

CONCRETE NEWS

Volume 5, No. 1, February 2002

from THE PRESIDENT

100 Million Dinars a year, What Can We Do?



Anas A. Kassem
President

I think we can help improve the quality of concrete construction and help the industry be more profitable.

In the past few years since establishment, our Chapter has become a sustainable organization with a membership roster that includes Owners (Kuwait Government Ministries), Research and Academic Institutions (KISR & KU), Design Consultants, Contractors and Material Suppliers.

In a pure business setting, many of these sectors have differing objectives and sometimes a conflict of interest. Therefore, it is not always easy to share information about concrete problems and develop long term solutions.

Our chapter can be the forum where different sectors of this industry can share information without being inhibited by contractual implications which makes it easier to address industry's challenges in a positive manner and facilitate practical solutions.

In my opinion, we can make a difference because:

- 1- Collectively, we have the interest and desire to succeed.
- 2- We have the technical skills and professional experience.
- 3- We will focus on real problems and facilitate realistic solutions.
- 4- Everyone will benefit.

Think about it, if we improve the quality and profitability by about 1% it is a one million Dinars a year worth of improvement.



Kuwait Chapter

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ACI INTERNATIONAL

The American Concrete Institute (ACI), is a nonprofit international organization that promotes improved technology, technical competence, design, and construction related to concrete for the benefit of society.

ACI KUWAIT CHAPTER

The purpose of the Chapter is to further the charter objective for which the American Concrete Institute was organized, i.e. to further education and technical practices, scientific investigation and research by organizing the efforts of its members for a nonprofit, public service in gathering, correlating, and disseminating information for the improvement of the design, construction, manufacture, use and maintenance of concrete products and structures.

How the Chapter FUNCTION

The ACI Kuwait Chapter is approved and authorized by the Board of Directors of ACI International to advance the objectives of the Institute in the State of Kuwait. The Chapter is managed by a local Board of Directors whose members constitute the Chapter officers. Chapter membership is open to all individuals and organizations with an interest in any aspect of concrete technology. The Chapter operates through its committees, which are made up of volunteers to meet the needs of the Chapter members. The Chapter may hold several meetings each year and engage in activities that include:

- Sponsoring educational seminars, short courses or work-shops.
- Holding or sponsoring certification training courses and examination.
- Publishing technical information and newsletters.
- Conducting awards programs to recognize quality, innovation and achievement.

Year 2002 Calendar of EVENTS

Publication Committee	"Newsletter" No. 1 - February No. 2 - May No. 3 - December
Social Committee	"Field Visit" Water Front - March KBRC - May A Factory - September "Dinner" Members Gathering - March Awards Banquet - October
Technical Committee	"Seminar" 1) Inspection, Testing & Monitoring the Durability of Concrete structure - March 2) Flowable, Self-Compacting Concrete - June 3) Minimizing Problems in Concrete Construction - October "Training" 1) Form-Work Systems: Design & Execution - April 2) Blended Cement and Supplementary Cementitious Materials - November
Membership Committee	"Membership Directory" "Annual General Assembly" December

Who's WHO

BOARD OF DIRECTORS

1. Mr. Anas A. Kassem (Parsons Brinckerhoff)	President
2. Mr. Ahmed A. Al-Jihayem (Al-Jazeera Consultants)	Vice President
3. Dr. Naji Al-Mutairi (KFAS)	Past President
4. Mr. Ubedur Rahman Arain (Gulf Consult)	Director / Secretary
5. Mr. Abdulwahab Rumani (KBRC)	Director / Treasurer
6. Mr. Gaby Khalaf (M.A. Kharafi)	Director
7. Dr. Khaldoun Rahal (Kuwait University)	Director
8. Ms. Malakah Noor (Misr Cont. & Eng.)	Director
9. Dr. Mohammed Nasseer Ul-Haque (Kuwait University)	Director

CHAIRPERSONS OF THE COMMITTEES

1. Dr. Naji Al-Mutairi (KFAS)	Exhibition & Nomination Committee
2. Mr. Hamad Al-Tabtabaie	Membership Committee
3. Dr. Khaldoun Rahal (Kuwait University)	Publication Committee
4. Mr. Anas A. Kaseem (Parsons Brinckerhoff)	Public Relation Committee
5. Mr. Mohd. Harb Madbouly (Al Ghanim Specialities Co.)	Social Committee
6. Dr. Moetaz El-Hawary (KISR)	Technical Committee

CONCRETE NEWS

Mission

Concrete News is published periodically by ACI-Kuwait Chapter to share information between members, exchange technical knowledge and enhance the Chapter's position within the engineering community.

Editorial Board

Khaldoun Rahal	Malakah Noor
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Chapter NEWS

Advanced Materials... The Training Program

The Technical Committee organized a Training Program; "Advanced Materials for Construction and Repair of Concrete Structures."



It was held at Kuwait Society of Engineers between 24th and 26th of September 2001.

Annual General Assembly Meeting

The Chapter organized the General Assembly Meeting and Election on December 22, 2001. The President started the program by presenting the fifth annual report. Then the attending members voted Mr. Ahmed Al-Jihayem to the position of Vice President, and Mr. Abdulwahab Rumani and Dr. Khaldoun Rahal to the Board of Directors, and Mr. Amgad Saad, Dr. Mohd. Abdel Rohman, Mr. Khaled Al-Shatti, and Mr. Hussain Al-Najada to the Nomination Committee. Buffet dinner was served at the end of the meeting.

Field Visit to Kuwait Cement Factory

The Social Committee organized a Field Trip to Kuwait Cement Factory on the 24th of October 2001. Fifteen



members participated. It was a big opportunity to see the newly set up modern factory. Kuwait Cement Company, K.S.C. was incorporated as per an Amiri Decree on November 5, 1968.

Congratulation!

The former Chapter Secretary, Mr. Tarik Abduljaleel has got marriage. The Chapter offers congratulation and also wishes him a happy marital life.

New General Manager at Ahlia Chemical



Engineer Abdul Rahman Saleh Al-Awwad has recently joined Ahlia Chemicals as General Manager. He has over 23 years of professional experience in the construction industry,

and was instrumental in executing various projects in the oil sector. Engineer Al-Awwad has a B.Sc. Degree in Mechanical Engineering from U.S.A.

Dr. Naji Al-Mutairi, the Past President moved to KFAS from KISR



ACI-KC Past President, **Dr. Naji Mohammed Al-Mutairi**, has accepted the position of *Director of the Research Projects Directorate* of Kuwait Foundation for the Advancement of Sciences (KFAS) as

of January 2002. Dr. Al-Mutairi was previously the Director of Environment and Urban Development at Kuwait Institute for Scientific Research (KISR).

Technical Seminar: "Dispute Resolution"

The Technical Seminar: "Dispute Resolution", organized by the Technical Committee was held at Kuwait Society of Engineers on November 13, 2001. The speaker was Mr. George H. Labib, Senior Advisor with Executive Management, Saudi Arabian Texaco. Over 60 people attended the seminar.

New Office Administrator



Mr. T. C. Mohammad joined the Chapter, as Office Administrator as of May 2001.

Technical ARTICLES

The chloride induced early corrosion of concrete reinforcement is a major problem in Kuwait. To prevent such early corrossions the first line of defense is to limit the chloride content of the concrete ingredients.

The local unwashed natural sand used for making concrete contains significant amount of chlorides. It is, therefore, imperative that it is washed to get rid of as much of the chlorides as possible. There are several local good sand washing companies supplying wet washed sand with moisture ranging from 4 - 10%. They supply it wet because they do not have expensive drying facilities obviously for economical reasons.

SAY "NO" TO DRY MIX

By A.W. Rumani

In spite of the availability of washed sand, about 85% of the concrete produced in Kuwait is dry mix using unwashed natural sand because it is traditionally accepted, at times demanded, and always cheaper for the supplier.

ACI-304 allows "dry mix" only when all materials used in the concrete are dry. Clearly under local circumstances detailed above "dry mix" is not acceptable for durable concrete.

Then why this practice is prevalent only in Kuwait and not in any other Gulf country?

Well the answer is simple. "Just for the sake of convenience and cheapness".

You might find it hard to believe but that is the core of all the possible lengthy explanations.

The better method of mixing is "wet mix", and it can be practiced by all competent concrete producers in Kuwait. Then why not use it.

Make a small step towards a big change. Say "NO" to dry mix. This will be your valuable contribution in directing the local construction industry towards a better quality.

COMPARISON BETWEEN DRY AND WET MIX

DRY MIX		WET MIX	
1	In this mixing method all dry materials except water is added in the transit mixer at the batching plant. Water and concrete admixture is added later at the site.	1	In this mixing method all materials including water and plasticiser/retarder are mixed at the batching plant.
2	Washed sand which is subsequently dried is not economical to produce and is not available in Kuwait.	2	Available wet washed sand is used.
3	Generally unwashed damp screened sand with relatively high salt content is used. This would lead to early reinforcement corrosion hence reduced design life of the structure.	3	Only washed sand with very low salt content is used in mix. Hence risk of chloride induced early corrosion is minimized.
4	If washed sand is used, the cement comes in contact with the water in the sand, hydration process begins. Which means that the so-called "dry mix" is in fact wet mix with limited amount of water. Later water addition at site is just to make the concrete workable. Therefore dry mix concrete is actually not as fresh as perceived i.e. if water is added at site after say three hours since batching the concrete used is three hours old.	4	All water with a plasticiser/retarder is added at plant. The dosage of plasticiser/retarder is so adjusted to retard the cement hydration for predecided time period keeping the concrete fresh for that intended period.
5	A truck mixer driver (not as qualified as the batcher) adds water and carries out the mixing. In case of 20 truck mixers the chances of human error are 20 times greater.	5	One well trained plant operator for any number of truck load hence reduced chances of human error.
6	Truck mixer flow meter is used to dispense water (an ingredient which governs concrete strength). Truck mixer flow meters are not as accurate as batching plant meters. Again in case of 20 truck mixers, the risk of water cement ratio variation is 20 times greater.	6	One batching plant water flow meter is used. Therefore better control over w/c ratio.
7	Strength reduction which is more pronounced in summer.	7	No effect due to presence of retarder.
8	Relatively higher concrete temperature due to dry mixing friction.	8	Allows better control over concrete temperature.
9	The contractor staff requests dry mix for his convenience but at the client's cost under the perception that he is not bound by a time limit. He starts organizing casting after the truck mixer arrival on site at the expense of concrete quality. Therefore by allowing the contractor staff to use dry mix the client is encouraging the disorganized fashion work and also compromising on the concrete quality which will cost the client dearly in the long run.	9	Insisting on wet mix will indirectly force the contractor staff to plan and organize the work and allow the client full benefits of the fresh concrete as a result save him long term costs.

The editor selected the article for readers' interest.
The editor invites comments from our readers about the personal views given in this article.

PROFILE

Dr. Bader Al-Hoti

Dr. Al Hoti has been helping our Chapter from day one. He was one of the founding members and Vice President of the Chapter in the first Board of Directors. In 1999, he was voted by the Chapter members to the position of Vice President and served the one-year term. He then served as President, and last year he served on the board as Past President.

As part of his duties as a Past President, Dr. Bader was the chairman of the Exhibition Committee involved in the organization of the 2001 Concrete and Construction Exhibition which took place in the Exhibition Land in Mishref.

Dr. Bader believes that credit for the our Chapter's progress goes to the devoted members who spent the time and devoted their efforts to bring the Chapter members together and to fulfill the Chapter's goals. Without this devotion, the Chapter would not have been able to function properly and reach the current high performance level.

Dr. Bader also believes that the Chapter has set an example of how not-for-profit organizations should function and how members can attain the goals and benefits of the Chapter's fellow members.

After graduation in 1997, Dr. Al-Hoti started working in the National Housing Authority as a Site Engineer, then went on to be a Follow-up Engineer and held the position of Assistant Section Head for Infrastructure Design. After that, he held the position of Assistant Director of Design Department. He resigned from his position in 1989 to start his own business and meanwhile held the position of Consultant for the Director General of Public Authority for Applied Education and Training (PAAET) in Engineering.

The task for the rehabilitation of 14 College campuses after Kuwait Liberation was the most challenging task he ever took. These campuses were to house the teaching of 20,000 students. In order to complete the work within the specified 6 months period, laboratories and study equipment had to be shipped to Kuwait using 14 Boeing 747 planes carrying full loads.

Dr. Bader took a break from his normal work to teach courses in the Civil Engineering Department at Kuwait University. He also published three technical articles.

In addition, Dr. Bader is the Chairman of Consultants Offices Committee in Kuwait Society of Engineers and a member of the Arbitration Committee in the society as a Class B Arbitrator.



Dr. Bader Al-Hoti

Children: Seven (three boys and four girls), the eldest (20 years) is a third-year university student studying Architecture, and the youngest (2 years) is undecided on his career yet.

ACI-Kuwait Chapter: Dr. Al-Hoti was one of the co-founders of the chapter, Vice President (first Board of Directors in 1997, and in 1999), President (2000) and Past President (2001).

Professional Profile: Dr. Al-Hoti is the Owner and General Manager of Kuwaiti Tech Consultants (since 1989). He also is a Partner and General Manager in the Kuwait Tele Card Co., and Chairman of the Board of Advanced Tele-Communication Co.

Education:

- Ph.D. in Civil Engineering, University of Miami, Florida, 1987.
- M.Sc. in Civil Engineering, University of Miami, Florida, 1982.
- B.Sc. Civil Engineering, State University of New York at Buffalo 1977.

Membership in Non-Profitable Organizations:

- Kuwait Society of Engineers.
- Kuwait Environmental Protection Society.
- Water Sciences and Technology Association.
- Islamic Heritage Society.
- ACI International.
- ACI-Kuwait Chapter.

Hobbies: Sports and reading



Kuwait Foundation For Advancement of Science The Scientific Centre *A Project with Vision, Innovation and Culture*



ACI – Kuwait Chapter presents the *Award of Excellence* to a Project in recognition of outstanding work in Concrete Construction and Practices within Kuwait.

The Scientific Center Project was envisioned to be “A Gift to the people of Kuwait that Symbolizes the Nation’s Commitment to Scientific Education and Environmental Awareness.”

The Center houses an Aquarium, Discovery area, Marina and an I-Max Theater. They were built mainly of concrete and detailed to signify the rich culture and heritage of Kuwait.

The design faced concrete challenges:

- Severe exposure to sulfate & chloride.
- Unusually high loading.
- Difficult ground conditions.
- Quality finish is essential.

Concrete solutions used:

- Use mass concrete & eliminate reinforcement where possible.
- Set up for Cathodic-Protection and constant monitoring for corrosion.
- Use Ground Granulated Blast Furnace Slag for first time in Kuwait.
- Use Calcium Nitrite corrosion inhibitors.

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Hamid A. Shuaib *Over 40 Years of Contribution & Devotion*

ACI– Kuwait Chapter presents the *Award of Achievement* to an individual in recognition of outstanding contribution in the field of concrete in the State of Kuwait.

This year, Mr. Shuaib was selected as the Award's recipient because of his valuable contribution to the engineering community and Kuwait's society.

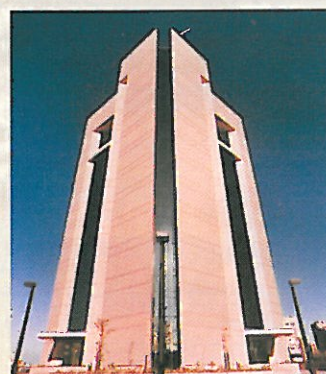
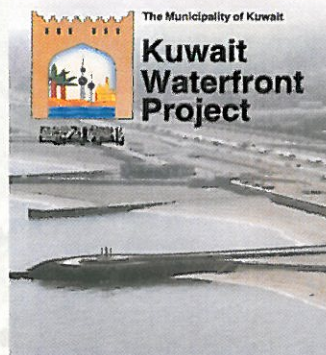
After receiving his Diploma in Architecture from Oxford College, Mr. Shuaib worked for Kuwait Municipality for 20 years where he became Chief Architect.

For 20 more years, Mr. Shuaib worked in the private sector where, as a partner in Pan Arab Consulting Engineers, he was involved in the design of many prestigious buildings.

What makes Mr. Shuaib special is his Public Service and involvement with not-for-profit organizations in Kuwait:

- *Kuwait Society of Engineers*, President from 1965 to 1971.
- *Kuwait Society for Protection of Environment*, Founding Member & President.
- Member of the *Supreme Housing Council and Supreme Planning Council* of Kuwait.
- *Kuwait Heart Foundation*, Founding Member
- *Kuwait Society for the Handicapped*, Founding Member.
- Represented Kuwait at many regional and international functions, such as UN conference on Human Settlement and Arab Town Organization.

[www. acikuwait.com](http://www.acikuwait.com)



ACI-KUWAIT CHAPTER THANKS OUR ORGANIZATIONAL MEMBERS.
 Their support and willingness to share knowledge is appreciated.

Your Organization Logo could be here!



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