



MYCONCRETE

THE BULLETIN OF THE AMERICAN CONCRETE INSTITUTE-MALAYSIA CHAPTER (e-Bulletin)

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MyConcrete:

The Bulletin of the American Concrete Institute – Malaysia Chapter


Editor:


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We take this opportunity to thank our sponsors for their contribution and support for this month's edition of MyConcrete e-Bulletin.

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ADEPT TECHNICAL SERVICES SDN
BHD

President's Note

The 25th AGM held on the 29 April 2022 was very well organized. Thanks to all who helped with this.

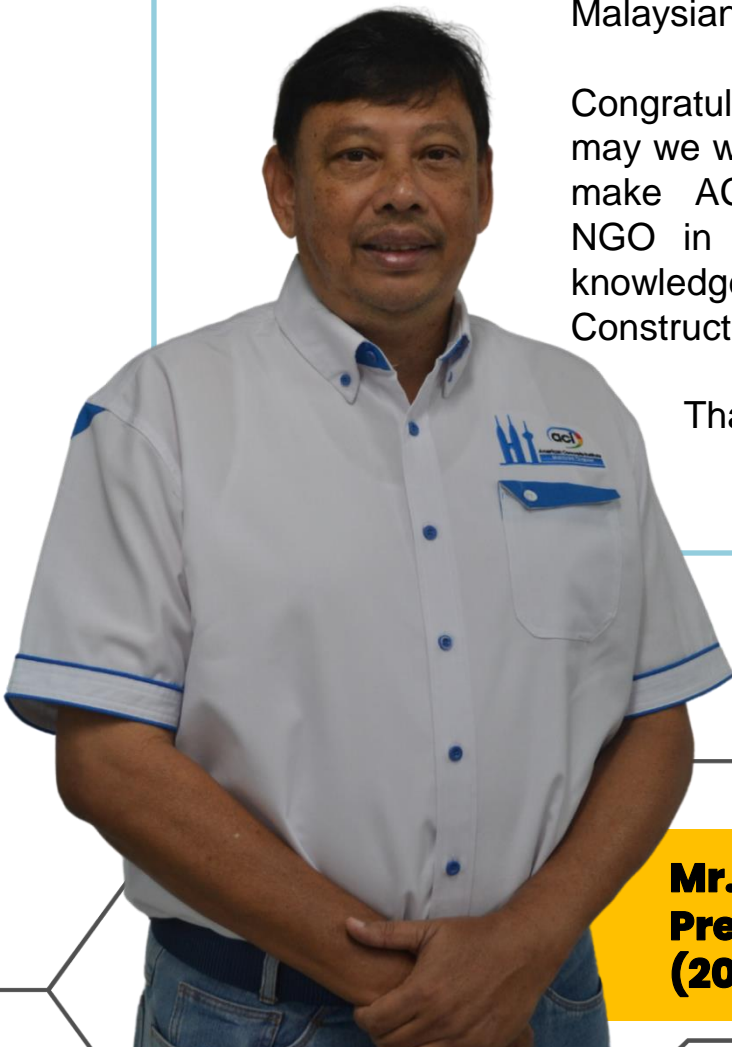
This time round there was a new format in the election. The elections for the Board of Direction remained as it has always been. Three new committees were formed and are as follows:

- i. Media and Event Committee
- ii. Technical Committee
- iii. Editorial Committee

These focus committees I believe will put ACI-MY on a platform which will take us to the next level in the Malaysian Construction Industry.

Congratulations to all elected and may we work together as a team to make ACI-MY a more relevant NGO in the aspect of technical knowledge to our Malaysia Construction Industry.

Thank you and Godspeed.



Mr. Martin David
President ACI-MY
(2022-2024)

INTRODUCTION TO ACI MALAYSIA CHAPTER

American Concrete Institute - Malaysia Chapter (ACI-Malaysia) is a non-profit technical and educational society representing ACI Global in Malaysia, which is one of the world's leading authorities on concrete technology. Our members are not confined to just engineers; in fact, our invitation is extended to educators, architects, consultants, corporate, contractors, suppliers, and leading experts in concrete related field. The purpose of this Chapter is to further the chartered objectives for which the ACI was organized; to further education and technical practice, scientific investigation, and research by organizing the efforts of its members for a non-profit, public service in gathering, correlating, and disseminating information for the improvement of the design, construction, manufacture, use and maintenance of concrete products and structures. This Chapter is accordingly organized and shall be operated exclusively for educational and scientific purposes.

Objectives of ACI-Malaysia are:

- ❖ ACI is a non-profitable technical and educational society formed with the primary intention of providing more in-depth knowledge and information pertaining to the best possible usage of concrete.
- ❖ To be a leader and to be recognized as one of Malaysia's top societies specializing in the field of concrete technology by maintaining a high standard of professional and technical ability supported by committee members comprising of educators, professionals and experts.
- ❖ Willingness of each individual member/organization to continually share, train and impart his or her experience and knowledge acquired to the benefit of the public at large.

Past Presidents

1997 - 1998
Ir. Tae Ah Heng
(Protem)

1998 - 2000
Ir. Dr. Kribanan G. Naidu

2000 - 2002
The Late Ir. Dr. Norzan

2002 - 2004
Ir. Soo Thong Phor

2004 - 2006
Mr. Seow Aik Guan

2006 - 2008
Ir. Boone Lim

2008 - 2010
Ir. Parnam Singh

2010 - 2012
Ir. Ng Kok Seng

2012 - 2014
Dr. Zack Lim

2014 - 2016
Dr. Zack Lim

2016 - 2018
Ms. Serina Ho

2018 - 2020
Prof. Dr. Sudharshan N.
Raman

2020 - Present
Mr. Martin David

Management for 2022 – 2024



Board of Directions (BOD) 2022 – 2024



President:
Mr. Martin Gerald
Joachim David



Director 1:
Mr. Mike Lim Wey
Peow



Director 2:
Prof. Dr. Hamidah Bt
Mohd Saman



Secretary:
Mr. Oscar Teng Ri
Hao



Treasurer:
Mr. Chris Yong Hoe
Chern



**Immediate
Past-President:**
Assoc. Prof. Dr.
Sudarshan N. Raman

Biodata of Board of Directions

01 Mr. Martin Gerard Joachim David – The President

Mr. Martin David is the founding Director of Adept Technical Services Sdn. Bhd. since 2004. He has been involved in the Building Industry for more than 30 years.

In the first 10 years of his career, he was a Site Technical Officer in a leading Architectural firm in Penang. He then spent 2 years overseas in Mauritius as a Construction Manager for a Malaysian construction company, building a Malaysian-owned 5-star hotel. Upon his return to Malaysia, he rejoined the architectural firm which he was previously working for in Penang. He worked there as a Project Manager for another 3 years managing mainly the construction of industrial buildings.

Soon after this, he was offered a managerial position in the sales team of one of the largest worldwide construction chemical company and spent another 8 years there.

After years of experience in the building industry and specialist construction chemical field, he decided to set up his own company, which he runs until today. With his vast knowledge and experience he gives good and helpful advice in areas of industrial flooring, waterproofing and concrete repair.

02 Mr. Mike Lim Wey Peow – The Director 1

Mike Lim has long experiences in raw materials supply to many industry such as Ceramic, Glass, Animal Feed, Road Marking, Asphaltic Premix and Oil & Gas, as well as many parts of Construction Industry – Plaster/Render, Tile Adhesives, Coatings and Concrete Industry. Has vast technical know-how to introduce Innovative use of latest raw materials.

Have Tertiary Education in Computer Science, UK. Started in Granite Quarry Industry for 5 years. Then went in and currently still in the Calcium Carbonate/Limestone Industry for 27 years, Specialize in Construction Segment for Omya Malaysia Sdn. Bhd. as Sales Manager.

03 Prof. Dr. Hamidah Binti Mohd Saman – The Director 2

She obtained her Bachelor in Civil Engineering Degree in 1988 from the University of Miami, Coral Gables, United States of America (USA). She worked as a Researcher in SIRIM Berhad from 1992 before furthered her study in University of New South Wales, Sydney, Australia and obtained her Ph.D in Civil Engineering in 1999. She joined Universiti Teknologi MARA (UiTM) in 2000 as a Lecturer and was promoted to Associate Professor in 2007. Her active involvement in professional bodies is portrayed by her designation as a Secretary of Concrete Society of Malaysia (CSM) for seven (7) sessions, Treasurer of American Concrete Institute Kuala Lumpur Chapter and Council Member of Confederation of Scientific and Technological Associations in Malaysia (COSTAM). Based on her expertise, she has been appointed as a Chief Editor for Scientific Research Journal (UiTM), a member of editorial board for Malaysian Construction Research Journal (CREAM-CIDB), The Institution of Engineers Malaysia (IEM) Journal, Journal of Engineering Science & Technology (JESTEC) and International Sustainable Construction Journal co-published by UTHM-Concrete Society of Malaysia (CSM). During her service as academic member in UiTM, she has published more than 300 papers in journals and conference proceedings at international and national levels in area of durability in concrete, lightweight concrete, high performance concrete and bio-concrete, international construction, strengthening and repair materials for concrete structures using non-corrodible materials. Nano, bio-concrete and high resistance cement materials to fire are the new area of her interest. She actively involved in research and consultation works and was granted totaling more than RM 1 million for the last five years of research grant from government agencies and industries. At present, she is supervising eighteen Ph.D students and eight of them have graduated. She was promoted to full Professor in 2015.

Biodata of Board of Directions

04 Mr. Oscar Teng Ri Hao – The Secretary

Mr. Oscar is a specialist in concrete/cementitious decorative and facade mixture. To be specific, Mr. Oscar focuses on Glass Fibre Reinforced Concrete (GFRC) and other light weight concrete facade. Graduated from Monash University in Bach. Civil and Environmental Engineering, his goal is always to create concrete that can beautify the current dull concrete jungle of city life. With 5 years of experiences in Concrete Facade industry, he has managed to assist in designing concrete facade at not only on private buildings that include but not limited to bungalows and condominiums, but also commercial buildings like arches on KL-Selangor Boundary and also decorative item of commercial factories.

On the other hand, Mr. Oscar is also a consultant on construction contract dispute which assist contractors on claiming issues.

05 Mr. Chris Yong Hoe Chern – The Treasurer

Started my career as a sales executive in concrete admixture in 1997. With more than 20 years of experience in technical sales and operation for concrete admixture. Over the 20 years of experience manage to start 2 admixture factories in Malaysia. I have been involved in numerous projects such as Terengganu Water Barrage, Pantai STP, Hulu Terengganu Hydro Power, MRT Package 5 and many more. Currently in charge of local and international sales of concrete admixture.

06 Assoc. Prof. Dr. Sudarshan N. Raman – The Immediate Past President

Dr. Sudharshan N. Raman, MASCE, MACI; is a civil engineer by training, specializing in structural and materials engineering. At present, he is a Senior Lecturer at the Faculty of Engineering and Built Environment of The National University of Malaysia (Universiti Kebangsaan Malaysia, UKM). He is also serving as a Committee Member of the Civil & Structural Engineering Technical Division of the Institution of Engineers, Malaysia (IEM), and as a Committee Member of the Kuala Lumpur Chapter of American Concrete Institute (ACI). Dr. Raman completed his PhD at The University of Melbourne in 2011, specializing in structural engineering/protective technologies. He has been involved with several consultancy work in the area of infrastructure protective technologies, within the public and private sectors both locally and internationally. He has published extensively and has been invited as a reviewer by major journals in the field of structural and materials engineering. Dr. Raman has taught structures and construction related courses at UKM, University of Malaya, and Open University Malaysia for the past 13 years. Prior to joining the academia in 2002, he was in employment with an engineering design consultant, and a specialist prestressed concrete contractor.

Membership Subscription 2022

Gentle reminder that 2021 subscription is due.

Kindly note that payment can be made as follows:

Bank : **Hong Leong Bank Berhad**
Account Number : **291 0002 0936**
Account Name : **American Concrete Institute – Malaysia Chapter**

Once payment has been made, it is important to send **Remittance Slip / Deposit Advice / Bank Transfer Receipt** to our **Administrative Office** for confirmation, via these channels:

WhatsApp: **+60 (14) 2207 138** or
E-mail: **admin@acimalaysia.org.my**

Digital Membership Certificate 2022

Members who have paid their subscription will receive their digital membership certificate. See sample below.



Internship Programme For ACI Student Members

(Subject to Terms & Conditions Apply by Companies)

Company Name	Company Address	Person To Contact	Business Involved
PLYTEC FORMWORK SYSTEM INDUSTRIES SDN BHD	No. 19, Jalan Meranti Permai 3, Meranti Permai Industrial Park, Batu 15, Jalan Puchong, 47100 Puchong, Selangor.	012 - 691 2883 (Mr.Louis Tay)	BIM Engineering Specialist, CME Project Delivery, IBS & Prefabrication Construction.
CRT SPECIALIST (M) SDN BHD	E5-5-25, IOI Boulevard, Jalan Kenari 5, Bandar Puchong Jaya, 47170 Puchong, Selangor.	012 - 313 5991 (Mr.James Lim)	Waterproofing Work, Concrete Repair & Strengthening, Injection & Grouting.
REAL POINT SDN BHD	No. 2, Jalan Intan, Phase NU3A1, Nilai Utama Enterprise Park, 71800 Nilai, Negeri Sembilan.	016 - 227 6226 (Mr.Chris Yong)	Concrete Admixture Production.
JKS REPAIRS SDN BHD	Star Avenue Commercial Center, B-18-02, Jalan Zuhai U5/178, Seksyen U5, 40150 Shah Alam.	017 - 234 7070 (Mr.Kathiravan)	Structural Repair Works, Structural Strengthening, Waterproofing System, Injection & Sealing, Concrete Demolition Works, Protective Coating For Concrete And Steel.
ZACKLIM FLAT FLOOR SPECIALIST SDN BHD	70, Jalan PJS 5/30, Petaling Jaya Commercial City (PJCC), 46150 Petaling Jaya, Selangor.	603 - 7782 2996 (Mr.Zack Lim)	Concrete Flatfloors.
UFT STRUCTURE RE-ENGINEERING SDN BHD	No 46, Jalan Impian Emas 7, Taman Impian Emas, 81300 Skudai Johor.	012 - 780 1500 (Mr.Lee)	Structural Repair, Construction Chemical, Carbon Fibre Strengthening, Protective Coating, Industrial Flooring, Soil Settlement Solution, Civil & Structure Consultancy Services, Civil Testing & Site Investigation.
SINCT-LAB SDN BHD	No 46, Jalan Impian Emas 7, Taman Impian Emas, 81300 Skudai Johor.	012 - 780 1500 (Mr.Lee)	Structural Repairing, CFRP Strengthening, Site Investigation, Civil Testing, Soil Settlement Solution, Civil And Structural Design And Submission.
STRUCTURAL REPAIRS (M) SDN BHD	No. 1&3, Jalan 3/118 C, Desa Tun Razak, 56000 Wilayah Persekutuan, Kuala Lumpur	012 - 383 6516 (Mr.Robert Yong)	Carbon Fiber Reinforced Polymer System, Sealing Cracks With Resin Injection, Re-Structure Repairs and Upgrade, Diamond Wire & Diamond Blade Sawing System, Diamond Core Drilling, Non-Explosive Demolition Agent.

Important Notes:

- i) ACI Malaysia is only a platform for our members to advertise for interns.
- ii) All application to be made direct to companies and would be subject to their terms and conditions.

Upcoming Events



ACI-Malaysia Annual Concrete Webinar 2022

15/6/2022 & 16/6/2022, Wednesday & Thursday 

Webinar Description

"The construction industry has been facing challenges of lack of skilled knowledge and labour, declining productivity, high and unnecessary repair costs, etc. Adopting the fundamental understanding of construction methods according to standard codes is hence key to tackling these challenges. ACI Malaysia Chapter provides a panel of expert speakers to share the knowledge and issues to be discussed in this Annual Concrete Seminar 2022. "

Who should attend?

Engineers, Consultants, Building Owner, Contractors, Academicians & Students, Researchers, Professionals from government, developers, public authorities, materials suppliers, public and private institutions.

Registration Fee		Payment Details
Non-member	ACI Members & MBAM Members	
RM 499 + Free one-year membership	RM 399	A/C Name: American Concrete Institute - Malaysia Chapter A/C No: 2910-0020-936 Bank Name: Hong Leong Bank Bank Address: Branch 552, Jalan 552/67, Petaling Jaya, Selangor
Group Price	STUDENT PRICE	
RM 439 per pax if > 2 pax	RM 199	Registration Link : www.acimalaysia.org

CCD & CPD POINTS CLAIMABLE !

For Enquiries : admin@acimalaysia.org +6014 220 7138
Website : acimalaysia.org

T&C :
-Webinar Fee paid is not refundable.
-Attendance certificate will be provided after seminar by email.
-ACI Malaysia Chapter reserves all rights to make any changes without prior notice.




Moderator
Mr Louis Tay

MEET OUR SPEAKERS


Dr. Cheah Chee Ban


Serina Ho


Yeo Shih Horng


Dr. Sudharshan N. Raman


Dr. Zack Lim


Lee Yean Fu


Ts. Go Chee Siang

Programme

Day 1 - Concrete Today		Day 2 - Concrete Assessment & Repair	
9:00am	Opening Keynote Speech	9:00am	Session 4 - concrete Testings for Fresh and Hardened Concrete, including Self-Compacting Concrete (EN 12350 & EN 12390)
9:30am	Session 1 - Important aspects of cement according to MS EN 197-1		Dr. Sudharshan N. Raman
	Ms. Serina Ho Chia Yu	10:00am	Session 5 - Non destructive test (EN 12504)
10:30am	break time		Ts. Go Chee Siang
10:45am	Session 2 - Ground Granulated Blastfurnace Slag for Structural Concrete Production (MS EN 15167)	11:00am	break time
	Dr. Cheah Chee Ban	11:15am	Session 6 - Concrete repair (EN 1504) and maintenance (covers technique/ methods in maintenance/ repair of concrete)
11:45am	Session 3 - Cost-saving concrete mix design according to the latest EN 206		*Mr. Lee Yean Fu & Dr. Zack Lim*
	Mr. Yeo Shih Horng	12:15pm	Q & A Session
12:45pm	Q & A Session	12:30pm	Closing Keynote Speech

For Enquiries : admin@acimalaysia.org +6014 220 7138
Website : acimalaysia.org

T&C :
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-ACI Malaysia Chapter reserves all rights to make any changes without prior notice.

Preceding Events

HOW TO EFFECTIVELY STOP STEEL REINFORCEMENT CORROSION IN REINFORCED CONCRETE



SUB-TOPIC:

- How does corrosion in reinforcement steel form? And what are the main contributors for it?
- What are the different repair options for corrosion related issues and their limitations
- Extending the service life of R.C. Structures using galvanic cathodic protection

Mr. Mazen Zein (Speaker)

Regional Product Segment Manager - Repairs and Grouts



Mazen Holds a Bachelor's degree in Civil Engineering and CP1 NACE Certified Cathodic Protection Tester. He has gathered extensive experience in the construction industry, working in both the Middle East and Asia regions. As a Product Segment Manager for Repairs and Grouts at Fosroc Asia, his work focuses on reinstating and prolonging the service life of reinforced concrete structures. During this webinar, Mazen will deliver his knowledge and experience on galvanic cathodic protection, how the system works and why it is recommended.

26TH MAY 2022 (THURSDAY) | 8.30 PM - 9.30 PM

 WWW.FACEBOOK.COM/ACIMALAYSIA.ORG

Disclaimer: The opinion expressed in the talk are of the individual speaker's and not necessarily those of the American Concrete Institute - Malaysia Chapter



Preceding Events

ACI-MBAM Joint Seminar

20th May 2022, Armada Hotel, Petaling Jaya

ACI-Malaysia Chapter in collaboration with Master Builders Association Malaysia (MBAM) organised a physical Seminar on RC Flat Roof – Criteria for Concrete Design, Waterproofing Skin and Maintenance of Water Seepage Related Issues based on ACI-MY Technical Commentary No.1. The seminar was conducted on 20th May 2022 at Armada Hotel, Petaling Jaya Selangor. More than 150 participants attended the seminar.

Seminar on RC Flat Roof – Criteria for Concrete Design, Waterproofing Skin and Maintenance of Water Seepage related issues based on ACI-MY Technical Commentary No.1.

25 February 2022, Friday | 9 am - 6 pm | Atlanta Ballroom, Armada Hotel, Petaling Jaya

Introduction

The problem of water intrusion leading to leakage in concrete roofs is of great concern and interest to many stakeholders and building owners in Malaysia. This seminar will focus on the current practices in Malaysia pertaining to the design, construction and repair of waterproofing systems on concrete roofs of buildings. This is in line with the primary objective of ACI Malaysia to share, enhance and advance knowledge in concrete technology.

A RC flat roof can experience issues relating to water seepage if it is not designed and constructed properly. In fact, this is a common problem in many buildings in the country. These leakages, when they occur, will cause a lot of inconvenience to the occupants below, with unsightly stains and even damage to the ceiling and walls including the fittings, fittings and furniture. Long term leakage will also cause weakening and deterioration of the RC slab which can eventually affect the structural integrity if timely repairs are not carried out.

The requirements for proper and effective waterproofing systems are often not well understood or managed poorly, resulting in many problems related to unacceptable leakages of moisture through the concrete roof. At the end of this seminar, you will gain valuable insights on flat roof design, the functions of the waterproofing skin and how issues related to water seepage could be managed after the completion of the building construction.

Registration Fee

MBAM, ACI & BRC Members	RM 400
Non-MBAM Members	RM 500

Full payment is due for the registration.

Organise discounts of 10% for 3 jobs or more from the table company.

For Enquiries: Mr Michael Tiong, MBAM General Manager, Email: mtiong11@mbam.org.my

MEET OUR SPEAKERS

Opening Speech | **Closing Remarks** | **Moderator**

Mr Martin David, ACI-MY President | Tan Sri Sultan Haji Ahmad Zin, MBAM President | Dr. Subbarayan, R. Ramen, Associate Prof, Monash University Malaysia

Prof. Hamidah, ACI-MY Secretary | Datuk Nonis, Director, (P&I), Asian Development Bank | Dr. Lim BT, Managing Director, Mohamad (Malaysia) Sdn Bhd | Dr. Zack Lim, Managing Director, zacklim P&I Engineering Specialist Sdn Bhd

Mr. Steven Tan, Manager, YTL Cement | Mr. Lee Chiew Fook, Manager, Training & Special Projects, MAFRI Malaysia Sdn Bhd | An. Alan Teh, Director, Anbar Alan Teh Accountant | Mr. James Lim, Director, CRT Specialist (M) Sdn Bhd

Programme

8:30 am	Registration	2:00 pm	Cement and concrete technology by Mr. Steven Tan
9:00 am	Opening Speech by Mr. Martin David	2:45 pm	Misconception of elongation properties in waterproofing membrane by Mr. Lee Chiew Fook
9:30 am	Introduction to ACI-MY by Prof. Hamidah	3:30 pm	Architectural perspective for a watertight RC Roof by Mr. Steven Lim
9:35 am	Preview of ACI Technical Commentary No.1 by Mr. Martin David	4:00 pm	The Architectural perspective for a watertight RC Roof by Mr. Steven Lim
9:45 am	Water Intrusion Issues at Concrete Roof at the Midpoint Store of Alfers by Sook & Horne	4:45 pm	Remedial methods for water intrusion at RC Roof by Mr. James Lim
10:30 am	Morning tea break	5:30 pm	Q & A
10:35 am	A holistic RC design approach for concrete roof from the structural engineer's perspective by Dr. Lim BT	6:55 pm	Closing Remarks by Tan Sri Sultan Haji Ahmad Zin
10:45 am	Good practices in construction of reinforced concrete roof by Dr. Zack Lim	8:00 pm	ACI-MBAM Fellowship Event
12:30 pm	Lunch		

REGISTER NOW!





Past Events

ACI-MY 25th AGM MEETING

29th April 2022, Armada Hotel, Petaling Jaya



The 24th Annual General Meeting (AGM) was conducted physically on 29th April 2022, at Armada Hotel, Petaling Jaya, Selangor. More than 30 members representing organization and individual also non-ACI Member have attended the meeting. The meeting was begun by welcoming speech by the president session 2020-2022, Mr Martin Gerard Joachim David, followed by Secretary Reports and Treasurer Report. The dissolution 2020-2022 Board of Directions (BOD) and Committee, new appointment Board of Directions and Office Bearers for 2022-2024 session are one of the main agenda.

Mr. Martin Gerard Joachim David from Adept Technical Services Sdn Bhd was re-elected as the president for 2022-2024 Session. The President in his closing speech wishes and with support from Committee he could formulate and act on vision, mission and strategies planned towards the betterment of the society. The meeting was ended with photograph session and networking dinner.



Article

Wet Crack Injections in Basement Slabs Explained

Written By: Mr. James Lim

Date: 21 Apr 2022

“Wet crack repair is becoming an integral part of concrete design to manage cracks that are prone to water seepage, especially in the lowest basement slab where water pressure is high.”

In today's construction design, the base slab or the raft foundation of a building is often designed with waterproofing admixture with the intention to waterproof the base slab against ingress of ground water. The use of waterproofing admixture is seemingly a trend now as structural engineers prefer admixture over the traditional membrane system. In order for it to work, the concrete has to be perfectly placed, vibrated properly so that a honeycomb and crack free concrete is produced at the end of day. However, the reality often gives a different outlook of this concept of admixture waterproofing system because it fails to address the natural occurrence of cracks in concrete structures. Whether it is based on pore blocking or formation of crystals that are only visible under the microscope, the truth is that the journey down this path is not so smooth sailing after all when cracks start to develop. All the so called self-heal mechanism of the admixture in the concrete will quickly evolve into a discussion of crack mapping and repair methodology not to mention who will be bearing the cost of the cracks repair.

When cracks start to develop, coupled with high water table of our ground condition, it does not take long for us to realise that the basement slab will soon become wet. Water ingress from the ground is almost inevitable in this scenario and there is only one way out from here. The objective has become clear that the project manager of the job site is now looking at the best way to seal those cracks so that the leaking cracks will not leak again. This might sound like a daunting task for a project manager as now he has to look for money to perform this task.

Main contractors will probably agree that injection grouting is the way to solve these problems relating to water ingress at the basement slab. Structural engineers prefer the cracks to be sealed with epoxy resin as it gives strength and good bond but majority of the epoxy resin in the market caters for dry crack condition. Epoxy resin is good for dry cracks normally found in intermediate floor slab. In the case of a base slab, epoxy resin will not be effective to seal against ingress of water from the ground. So a polyurethane (PU) based injection resin is preferred. Having said that, the majority of the polyurethane resin in our market consists mostly of the foaming type of

PU resin (1K) and this normally come in a single pack water reacting resin. Water acts as the catalyst to start the reaction when the PU resin is injected into the wet cracks thus creating a foam that is filled with air bubbles. The foaming PU resin is normally formulated with a foaming factor between 20 to 40x. The higher the foaming factor, the lighter the foam as there are more air bubbles within the foam structure. As it is a foam, it does not come with strength and the foam can easily break or shrink over time. The German injection methodology treats this type of injection with the PU foam as temporary seal. So if you were to get a recurring leak after the injection, the PU foam has either shrunk and failed to resist the water pressure thus allowing water to escape through the cracks again. If someone says PU does not work, that basically means he has bad experienced with foaming PU resin.

What's next if you have lost faith in PU injection? It is perhaps time to look at dual component PU technology. The formulation of a two-component (2K) PU resin allow the mixed resin to achieve a compressive strength of up to 80MPa which was previously not possible with 1K PU. A 2K PU resin will set after mixing the two separate components together without the presence of water. This is an important criteria of a good resin as not all parts of the wet cracks are wet and the PU resin will still set inside the crack if it finds a dry patch. The PU resin in the dry section will set just like an epoxy resin giving it good bond and compressive strength. Unlike foaming PU, the resin will not set in locations without the presence of water because water is required to catalyze the PU resin to start the foam reaction.

There are really no real advantages of using foaming PU resin to seal any wet cracks once you understand the chemistry of a foaming resin. The only reason why foaming resin is widely used is due to cost factor as the resin is much cheaper compared to a 2K resin. But does it really save money for the project manager?

The project manager shall look at the overall cost of the injection repair when it comes to wet crack repair rather than ask for a per point injection rate from the specialist contractor. Allowing your applicator to quote you based on a per point basis type of injection contract is like signing on a blank cheque and allowing your applicator to fill in the amount. Can you imagine the damages this concept can do to your project's bottom line? In conclusion, concrete admixture alone is insufficient to prevent water ingress as a result of crack formation. Perhaps then, it is time to switch to a two-component injection resin system for a permanent fix.

- Thank you -

MEMBERSHIP

WE ARE A
CARING
ASSOCIATION



Benefits of Joining Us?



Benefit #1

Access to the ACI
Membership Directory



Benefit #2

Digital subscription to
Concrete International Magazine



Benefit #3

Three ACI University
tokens



Benefit #4

Printable ACI
Membership Certificate

We believe a
long lasting business
relationship is built
on friendship.

About Us

America Concrete Institute-Malaysia Chapter (ACI-Malaysia) is a non-profit technical and educational society representing ACI Global in Malaysia, which is one of the world's leading authority in concrete technology. Our membership is not only limited to engineers, in fact it includes educators, architects, consultants, corporate bodies, contractors, suppliers and experts in cement and concrete related fields.

Contact Us

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Email: info@acimalaysia.org



We look forward to your kind support and, more importantly, to your participation and registration as a member of ACI-Malaysia Chapter. It is our firm belief your involvement and together with your commitments will go a long way in our quest to uphold all our objectives to mutually benefits for all members.

**American Concrete Institute - Malaysia Chapter
70-1, Jalan PJS 5/30,
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 Tel.: +60 (3) 7782 2996 Fax.: +60 (3) 7782 1196
 Website: www.acimalaysia.org eMail: info@acimalaysia.org

Membership Application Form

Type of Membership (please tick "☑" one option only)

	<u>Joining Fees (Total)(RM)</u>	<u>(Entrance Fee + Subscription Fee per annum)</u>
<input type="checkbox"/> Organizational Member: A Firm, Corporation, Society, Government Agency or other organizations.	RM800.00	(RM500.00 + RM300.00)
<input type="checkbox"/> Associate Member: An individual who is not a member of ACI International but American Concrete Institute – Malaysia Chapter only.	RM200.00	(RM100.00 + RM100.00)
<input type="checkbox"/> Student Member:	RM30.00	(RM30.00 + RM0.00)

To be admitted as a **Chapter Member^(*)**, return this form together with **Crossed-cheque** (any outstation cheque to include Bank Commission)/ **Online Bank Transfer/ Cash Deposit** made payable to:

Account Holder Name: **American Concrete Institute – Malaysia Chapter**
 Bank: **Hong Leong Bank Berhad (HLB)**
 Account Number: **291.0002.0936**

Once payment has been made, it is important to send **Remittance Slip/ Deposit Advice/ Bank Transfer Receipt** to our Administrative Office for confirmation, via these channels:

WhatsApp: **+60 (14) 2207.138** (ACI.my Administrative-2); or
 eMail: **admin@acimalaysia.org**

(*) Benefits provided by **ACI International** for Chapter Members:

1. Digital subscription to Concrete International magazine;
2. Access to the ACI Membership Directory; and
3. 3-Tokens to ACI University Courses;
4. Printable ACI Membership Certificate

Important Notes:

- ❖ Benefits will be accessible via Temporary Password sent to your email account either in the month of **June** or **December**, depend on time slot of **Chapter Member List** update to **ACI International**;
- ❖ All benefits are subject to change without prior notice.

Personal Particulars:

Are you a Member of **American Concrete Institute International** (ACI International)?

- No.
 Yes. (Please provide your ACI Int'l Membership Number: _____ Since (Year): _____)

Name: _____ (First) _____ (Last)

Salutation / Title: _____ (Mr./ Ms./ Mdm./ Ir./ Ar./ Dr./ Prof./) Other: _____

NRIC/ Passport No: _____ Nationality: _____

Mobile Number: +60 (1) - _____ Email: _____

Company / Organization: _____ Designation: _____

Postal Address: _____

Postal code: _____ State: _____

Tel.: _____ Fax: _____ Email: _____

I am introduced to ACI-Malaysia Chapter by: _____

Applicant Signature

Date

For Office Use Only

Membership No: - Receipt No.: _____ Date: _____

Verified by: _____ (Name: _____) Date: _____

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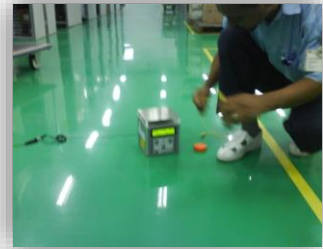


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American Concrete Institute
Malaysia Chapter

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