Concrete News

Kuwait Chapter

Volume 15 -No. 1

June 2012 - December 2012





Concrete News

Concrete News is published periodically by ACI-Kuwait Chapter for sharing information, promoting exchange of technical knowledge among members, and enhancing the Chapter's position within the engineering community

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Mr. Bader Al-Salman

From the President's Desk

We at ACI Kuwait Chapter are immensely proud of our achievents over the years, being a voluntary professional society serving the construction sector in Kuwait and the concrete industry in particular.

The crown of our activites is the Annual Awards Ceremony which we held in mid-2012 under the patronage of His Excellency, the Minister of Electricity and Water and Minister of State for Municipality Affairs, Eng. Abdulaziz Al-Ibrahim. It was a very successful event and you will find in this issue a coverage of the ceremony activities. This issue also presents other activities, including technical seminars and site visits.

This issue includes for the first time an article by an ACI Kuwait Chapter member. We are thankful for Mr. Abdul-Hameed Darwish from KEO for his contribution and we are hoping that this will encourage for other colleagues to follow suit and contribute with articles and disseminate technical knowledge and experiences.

We hope you will find this issue useful and informative. Needless to say, we welcome all your comments and suggestions toward further improvement.

About ACI



The three main bodies of the Chapter are its Directors, Committees, Members.

Board of Directors

Members of the Board of Directors are elected by the Members of the Chapter after being nominated by the Namination Committee. There are eleven members of the Board of Directors:

The terms of office of the President and the Vice - President cover a maximum of one year. The Directors are elected every year to serve a three-year term.

Board of Directors 2012-2013

President : Mr. Bader Al-Salman
Vice President : Dr. Saud Al-Otaibi
Past President 1 : Mr. Ali Al-Abdullah
Past President 2 : Dr. Moetaz El-Hawary
Past President 3 : Mrs.Hayfaa AL-Mudhaf
Director : Mr. Abdul Wahab Rumani

Director : Mr. Mansoor Rao
Director : Dr. Khaldoun Rahal
Director : Dr. Hasan Kamal
Director : Mr. Mohammad Harb
Director : Mr. Mousa Al-Sarraf

Technical Committee

Chairperson Dr. Moetaz El-Hawary
Member Dr. Hasan Kamal
Member Dr. Khaldoun Rahal
Member Mr. Abdel Wahab Rumani

- * Identifying technical topics of interest to Chapter Members and arranging seminars, short courses and workshops on various topics.
- * Reviewing and submitting to Chapter members of ACI International the committee reports of relevance to Kuwait.

Reviewing proposed revision of ACI Standards and submitting reviewed comments to the Chapter's Board of Directors for submission to ACI International.

* Promoting local research and testing programs to resolve technical issues of importance for durable concrete construction in Kuwait.

Membership Committee

Chairperson Mr. Mansoor Rao Member 1 Mr. Abdul Wahab Rumani

Member 2 Mr. Aziz Mamuji

Member 3 Mr. Sayed Saadat Salman Shah

Member 4 Mr. Moath Al-Manayes

- * Recruting new individual members and organizations.
- * Issuing and renewing membership identity cards.
- * Publishing and updating chapter directory of membership.
- * Facilitating interaction among members and communicating to the Board of Directors and other established student chapters.

About ACI



Publication Committee

Chairperson Dr. Saud Al-Otaibi

Member Mr. Yousef A. Benawadh

Member Mr. Nezar Nazzal

Member Mr. Aziz Mamuji

- * Publishing the periodic newsletter covering the Chapter's activities and providing general information of use to Chapter members.
- * Printing and distributing copies of technical reports to Chapter members, as well as to interested individuals and concerned bodies.
- * Preparing meeting reports and Chapter news to submit for publication in the Concrete International Magazine.

Social Committee

Chairperson Egn. Dana Drobiova

Member Eng. Mansoor Rao

Member Eng. Nezar Nazzal

Member Eng. Satya Hany Awad

Member Eng. Muhammad Ahsun

Member Eng. Syed Saadat Salman Shah

* Organizing annual recreational activities for Chapter members.

* Arranging participation of the Chapter for selected national events.

* Organizing field trips to major contruction projects/industries.

Training Committee

Chairperson Dr. Khaldoun Rahal

Member Dr. Zafar Sakka

Member Dr. Hasan Kamal

Member Dr. Moetaz El-Hawarr

Member Dr. Moetaz El-Hawarry Member Mr. Mohamed Ahsun The training committee serves the objectives of the Chapter by organizing training courses and workshops.

Nominating Committee

Chairperson Mr. Ali Al-Abdullah
Member Mr. Khaled Ahmad
Member Mr. Yaser Abdel Monem
Member Mr. Adel Abdel Tawab
Member Dr. Mohamed Shalaby
Member Mrs. Suad Al-bahr

* The Nominating Committee selects individuals who have the interest and the willingness to serve, as well as those possessed of leadership qualities for selection to the Board of Directors. The committee submits their names before the annual general assembly for selection by Chapter members.

Spot Light



Dr. ZAFER SAKKA

Zafer Sakka is a senior lecturer in the Engineering Degree Department at the Australian College of Kuwait (ACK). He has been working with ACK since September 2009. He was born in Kuwait in 1967 and obtained his BSc and his first MSc degree from Kuwait University. In 2000 he moved to UAE to join the American University of Sharjah (AUS). He obtained his second MSc in 2005 in Engineering Systems Management. He obtained his PhD degree in Structural Engineering from the University of New South Wales (UNSW) in Sydney, Australia. Dr. Sakka is married and has 4 children.

Dr. Sakka has worked in the industrial and academic fields. As an academic he worked for the ACK, UNSW, AUS, and Kuwait University. As a professional, Dr. Sakka worked for Hyder Consulting in Sydney and Schlumberger. During his career, Dr. Sakka has worked on several landmark projects in Kuwait, UAE, and Australia. Dr. Sakka has more than 20 publications in the areas of structural engineering, construction materials, construction management, and engineering education.

As an academic, his teaching philosophy focuses on establishing a strong bond and integration between theoretical studies and professional practice. He achieves this by implementing project based learning, exposing students to real life projects and case studies, and by exposing them to construction sites, professional practices and construction techniques.



Education

2005 - 2009	PhD in Civil Engineering – Structural - University of New South Wales – Sydney Australia
2003 - 2005	M.Sc. in Engineering Systems Management - American University of Sharjah – UAE
1993 - 1997	M.Sc. in Structural Engineering - Kuwait University - Kuwait
1985 - 1990	B.Sc. in Civil Engineering - Kuwait University – Kuwait

Experience

Since Sep. 2009	Assistant Professor (Senior Lecturer) in Civil Engineering - Australian College of Kuwait (ACK)
Since Sep. 2009	Honorary Research Associate in Civil Engineering - University of Tasmania (UTas) – Australia
20082009-	Structural Engineer - Hyder Consulting – Sydney - Australia
2005 - Nov. 2008	Tutor - Civil and Environmental Engineering, University of New South Wales
2000 - 2005	Lab Instructor - Department of Civil Engineering, American University of Sharjah, UAE
1996 - 2000	Assistant Chief Engineer - Department of Civil Engineering, Kuwait University, Kuwait
1995 – 1996	Lab Engineer - Department of Civil Engineering, Kuwait University, Kuwait
1993 – 1995	Scientific Assistant - Department of Civil Engineering, Kuwait University, Kuwait
1992 – 1993	Structural Design and Supervision Engineer - Experts Consultants, Kuwait
1991 – 1992	Field Engineer - Schlumberger Wireline and Testing, Egypt and Syria

Honors and Awards

UPA (University Postgraduate Award) from the UNSW (20052009-) Recipient of RMC (Research Management Committee) grant at the UNSW to attend a conference. Recipient of two Faculty Research Grants - AUS; as Co-I, 2002 and 2003.

Affiliations

The Institute of Engineers, Australia ACI – Kuwait Chapter, Kuwait Kuwait Society of Engineers (Consultant), Kuwait

Annual Awards Celebration 2011 - 2012

Keeping up with the tradition of American Concrete Institute, Kuwait Chapter, the Annual Award Banquet was held on 28th May 2012. The event was held under the patronage of His Excellency, Minister of Electricity and Water and Minister of State for Municipality Affairs, Eng. Abdulaziz Al-Ibrahim at the J W Marriot Hotel. It was attended by a large number of colleagues from various disciplines of the building industry, along with the ACI members. This year's ceremony program included three sections which distinguished it over previous celebrations:



CERTIFICATES OF APPRECIATION

Presented to a Board Member who has completed 10 or more years of distinguished service to the ACI-Kuwait Chapter. This year, three Members were Honored, two who served for 13 years (and counting) and one who served 10 years. The recipients were:

- Mr. Abdul Wahab Rumani, Quality Control Manager Kuwait British ReadyMix Company.
- Prof. Khaldoun Najib Rahal Professor of Structural Engineering & Concrete Technology, Kuwait University.
- Eng. Ubed Arain, Chief Executive Officer & Managing Director, Gulf Consult.









AWARD OF ACHIEVEMENT

The Award of Achievement, presented by ACI-KC to an individual to recognize outstanding contribution to the Engineering Community in Kuwait, was given to Professor Husain Al-Khaiat in recognition of his Contributions towards the Advancement of Concrete Technology in the State of Kuwait.

AWARD OF EXCELLENCE

The Award of Excellence presented to a local outstanding project, was given to Al Hamra Project for Setting New Standards for Landmarks in the State of Kuwait. The award was given to Al-Hamra Real Estate Company, the Owner and Developer of the project.











Award of Achievement 2011-2012

Professor Husain Al-Khaiat

Contributions towards the Advancement of Concrete Technology in the State of Kuwait

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

This year, 2011–2012, the award was presented to a structural engineering and concrete-technology specialist, Professor Husain Al-Khaiat who has a significantly contributed towards the advancement of concrete construction and concrete knowledge in Kuwait.

Professor Husain Al-Khaiat was born in Kuwait, went to Ibn-Sina Elementary School in Deayah, completed his middle school studies in Shaab and finished high school studies in Al-Roumi School in Deayah. He studied Civil Engineering at Pennsylvania State University in USA.









Professional Career:

- 1976: Returned to Kuwait to work as a Site Engineer in a prestressed concrete plant for the National Industries Companies .
- 1977: Joined the Civil Engineering Department at Kuwait University as a Research Assistant, where he was awarded a scholarship to travel and obtain his graduate degrees
- M. Sc. Degree in 1979, Analysis of Beams on Elastic Foundation by the Initial-Value Method.
- Ph. D. Degree in 1983, Analysis of Plates by the Initial Value Method.
- Joined the Civil Engineering Department at Kuwait University in 1983 as an Assistant Professor (Structural Engineering and Concrete Technology).
- In 1991, he was elected Chairman of the Department of Civil Engineering at Kuwait University, and served a four-year term. This was a critical stage after the liberation of Kuwait from Iraqi occupation.
- In 1992, he was promoted to the rank of Associate Professor.
- Between 1995 and 1999, he was Vice Dean for Consultations and Planning, College of Engineering and Petroleum, Kuwait University.
- In 2001, he was promoted to the rank of full Professor
- Between 2002 to 2005, Prof. Al-Khaiat served as the Vice Dean for Academic Affairs at the College of Graduate Studies, Kuwait University.
- In 2011, he was voted and appointed Dean of the College of Engineering and Petroleum.
- In 1997, he and a team of professional engineers initiated the ACI-Kuwait Chapter. Prof. Al-Khaiat was the First President of the ACI-KC and served in this position in 97 and 98. The chapter is now 16 years.









Award of Excellence 2011-2012

Al Hamra Tower Project

Setting New Standards for Landmarks in the State of Kuwait

ACI – Kuwait Chapter presents the Award of Excellence to a project in recognition of outstanding work in concrete construction and practices within Kuwait.

The Award of Excellence 2011-2012, was presented to Al-Hamra Tower Project for being a landmark tower in sculptural form it has put Kuwait on the map of great skyscrapers of the world, and sets a new standard for what can be proudly described as a landmark.

Al-Hamra Tower is located at the intersection of AbdulAzeez Al-Saqr (Al-Shuhada) Street and Jaber Al-Mubarak Street in Sharq (on the site previously occupied by Al-Hamra and Al-Fardous movie theaters).

Building Information

Business Tower: 175364 m² of Office Space; 2353 m² Sky Lounge; and 4574 m² Spa.

• Luxury Center: 41388 m²

• Multi-storey Car Park: 65968 m². In total 2000 parking spaces are provided in 2 basements and nine upper levels.

• Tallest building in Kuwait

• Tallest office building in Middle East

• Tallest concrete structure in Middle East

Second tallest building in Middle East

Second tallest concrete structure in the world

• Fifth tallest office building in the world

Twelfth tallest building in the world





with International Link

The Award was presented to:

The Owner: AL-HAMRA REAL ESTATE COMPANY - Mr. Khalid Al-Othman,

Vice Chairman and CEO

Co-recipients of the Award:

General Contractor: Ahmadiah Contracting and Trading Co.

Mr. Tony Najjar, Managing Director.

Tower Design Consultant: Skidmore Owings & Merill LLP -

Mr. Aaron Mazeika, Associate Director.

Local Consultant: Al-Jazera Consultants - Arch. Ahmad A. Al-Jihayem, President.

Concrete Supplier: Ahmadiah Contracting and Trading Co. - Mr. Ayad Al-Thuwainy, Vice Chairman.

Project Manager: Turner Construction International LLP - Mr. Ali Odeh

CEO, Middle East.













Benefactors... Sponsors... Friends...



Your support and your willingness to share knowledge are highly appreciated





















































Benefactors... Sponsors... Friends...



















شركة مختبرات إنكو الصناعية (شمكم) رأس المال المدفوع ٢٠٠,٠٠٠ دك

INCO - LABS (KSCC) Paid up Capital K.D. 600,000









































Technical Activities:

Post-Tensioning Solutions Workshop

The Technical Committee of the ACI–Kuwait Chapter, in association with ELEMKA, organized a technical workshop entitled Post-Tensioning Solutions. The workshop covered three different themed seminars as follows:

- An overview of External Prestressing, Bridge Construction Methods and associated PT issues: Presented by Prof. I. N. Sigalas/NTUA, National Technical University of Athens-GREECE Civil Engineering Department.
- ALGA CABLE PT Solutions: Presented by ALGA (Italy), Eng. Marco Bizzozero (Technical and Commercial Manager).
- PE and PP Post-tensioned Ducts: Presented by PES.TEC (Germany), Eng. Holger Jung, Technical and Commercial Manager

The event took place on Wednesday, 30th May 2012 at Holyday Inn Hotel, Salmiya.













Local Connection with International Link













Technical Activities:

The First Middle East Workshop for the Manufacturing of FRP Rebar (C-Bar) for Reinforcing Concrete Structures



On Wednesday, 7th November 2012, the Technical Committee of the ACI–Kuwait Chapter sponsored, organized, participated in and conducted a technical workshop under the title of "The First Middle East Workshop for the Manufacturing of FRP Rebar (C-Bar) for Reinforcing Concrete Structures". The event was arranged by Alarjan Company and was held in the Movenpick Hotel. The event was co-sponsored by the Kuwait Society of Engineers and KPMG; and was arranged to introduce Kuwait's construction industry to Fiber Reinforced Polymer (FRP) Rebars, as a substitute to conventional steel bars. FRP bars are stronger and lighter than steel, and are more













sustainable and durable as they are not subjected to corrosion. The material will be manufactured in Kuwait by Alarjan Company and Marshall Composite Technologies, which is the leading manufacturer of this material in the USA. Production is expected to commence in 2013.

The workshop started by a welcome note from Alarjan and Marshall Composites, followed by a welcome by the US Embassy which was read by Mr. Dao Le. A presentation entitled "Overview of Composites, ACI 440 and Life Cycle Costing" was thereafter made by Mr. Charlie McClaskey, Senior Consultant, Marshall.

Subsequent presentations included:

"Feasibility Study Highlights- Implementation in Kuwait and GCC/MENA", by Dr. Rasheed Al Qenae, KPMG. "Kuwait Durability and Sustainability Issues and Research", by Dr. Moetaz El-Hawary, Chairperson of the Technical Committee, ACI-KC.

"Use of FRP Materials for Infrastructure, North American Bridge Database" by Mr. Tom Ohnstad, Director of Engineering. Marshall Composites and "Designing with GFRP Rebar" by Mr. Derek Schesser, University of Miami. The presentations were followed by discussion and lunch.

In order to assure maximum benefit to engineers, the entire morning session was repeated in the afternoon. The afternoon programme was followed by a question and answer session with Dr. Brahim Benmokrane of the University of Sherbrooke, Canada, via video conference.

The event attracted a large number of ACI-Kuwait chapter members, and an interested audience representing the public and private sectors. Attendance during the two sessions exceeded 150 delegates.







Technical Activities: Site Visit

The Social Committee of ACI-KC organized a visit to National Industries Company (NIC) for Building Materials, on Saturday, 8th December 2012.

National Industries Company (NIC) was founded in 1960 and specializes in manufacturing and marketing building materials and infrastructure products. NIC also has a concrete mix plant which can provide concrete mix up to K-800 and it is one of the largest concrete and construction material suppliers in Kuwait.

The ACI-KC members were welcomed by NIC's factory team which comprised their professional engineers and quality controllers. They accompanied and guided us through the factory tour and explained facts about their different plant, machinery and processes used to produce high quality products.

The facilities toured by the members included:

- Concrete Ready-mix Plant
- Reinforced Concrete Pipes Plant
- Pavers Plant
- Colored Cement Tiles Plant
- Precast Kerb Stone Plant

Members were impressed by the sophisticated environment and operational capabilities of NIC's manufacturing facilities. During the visit, members were given the opportunity to ask questions regarding NIC's different products and equipment, and all were satisfied with the responses. The trip ended up with a buffet lunch hosted by NIC.















The visit was very informative and all members enjoyed the walk through the factory.

The ACI-KC Social Committee thanked NIC's team for making the event successful. Special thanks to Eng. Mohammad Ebraheem, the Ready-mix Manager; Eng. Nasir Al Saleh the Q.A/Q.C Engineer; Eng. Morad Majde, the Ready-mix Engineer; Mr. Fagees Faleel, Senior Q. Controller; Mr. Reda Al-Khamees Asst. F.Q. Controller; & Mr. Suresh, Asst. F.Q. Controller for their valuable time.











Social Activities: Dinner Party

The Annual Dinner of ACI Kuwait Chapter was held on December 9th, 2012 at the Regency Palace Hotel, sponsored by OHA Consultants. The event was attended by over fifty members and their guests.

The event started with a welcome speech by Ms. Dana Drobiova, Chairperson of the Social Committee, followed by anaddressby Mr. Bader Al-Salman, President of the ACI-KC. He thanked everyone on behalf of ACI-KC for their attendance.

Special features of the evening were the games activities hosted by Syed Saadat Salman Shah, a Social Committee member. Three games were played and winners were awarded prizes. Two lucky guests won prizes in a raffle draw.















The enjoyable evening ended with words of gratitude from Ms. Dana Drobiova and a warm wish for a more productive year ahead for ACI-KC and its members. OHA Consultants were acknowledged and thanked for sponsoring the event.











Article

STRUCTURAL DESIGN OF KUWAIT BUSINESS TOWN TOWERS

Abdul-hameed Darwish

The Kuwait Business Towers project comprises two towers of 40 and 36 storeys respectively (Figure 1).

The plots for the project are long and narrow. In order to achieve efficient utilization of the available land space, the architectural solution involves eccentric cores located on the edge of the buildings.

The main elevations are sloped back towards the core and have a slight angle of 20° at each floor. The structure is formed mainly in cast-in-place concrete, comprising post-tensioned (PT) slabs, reinforced concrete columns and reinforced concrete shear walls arranged around the elevator/staircase/utilities core. The core structure provides resistance to both gravity and lateral loads.

The perimeter columns are sloped in two directions to form the sloping/skewed elevations. The slenderness of the superstructure was such that it was necessary to carry out wind tunnel tests in order to derive the wind loading on the building. Tests were carried out for structural loads, cladding design pressures and pedestrian comfort. The testing was done by wind engineering consultants, BMT Fluid Mechanics Limited. The combination of the eccentric core, together with the permanent lateral force induced by the sloping façade results in an uneven distribution of bearing pressure under the foundation. This could lead to an unacceptable risk of excessive differential settlement and consequential tilting of



Figure 1





with International Link

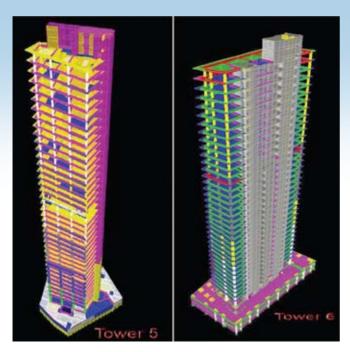


Figure 2

Following cost-comparisons between various alternative foundation systems, it was found that the most cost effective solution was to utilize a piled raft foundation. The cost saving percentage for piled raft foundation in comparison with fully piled foundation is tabulated below.

Tower No.	Piles	Pile Tests	Raft Foundation/ Pile Caps	Trimming of Piles
Tower 5	36%	48%	-3%	41%
Tower 6	44%	54%	-19%	32%

The overall savings on the cost of the foundations was in the order of 16%. The total number of piles was reduced from 239 for the fully piled scheme to 151 for the piled raft foundation. The saving in pile numbers allowed for faster construction and subsequent occupation of the building. This piled raft solution behaves as an interactive composite foundation system consisting of the three bearing elements of piles, raft and subsoil and requires specialized mathematical modeling techniques to analyze the system. KEO worked with specialist geotechnical consultants Golder Associates to develop the design through from concept to working drawings.

The methodology for the piled raft design involved an iterative process between KEO's Structural Engineers and the geotechnical consultants.

The reactions from the superstructure were fed in to the geotechnical analysis models to obtain initial spring values for the raft/soil and the pile/soil elements of the foundation.

Alternative configurations of the foundation system were considered and analyzed.

The results of this initial analysis were studied and the design was adjusted to limit soil pressure, pile loads and total/differential settlements within acceptable values.

Following this, the spring values were fed in to the structural analysis model and an iterative process of adjusting both the models was carried out until there was good agreement between the results of the geotechnical and structural analysis models.

At this stage the geotechnical and structural design of the piles and raft was finalized and issued for construction. During construction the piles were successfully load tested using the Osterberg Cell Testing Method to ensure that their geotechnical behavior was in line with that predicted by the analysis models (Figure 2).

The design of the KBT project utilized state-of-theart structural and geotechnical modeling and design techniques to ensure that the Architect's vision of a striking addition to the skyline of Kuwait was achieved with optimized superstructure and foundation systems.

ACI-KC Press



Local Connection with International Link



















The American Concrete Institute (ACI)-Kuwait branch organized recently the annual unique project awards cer-mony at the JW Marriott Hotel for prominent personalties who have greatly contributed to the construction sector Kuwait. Director of the institute Eng Ali Abdullah and of the personalities attended the event. Top and above: Some pictures taken at the event.



برج الحمراء نال جائزة التميز للمشاريع المعهد الأميركي للخرسانة كرم شخصيات مساهمة في البناء



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Categories of Membership					
Please check the category of mem	bership you are applying for an	d provide the appropriat	te dues as des	cribed below:	
☐ Organizational: KD 100/Year	. (A Firm, corporation, agency of	of government, society, e	etc.).		
☐ Individual: KD 15/Year(A pe	erson who is a member of ACI In	nternational).			
☐ Affiliate:Please check the categ	gory of membership you are appl	lying for.			
☐ Student: KD 5/Year (Full time	ne student at an Educational Inst	itution)			
Member Profile Information	(Please check only one box	in each section)			
☐ Officer, Top Management	☐ Engineeri	ng Services	□ Te	esting Laboratory	
☐ Administrative, Operating Man	agement	☐ Constructing Services		☐ Quality Control	
☐ Plant, Production and Construct	ion	☐ Architectural Services		☐ Research Services	
Design engineering Managemen	nt	☐ Management		☐ Concrete Products	
Architectural Engineering Servi	ces	☐ Design Engineer		☐ Educators	
☐ Chemicals and Allied Products	☐ Material I	☐ Material Engineer		☐ Student	
☐ Contructons Machinery and Equ	ipment	☐ Plant Engineer		☐ Utility	
☐ Concrete Block and Brick	☐ Research	☐ Research Engineer		☐ Architect	
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Are you intrested in joining an AC	I Chapter Committee?	() YES		() NO	
Method of Payment					
□ Cash		Cheque (Payable to AC	I-Kuwait Cha	pter)	
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For ACI Kuwait Ch	apter use only:	-			
Membership No.		Date:			
	Detailed Information Please Co	ntact:			



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Kuwait Chapter



ACI INTERNATIONAL

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

PURPOSE OF THE ACI KUWAIT CHAPTER

The purpose of the chapter is to further the chartered objective for which the American Concrete Institute was established essentially 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 design, construction, manufacture, use and maintenance of concrete products and structures.

HOW THE CHAPTER FUNCTIONS

The ACI Kuwait Chapter is approved and authorized by the Board of Directors of ACI International to provide the means for furthering the chartered 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 is operated through its committees which are made up of volunteers from the membership. Programs are developed by the committees to meet the needs of Chapter members. The Chapter may hold several meetings each year and engage in activities that may include:

Sponsoring educational seminars, short courses or workshops.

Holding or sponsoring certification training courses and examinations.

Publishing technical information and newsletters.

Conducting awards, programs for local concrete structures.

Special social events.

BENEFITS TO CHAPTER MEMBERS

Attend seminars, short courses and workshops organized by the Chapter at reduced fees.

Free use of ACI publications, which are supplied to the Chapter by ACI International and are kept in the Chapter library. The Chapter is an important forum for members to interact with colleagues and identify potential sources for cooperation in addressing specific technical problems.

HOW TO JOIN THE ACI KUWAIT CHAPTER

To become a member of the Kuwait Chapter please complete the attached membership application form. Different categories of membership are available. You will receive a copy of the Chapter Bylaws upon becoming a member. The work of the ACI Kuwait Chapter is a mutual interest effort and its success depends upon your active participation.

For detailed information please contact:

ACI Kuwait Chapter-

P 0. Box 12608 Shamiah 71657 Kuwait

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