 2019. Furthermore, he is the committee member of the Civil and Structural Engineering Technical Division of The Institution of Engineers, Malaysia (IEM) from 2017 to 2019.

Title: Session 4 - Concrete Testings for Fresh and Hardened Concrete, including Self-Compacting Concrete (EN 12350 & EN 12390)

Synopsis: This session will cover on the common testing procedures for fresh and hardened concrete with reference to the European Standards. Parallels will also be drawn to the ASTM standards. The discussion on fresh concrete tests will include slump test, Vebe test, degree of compactability, flow table test, and density; while discussion on workability and flowability tests of self-compacting concrete will cover on slump flow, V-funnel flow, J-Ring and L-Box tests. On the other hand, the hardened concrete tests will mainly focus on the properties such as compressive strength, flexural strength, splitting tensile strength and density.

Speaker Name: Dr. Sudharshan N. Raman

Biodata: Dr. Sudharshan N. Raman is an Associate Professor in Civil Engineering in the School of Engineering, Monash University Malaysia; with research interest(s) in concrete engineering and technology, and structural resilience. Dr. Raman is also a Past President of the Malaysian Chapter of American Concrete Institute.

Title: Session 5 - Non-destructive test (EN 12504)

Synopsis: This presentation focuses on the deployment of advanced non-destructive testing (NDT) methods of concrete structures as utilized by the structural engineering industry in performing structure forensic investigation/ condition assessment. The fundamentals of NDT methods are explored in regards to their potential, limitations, inspection techniques and interpretations, as well as the factors that influence the success of NDT methods are discussed. The advanced NDT of concrete is found to be gaining increasing acceptance by local consultants/ clients as a means of evaluating the strength, uniformity, durability and other properties of existing concrete structures. The perceptions of NDT inadequacy were attributable to lack of understanding of construction materials and NDT methods themselves. This presentation provides an overview of the current state of advanced NDT application by identifying and describing the most common successful methods of NDT as applied to concrete structures.

Speaker Name: Ts. Go Chee Siang

Biodata: Ts. Br. Go Chee Siang, holds a Master's degree in Civil Engineering and BSc in Construction Management, is a registered Chartered Civil Engineer and Professional Technologist, a qualified multidisciplinary built environment professional, and having spent 22 years working for locally established Contractors.

His specific experience and expertise include construction project management, planning & scheduling, risks management, technical & value engineering specializing in Dams and Hydropower (such as Roller Compacted Concrete Dam, Concrete Gravity Dam, Earthfill Dam), Railway Infrastructures & Trackwork, Water Treatment Plant, and Roads & Bridges, as well as the structural condition assessment.

Title: Session 6 – Concrete Repair (EN 1504) and maintenance (covers technique/ methods in maintenance/ repair of concrete)

Synopsis: Moving into 2022, more and more questions have been raised on cost effective ways of repair and maintaining concrete structures. Sweeping across land RC structures to harsh marine structures, engineers and contractors have been given task to ensure life span of concrete structures can be continued for next many numbers of years. This topic today we will go through step-by-step general guidance on concrete repair and protection using European Standards EN1504 series. If time permitted, a similar code on ACI-562 will be highlighted in conjunction with EN1504.

Speaker Name: Mr. Lee Yean Fu & Dr. Zack Lim

Biodata: Mr Lee Yean Fu started his career in 1995 as branch manager for Sika Kimia S/B. Later in 1997 he formed UFT Structure Re-Engineering S/B specialised in concrete repair and structure strengthening, business carries on till today. Besides, he also runs an independent site investigation firm, namely Sinct-lab S/B since 2000. Over his 24years of service in the industry, he has accumulated numerous site experience and application knowledge in concrete repair and structure strengthening works.

Dr. Zack Lim is widely recognized in the flooring industry circle in Malaysia and throughout other countries in the world. He is the Managing Director of Zacklim Flat Floor Specialist Sdn Bhd with almost 40 years of experience in the construction industry, he aims to lift the construction standard by sharing his passion with practical knowledge and experience to as many people as possible.