

Asian Concrete Federation E-Newsletter

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1. Message from ACF President: Asian Concrete Federation Reborn in 2011



Prof. Tamon Ueda, ACF President

The year of 2011 was a special year to many people in the world. As natural hazard, the Great East Japan Earthquake happened on 11 March leaving catastrophic damages by tsunami and enormous impact to the whole world by the nuclear power station accident, and the historical flood in Thailand caused the social and economic chaos not only locally but also globally. Human being shared the lessons that we cannot control the nature and that engineers still need efforts to mitigate disaster.

The year 2011 was also special to the Asian Concrete Federation. We formally started the merger process between ACF and International Committee on Concrete Model Code for Asia (ICCMC). After the merger ICCMC has been transformed to be the core of the new Technical Committee in ACF (see Fig.1). ICCMC has been active to produce model codes which are the model of national code in the region as well as international code such as ISO code.

On the other hand ACF has been not only supporting ICCMC's code drafting activities but also other technical activities, such as preparing the white paper on concrete in Asia and taking the initiative for sustainability on concrete. The enhancement of technical activities is the primary target of the reborn ACF. You are kindly invited to take a part of the Technical Committee activities.

Another primary target is the enhancement of information dissemination. In Asia there are tremendous construction activities, many of which are related to concrete structures. The construction information in respective Asian countries is highly demanded by the industry for international projects. However no information platform on concrete industry is available. The white paper on concrete industry in Asia, consisting of statistical data in various countries, which is prepared by ACF, would comply with the demand.

There have been several attempts of international journal for high quality paper in Asia, which are issued by domestic organizations. However, majority of papers on concrete technology authored by Asian are still found in the other international journals edited in Western countries. This implies that we may need a truly international and prestigious journal in Asia. Being a sole international organization in the region, ACF is exploring the feasibility to issue an international journal in collaboration with the domestic organizations which issue the international journal.

ACF International Conference, which had been held four times, provides a platform to exchange the latest information on concrete research and technology. ACF will make the conference proceedings in the past available to public in the near future.

Sustainable infrastructure is a common issue in many countries. As the largest consumer of construction materials in the world, Asia should take the leading role on this issue. After presenting "ACF Taipei Declaration on Sustainability" in December 2010, Sustainability Forum which is chaired by Prof Koji SAKAI was set up in 2011 as the first major step which the reborn ACF took.

Due to the big economic and technological diversity in Asia, the feasible way to achieve sustainability in concrete industry is varying among the countries, meaning that Asia could show good models to achieve the goal to the rest of the world. ACF would put the efforts continuously for this important issue.

On behalf of the present executive team, consisting of Prof Dong-Uk Choi as Vice President for Policy, Prof Somnuk Tangtermsirikul as Vice President for Technical, Prof Y. W. Chan as Treasurer and Prof Taketo Uomoto as Technical Board Chair, I would be grateful if you could give continuous support and participation to the reborn ACF.

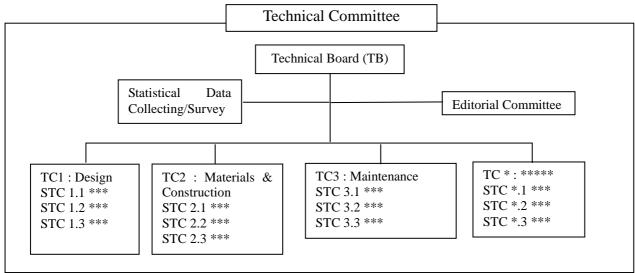


Figure 1: Organizational Structure of Technical Committee

2. ACF Major Activities in 2011 and Future Plans

In the year 2011, ACF has held various activities as can be seen in table 1. ACF also plan to carry out many activities (Table 2), aiming to stabilize the ACF organization and to bring more benefits to its members.

Activities	Time	Notation
ACF Presidents and Vice Presidents Meetings	Apr. 23, 2011	Bangkok, Thailand
Mergence of ICCMC into ACF	Since April, 2011	ICCMC to become the core of the new Technical Committee in ACF
1 st ACF Sustainability Forum	Apr. 22-23, 2011	Bangkok, Thailand
7 th ACF EC Meeting	Jul. 13 – 14, 2011	Osaka, Japan
ACF-JCI-VCA Joint seminar on Control of Thermal Cracking of Mass Concrete	Sept. 26-30. 2011	Hanoi & Hochiminh, Vietnam,
2 nd ACF Sustainability Forum	Nov. 3-4, 2011	Seoul, Korea

Table 1: Major activities of ACF ir	n 2011
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Table 2: ACF	future plans	

Activities	Notation
Organizing the 5 th ACF International Conference	October 24-26, 2012, Pattaya, Thailand LOC chaired by Prof. Somnuk, TCA
Settlement of the ACF Headquarter in Bangkok,	Completed by the end of 2012
Thailand	(Taken care by Prof. Somnuk, TCA)
Issuing international journal of Asia region	Under consideration by ACF leaders
Publishing the white book on concrete industry in Asia	Survey being carried out by Prof. Noguchi (JCI)

3. Report on 1st and 2nd ACF Sustainability Forum

The ACF Sustainability Forum (chaired by Prof Koji SAKAI) meetings were held to actively pursue and realize the spirit of the following 2010 ACF Taipei Declaration on Sustainability.

ACF Taipei Declaration on Sustainability (Nov. 2011)

1. ACF recognizes the importance of the Asian concrete industry's role in achieving global sustainable development as the consumption of concrete keeps increasing

2. ACF realizes the need for sustainable development by reducing resource consumption and carbon footprint in the life cycle of a concrete structure.

3. ACF encourages the concrete industry to make efforts for the well-being of human society by providing safe, serviceable, and environmentally-friendly concrete structures.

4. ACF promotes the concrete industry to employ the best available technologies and make technological innovations in the future for sustainable development.

5. ACF informs concrete industry and the public of the importance of concrete structures in sustainable development.

6. ACF collaborates on sustainable development with other international associations in the concrete society.

3.1 Brief Report on the 1st ACF Sustainability Forum

Time: Apr. 22nd and 23rd, 2011
Venue: Thailand Concrete Association (TCA), Bangkok, Thailand
Participants: K. Sakai (Chairman, Japan), D. Choi (Secretary, Korea), T. Noguchi (Secretary, Japan), Y.W. Chan (Taiwan), N.V. Chanh (Vietnam), T.C. Liu (Taiwan), C. Park (Korea), T. Phenrat (Thailand), P. Sukontasukkul (Thailand), T. Ueda (Japan)

The forum consisted of the presentations by the delegates of five participating countries and discussions on the future forum activities. Following is the six declarations and the corresponding results of discussions shared by the forum participants:

- 1. ACF recognizes the importance of the Asian concrete society's role in achieving global sustainable development as the consumption of concrete keeps increasing.
 - → ACF needs to know the stochastic data on resource consumption and CO₂ emission. Therefore the first step is to collect sustainability data.
- 2. ACF realizes the need for sustainable development by reducing resource consumption and carbon footprint in the life cycle of a concrete structure.
 - → ACF needs to define barriers through gathering information from industries and by conducting surveys.
- 3. ACF encourages the concrete industry to make efforts for the well-being of human society by providing safe, serviceable, and environmentally-friendly structures.
 - → ACF needs to clearly understand the current state of the industry and also provide the industry with the latest information through seminars.
- 4. ACF promotes the concrete industry to employ the best technologies and make technological innovation in the future for sustainable development.
 - → This will be conducted through seminars to be held based on the collected data. It is also important to identify the best available technologies as well as the knowledge gaps.
- 5. ACF informs the concrete industry and the public of the importance of concrete structures in sustainable development.
 - → ACF will make a document in which the importance of concrete/construction industry is further explored and clearly explained.
- 6. ACF collaborates on sustainable development with other international associations in the concrete society.
 - → ACF needs to have collaborations with leading organizations such as JCI, fib, and ACI.

3.2 Brief Report on the 2nd ACF Sustainability Forum

Time:	Nov. 3 rd and 4 th , 2011
Venue:	Korea Concrete Institute (KCI), Seoul, South Korea
Participants:	K. Sakai (Chairman, Japan), D. Choi (Secretary, Korea), T. Noguchi (Secretary, Japan), Y.W. Chan (Taiwan), N.V. Chanh (Vietnam), Y. Duinkherjav (Mongolia), D. Hardjito (Indonesia), J. Kurian (India), C. Park (Korea)
Observers:	T. Sui (China), T. Ueda (ACF President, Japan), J. Sim (KCI President, Korea), K. Yang (Chairman of KCI Green Committee, Korea), T. Kang (Member of KCI Green Committee, Korea)
Lecturer:	C. Chae (KICT, Korea)

KCI Green Committee for Concrete invited delegates from 8 countries who gathered together again in Seoul for the second meeting of the ACF Sustainability Forum. The forum meeting consisted of presentations by the delegates on the first day and the follow-up discussions on the future activities on the second day.

A special presentation was provided by Dr. Chae of KICT, Korea, on "Various Korean Governmental Systems to promote Sustainability in Construction Sector." Asian stochastic data on sustainability which were exchanged and gathered are going to be accessible by the ACF members through ACF website in the near future. For member countries which did not sign the declaration but will join in the forum activities, ACF need to circulate the declaration and make request so that they officially agree with the declaration. Some difficulties in answering the sustainability questionnaire were identified such as the following:

- In Indonesia, India, Vietnam and China, the data on aggregate is difficult to be collected because the local government is controlling such data.
- In many countries including Korea and Taiwan, data on consumption of chemical admixtures are not maintained by a responsible organization.
- In some countries including India and Indonesia, site mixing is still popular which causes the quality control problems. Site mixing also makes it very difficult for the sustainability data to be quantified.
- As it will be difficult to collect direct data in some countries, certain assumptions and estimations may need to be allowed. For example, the data of other concrete constituents may be calculated based on the consumption of cement.

In addition to the survey, it was decided to make a short preliminary report on the problems in concrete sector for promoting sustainability. Based on the reports, discussions will be continued at the next meeting. The 3rd forum meeting is planned to be held in New Deli, India, in mid April, 2012.



Photo 1: Participants of the 2nd ACF Sustainability Forum

(Information provided by Prof. Donguk CHOI, Korea)

4. ACF-JCI-VCA Joint Seminar on Control of Thermal Cracking in Mass Concrete

Introduction

The seminar was to enrich the mutual relation between country members of ACF, and to cope with the cracking problem of mass concrete structure, one of the most concerned issues in concrete technology not only in Vietnam, but also in other Asian countries and all over the world.

It was jointly organized by Asian Concrete Federation, Japan Concrete Institute and Vietnam Concrete Association, with the support of the Vietnam State Authority for Construction Quality Inspection. This seminar is the second one since the establishment of ACF, following the success of a similar seminar on cracked concrete (May, 2010, Vietnam). The preparation work started at the end of the year 2010, but was then delayed due to the tremendous earthquake that took place in north-eastern Japan in March, 2011. Fortunately, all involved people, especially those in Japan had finally overcome many difficulties to realize this seminar.

To accommodate a large number of participants, the seminar was organized at two locations in Hanoi (Sept. 27& 28) for participants in northern Vietnam, and in Hochiminh (Sept. 29&30) for participants in southern Vietnam.

Seminar Program

The program for both Hanoi and Hochiminh seminars are shown in the table bellow.

Date and Time	Content	Person in charge
First day		i eroon in ensube
7:00 - 8:00	Reception	Staff
8:00 - 8:20	Opening ceremony	Mr. Hung, VCA Vice President Prof. Sato, Head of JCI delegation Mr. Hoa, Ministry of Construction
8:20 - 8: 30	Program Explanation	Dr. Phan Huu Duy Quoc
8:30 - 9:10	General Introduction	Prof. Ryochi Sato
9:10 - 9:50	Basic Concept of Thermal Cracking Control	Prof. Takafumi Noguchi
9:50 - 10:10	Coffee Break	
10:10- 11:30	Planning for Control of Thermal Cracking	Prof. Takafumi Noguchi
11:30 - 13:00	Lunch Break	
13:00 - 13:40	Execution, Control and Inspection	Dr. Tsutomu Kanazu
13:40 - 14:20	Parameters for Verification of Thermal Cracking	Dr. Makoto Tanimura
14:20 - 14:40	Discussion time	Dr. Phan Huu Duy Quoc
Second day		
7:30 - 7:50	Reception	Staff
7:50 - 9:20	Methods for Verification of Thermal Cracking	Prof. Ippei Maruyama
9:20 - 9:35	Case studies	Dr. Makoto Tanimura
9:35 - 10:35	Coffee Break	
10:35 - 11:25	Discussion time	Dr. Phan Huu Duy Quoc
11:25 - 11:50	Issuance of Completion Certificate	JCI lecturer and VCA leaders
11:50 - 12:00	Closing ceremony	VCA

Table 3: Program of the ACF-JCI-VCA joint seminar

JCI's Technical Support

On technical aspects, JCI Committee on mass concrete (Chaired by Prof. Sato of Hiroshima University) prepared the English version of the Guidelines for Control of Thermal Cracking in Mass Concrete (Translation works completed in July, 2011) .This Guideline was first published in 1986 and revised in 2008 .by Japan Concrete Institute. This time, Vietnamese version of the JCI's Guideline was published and used as the textbook of the seminar.

JCI also selected the most experienced lecturers for the seminar, including

- · Prof. Ryoichi Sato, Hiroshima University
- Dr. Tsutomu Kanazu, Central Research Institute of Electrical Industry
- Prof. Takafumi Noguchi, The University of Tokyo
- Dr. Makoto Tanimura, Taiheiyo Cement Corporation
- Assoc. Prof. Ippei Maruyama, Nagoya University

JCI Committee on ACF Affairs (Chaired by Prof. Noguchi, the University of Tokyo) assigned Dr. Phan Huu Duy Quoc to coordinate the preparation work between JCI, VCA and ACF.

The Outcome and Expectation

Totally, approximately 400 people have participated in the seminar at two locations in Hanoi and Hochiminh city. Most of the participants were engineers working at construction companies and researchers at research institutes.

Many respected experts also came to collect information and showed their strong support, including former presidents of VCA like Prof. Nguyen Manh Kiem (also former minister of construction), Mr. Tong Van Nga (former vice minister of construction), key researchers like Dr. Tran Ba Viet, vice director of Vietnam Institute of Building Science and Technology, Prof. Nguyen Van Chanh of Hochiminh University of Technology.

At the end of each seminar, a Certificate of Completion was issued to each participant to recognize their participation, which means that each participant has gained the basic knowledge on how to deal with thermal cracking problem in mass concrete.

Most of participants at the seminar requested that the English version of the computer software developed by JCI will be developed in the near future to facilitate the actual application of the Guidelines. On behalf of JCI committee on mass concrete, Prof. Sato promised to raise this issue to JCI after coming back to Japan.

It is expected that similar activities will be held more and more under the coordination of ACF and with the cooperation from member countries.



Photo 2: Seminar in Hanoi (205 participants)



Photo 3: Seminar in Hochiminh city (180 participants)



Photo 4: Prof. Sato gave opening speech at the seminar in Hochiminh city

(Written by Dr. Phan Huu Duy Quoc, JCI Committee for ACF Affairs (Japan))



5. Invitation to the 5th ACF International Conference

October 24-26, 2012, Pattaya, Thailand

Asian Concrete Federation was officially established in 2004 along with the recognition of the growth of the Asian Region. It is obvious that the construction activities are concentrated in the region. It is certain that a tremendous amount of research and practical information as well as new technologies are now spreading within this region.

The periodically held ACF International Conferences has been, up to now, well functioned as a place for the information exchange as well as for many other activities such as technical meetings of related committees and social meetings of participants, etc.

The 1st International Conference of ACF was held in Chiang Mai, Thailand on 28 to 29 October 2004, at the same time when the ACF was officially established. The 2nd, 3rd and 4th ACF International Conferences were organized in Bali, Indonesia in 2006, in Hochiminh city, Vietnam in 2008 and in Taipei in November, 2010. With the increasing numbers of presented papers and participants, the ACF international conference has become well known among researchers, academicians and practitioners in the field of concrete and has become one of the major conferences in this area in Asia and other regions.

In 2012, the 5th International Conference of ACF is scheduled to be held in Pattaya City, Thailand from October 24 to 26. It will be hosted by the Thailand Concrete Association (TCA) together with Faculty of Engineering, Chulalongkorn University (80th anniversary celebration) and the Sirindhorn International Institute of Technology (SIIT), Thammasat University (20th anniversary celebration).

Pattaya is one of the most popular tourist destinations in Thailand and is located only about 1.5 hours away from the new Bangkok International Airport (Suvarnabhumi airport) by car.

The 5th International Conference of ACF seeks to be a place for the technical information exchange in the field of concrete as well as for many other activities such as technical meetings of related committees and social meetings of participants, etc. Main theme of the conference is "Novel Concrete Technology for Environmentalism-conscious Design" to unite the expanding construction industry in Asia with the environmentalism-conscious design and sustainability. The important dates of the conference are listed below.

Authors are invited to register and submit abstracts online as well as to find relating further information on the official website $\frac{http://acc.thaitca.or.th/pv1/}{}$.

Last date of Abstract Submission	January 31, 2012
Notification of Abstract Acceptance	February 15, 2012
Deadline for Full Paper Submission	June 1, 2012
Notification of Full Paper Acceptance	August 31, 2012
Deadline for Early Bird Registration	September 15, 2012
Conference Dates	October 24-26, 2012

As the chairman of the Local Organizing Committee, the Vice President of the ACF, the President of TCA, the Deputy Director of SIIT and an alumni of the Faculty of Engineering, Chulalongkorn University, Prof. Somnuk Tungtermsirikul (ACF Vice President) would like to extend his invitation to all of you to participate in this meaningful Conference and to welcome all of you back to the land of smile, Thailand, where ACF was officially established first.

(Information provided by Dr. Phakawat, Thailand)



6. Call for participation to the first International Conference on Concrete Sustainability

May 27-29, 2013, Tokyo, Japan

1. Introduction

Sustainability is an issue of global importance in the 21st century. All industries of all nations have to take action to achieve sustainable development. The concrete industry is no exception, as it uses an enormous amount of resources and energy. However, concrete is also essential for the creation of infrastructure and buildings that form the basis of human socioeconomic activities. We need to utilize concrete in the future by promoting the development of innovative concrete technologies and systems from the perspective of sustainability. The First International Conference on Concrete Sustainability will provide a forum to encourage such developments and to discuss the future of concrete by exchanging the latest information, technologies and ideas.

2. Conference Topics

- Environmental impact reduction technologies (Materials, construction, repair & rehabilitation, demolition, reuse & recycling, CO2-uptake, thermal mass, environmental engineering structures, CO2 capturing, etc.)
- Environmental design, evaluation and systems (Design system, carbon accounting, building information modeling, evaluation tools, LCA, development of evaluation indices, codes, standards, specifications, guidelines, etc.)
- Social and economic aspects
- (Resources management, built environment, aesthetics, LCC, etc.)
- · Case studies of sustainable concrete materials and structures
- Other related topics
- 3. Conference Chair

Chair:Koji Sakai, Kagawa University, JapanCo-chairs:Mette Glavind, Danish Technological Institute, DenmarkAndrea J. Schokker, The University of Minnesota Duluth, USA
Ravindra Gettu, Indian Institute of Technology Madras, India

4. Organizer, Co-organizers and Supporters

• • •	
Organizer:	Japan Concrete Institute (JCI)
Co-organizers:	fib –International Federation for Structural Concrete
	American Concrete Institute (ACI)
	International union of laboratories and experts in construction materials, systems
	and structures (RILEM)
Supporters:	Asian Concrete Federation (ACF)
	Architectural Institute of Japan (AIJ)
	Japan Society of Civil Engineers (JSCE)

5. Important Dates

Submission of abstract	January 1, to May 31, 2012
Acknowledgement of acceptance	Around the end of June, 2012
Submission of full paper	July 1 to September 12, 2012
Acknowledgement of review result	Around the end of January, 2013
Submission of revised paper	By March 31, 2013

6. For more information

Website:	http://www.jci-iccs13.jp/
Inquiries:	Paper Submission Office: iccs13@ics-inc.co.jp
	Registration Office: iccs13-reg@ics-inc.co.jp

(Information provided by Dr. Yuichiro KAWABATA, Japan)



7. Call for participation to the 1st International Conference on Sustainable Civil Engineering Structures and Construction Materials

September 11-13, 2012, Yogyakarta-Indonesia.

1. Introduction

Concept of sustainability has been gradually applied in various aspects of civil engineering structures. The concept as indicated by high efficiency in human and material resources but less in environmental impacts shall be further implemented in design, construction and maintenance of every civil engineering structure. In this regard, potential networking and sharing the information on the latest scientific findings and achievements among civil engineers around the globe shall be met through international conferences as what we will have in this conference in Yogyakarta-Indonesia.

2. Conference Topics

The topics for which papers are invited cover (but are not limited to) the following:

- · Construction Materials, Technology and Management
- Construction Method and System
- · Optimization and Innovation in Structural Design
- · Environmental Impact and Green Design
- · Local and Recycled Materials
- Forensic Engineering
- · Structural Health Monitoring, Assessment and Retrofitting
- Smart Materials and Structures
- Hybrid and Composite Structures
- Special Structures
- Structural Dynamics and Earthquake Engineering
- · Structures in Severe Environment
- · Disaster Mitigation and Restoration

3. Organizer and Supporters

Organizer:

- · Department of Civil Engineering, Faculty of Engineering, Universitas Gadjah Mada, Indonesia
- Division of Engineering and Policy for Sustainable Environment, Faculty of Engineering, Hokkaido University, Japan
- Institute of Concrete structures and Building Materials, Faculty of Civil Engineering, Geo and Environmental sciences, Karlsruhe Institute of Technology, Germany

Supporters:

- · Indonesia Society of Civil and Structural Engineering (HAKI)
- Institute of Engineering Indonesia (PII)
- Asian Concrete Federation (ACF)
- · Japan Society of Civil Engineers (JSCE)

4. Important Dates

Last date of Abstract Submission	February 9, 2012
Notification of Abstract Acceptance	March 6, 2012
Deadline for Full Paper Submission	May 6, 2012
Notification of Full Paper Acceptance	June 7, 2012
Deadline for camera-ready manuscript	September 15, 2012
Conference Dates	October 24-26, 2012

5. For more information,

Please visit the conference website at http://conference.tsipil.ugm.ac.id/scescm/

(Information provided by Dr. Ali Awaludin, Indonesia)

8. Report on activities of ACF member: KCI-KCIA 8th International Symposium

Time:	Sep. 23 rd , 2011
Venue:	Korea Science and Technology Building, Seoul, Korea
Theme:	Advancement of Cement and Concrete Industries
Participation:	About 370 engineers, researchers and academicians from cement, concrete, and reinforced
	concrete related fields.

Korea Concrete Institute (KCI) along with Korea Cement Industrial Association (KCIA) has been holding an annual international symposium since 2006.

This year's theme was the "Advancement of Cement and Concrete Industries." The invited speakers this year included those from China, England, Japan, and Korea.

The themes included future cement and concrete technologies and sustainability topics such as LCA study on concrete and advanced carbonation technologies.



Photo 5: Key participants at the symposium

(Information provided by Prof. Donguk CHOI, Korea)

This Newsletter is published by ASIAN CONCRETE FEDERATION Sogo Hanzomon Building, 12F, 1-7 Kojimachi, Chiyoda-ku, Tokyo 102-0083, JAPAN (Inside the office of Japan Concrete Institute)

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