



# International Newsletter

Korean Society of Civil Engineers



## *The 3rd CECAR Moves Asia into the Future*

The long awaited 3rd CECAR (Civil Engineering Conference in the Asian Region) held its grand opening on August 16th at the Sheraton Walkerhill Hotel in Seoul, Korea under the theme of "Moving Asia into the Future". Organized by the Asian Civil Engineering Coordinating Council (ACECC) and hosted by KSCE, the four day conference attracted almost 1,000 participants from 17 countries. The keynote lecture was delivered by the former Minister of Environment Dr. Myung Ja Kim, on "Environmental Issues and Sustainable Development in NorthEast Asia".

What makes the CECAR a distinctive international meeting is that the conference provides an international forum for discussions and exchange of ideas on civil engineering profession. The 3rd CECAR organized two different special forums and five special lectures. Presidents of the ASCE (American Society of Civil Engineers), JSCE (Japan Society of Civil Engineers), PICE (Philippine Institute of Civil Engineers), CICHE (Chinese Institute of Civil and Hydraulic Engineering) and the vice president of the VIFCEA (Vietnam Federation of Civil Engineering Associations) presented special lectures on issues varying from national infrastructure development plans to practical civil engineering education. Two special forums were also held on themes of "Great Mekong Sub-region" and "New Trends in the Asian Construction Industry", which generated keen interests from the conference participants.



Opening ceremony with delegates from member countries

A total of 138 papers were presented during the parallel sessions on ten technical tracks. Involvement of civil engineering students were also encouraged through the "Student Essay" and the "Young Engineers Session" where student delegates gathered to present their academic papers and essays on sustainable development. On the last day of conference, many participants took part in technical visits to the Chunggye stream restoration project in Seoul, the north Han River dams, and the KTX (Korea Train eXpress) high speed rail project. Following a great success this year, the next CECAR is planned to be hosted by CICHE in Taipei in May 2007.

## *Workshop for Attracting Future Civil Engineers*

Avoiding both science and engineering fields of study for future career among the younger generation has become widespread, raising a major concern that the nation would face a serious shortage of engineering manpower. The civil engineering field is not an exception, and the needs for raising the professional competitiveness of civil engineers in both educational institutions and industries have recently become an issue of great concern. Workshop for attracting future civil engineers was aimed to resolve such difficulties by discussing proposals and suggestions from civil engineering professionals in academia and industries.

Held at the assembly hall of the Korean Foundation of

Teacher's Associations building on April 30th, the workshop was divided into four presentation sessions followed by a panel discussion. Among the 120 participants, a group of students majoring civil engineering was also present to bring the discussion into the heart of the matter by expressing their points of view. Most of the discussion panel agreed in stressing the needs for changing the image of civil engineering career, which has long been misunderstood to mean intensive labor and harsh working environment. Increasing the financial support to the research and development sector was also of a great concern by many panelists, in order to bring a rise in the demands for a greater number of professional civil engineers.

## KSCE Participates for Brighter Future, Science Korea

Expo on choosing science as a major and future career is an annual event aimed to promote science and engineering by providing accurate information on the vision and characteristics of majoring in science and engineering. Hosted by the Korea Science Foundation and sponsored by the Ministry of Science and Technology, this exposition is an important event in view of current social phenomenon of avoiding both science and engineering fields of study among the younger generation. The KSCE participated in this year's exposition held at the COEX exhibition hall during June 23-28, by organizing an information booth with various scale models, posters and pamphlets from both public and private organizations. Display items which became the center of interest included the sewage disposal plant model (courtesy of KNR), a scale model of Soyang-gang multipurpose dam (courtesy of Korea Water Resources Corporation) and the lead rubber bearing display (courtesy of Unison Corporation). Free gift giveaways and the civil engineering quiz contest which were sponsored by local construction companies attracted many students as well. The KSCE booth was quite successful, attracting more than 3,500 middle and high school students as well as elementary students and parents.



Civil engineering wants you. How about you? Attracting youths to engineering profession is not an easy task

## Hwaseong Fortress designated as an International Historic Civil Engineering Landmark

During the 3rd CECAR (Civil Engineering Conference in the Asian Region), the Hwaseong Fortress was designated as an international Historic Civil Engineering Landmark (HCEL) by the American Society of Civil Engineers. After its recognition as a world heritage by UNESCO in 1997, HCEL designation acknowledged the Hwaseong Fortress to have a historic civil engineering significance.

The HCEL was created by ASCE in 1967 to recognize and encourage preservation of civil engineering landmarks. Nominations are made annually by an ASCE selection committee after reviewing sites that are at least 50 years old and are accessible to public. Over 230 civil engineering works are



Presidents of KSCE and ASCE at the Hwaseong Fortress, now an international Historic Civil Engineering Landmark (HCEL)

currently designated as HCEL throughout the world, including the Statue of Liberty (1985), Eiffel Tower (1986), Sydney Harbour Bridge (1998) and the Suez Canal (2003). The Hwaseong fortress is the second landmark to be titled as a HCEL in the Asian region, following the "Ifugao Rice Terrace" of the Philippines in 1995.

"The fortress was considered a pioneering achievement in the late 18th century, due to the modern technologies and equipment used in its construction," said Patricia D. Galloway, president of the ASCE. "That combined with its aesthetic beauty, makes the Hwaseong Fortress worthy of the title Historic Civil Engineering Landmark." Located in Suwon city, the massive walls of the Hwaseong fortress still extend nearly 6km and embodies King Jeongjo's devotion to his ill-fated father. Rapid construction of the fortress using paid labor and complete documentation detailing the construction process symbolizes the cultural and technological renaissance under the King.

## Songsan Award of the Year

The 2004 Songsan Award ceremony was held at the JW Marriott Hotel on the 16th of September. Established by Songsan "Hyung Ju Kim" in 2001, the prestigious Songsan Award has annually recognized those who have dedicated their lives to the development of one of four different categories: civil engineering technology, academic research, culture and journalism. This year, the award for academic research was presented to Hyo Seop Woo (Senior Research Fellow, Korea Institute of Construction Technology) and the award on culture was presented to director Il Sung Jung. No awards were given for the categories of civil engineering technology and journalism this year.



Hyung Ju Kim (Founder of the Songsan Award), Hyo Seop Woo (Award winner, Academic Research Category), Il Sung Jung (Award winner, Culture Category) and Soo Sam Kim (President, KSCE) (From Left)

## KSCE Annual Conference and Civil Expo 2004

A record number of 2,600 professionals and students from the academic, research and corporate sectors participated in this year's Annual Conference and Civil Expo, the civil engineering's most comprehensive annual event in Korea. Held at the Phoenix Park Resort located in Pyung-Chang city of the Gang-Won province from October 20 to 22, this year's conference was more successful than ever in terms of providing a field for academic exchange with a record breaking 1,106 paper submissions. Nonetheless, the meeting was held under a casual atmosphere since informal attire was specially recommended by the KSCE to all participants.

Substantial improvements were notable in the special sessions with increased contributions from the corporate professionals who have helped share their experiences and insights to construction expertise. International cooperative relations were strengthened through the International Roundtable Meeting held on the topic of "Civil Engineering in the Digital World" and the International Symposium held on the topic of "Future Construction Material: FRP". Newly organized special sessions included the Student Session and the "Workshop on Civil Engineering Youths", allowing attendees to apply their development and learning opportunities to specific needs and interests. The Civil Expo 2004 attracted 50 different suppliers, corporations and public agencies by operating 64 booths which provided plenty of networking opportunities. The KSCE annual conference which marks its 30th anniversary next year is planned to be held in the beautiful island of Cheju.



Opening of Annual Conference and Civil Expo 2004 at Phoenix Park Resort

## 2004 ACECC Meeting Held in Kaohsiung, Taiwan

ACECC (Asian Civil Engineering Coordinating Council) Executive Committee Meeting was held at the Ambassador hotel in Taiwan's harbour city Kaohsiung, during December 2-5. Hosted by CICHE (Chinese Institute of Civil and Hydraulic Engineering), thirty one participants gathered

from the civil engineering societies of Korea (KSCE), Australia (AIEAust), Japan (JSCE), and Vietnam (VIFCEA). The KSCE delegation included Dr. Young-Nam Lee (Chair, Planning Committee), Mr. In-Kuin Kim (Vice President of KSCE), Dr. Kwang Il Kim (past Chair, ACECC), Dr. Sung-Wan Hong (Chair, 3rd CECAR LOC), Dr. Hyo Seop Woo (Sec. Gen., 3rd CECAR LOC), Prof. Junboun Park (KSCE International Affairs Committee), and Ms. Joyce Par Lee (past Secretary, ACECC).

The main programs of this year's assembly were the PCM (Planning Committee Meeting), ECM (Executive Committee Meeting) and the IRF (International Roundtable Forum) which were held along with the Annual Meeting of CICHE on consecutive dates during the four day schedule. On the last day, participants made technical visits to the Kaohsiung Rapid Transit O5/R10 Station and the Taiwan High Speed Rail Depot.

Issues of discussion on the PCM agenda were the Code of Ethics, Public Perception, and other Operational Tasks. The ECM settled this year's budget including the financial report of the 3rd CECAR, then moved on to discussions on future ACECC activities. Under the theme of "New Paradigm of Civil Engineering and Mission of Civil Engineers," the IRF was scheduled with presentations from each international societies. Vice president Mr. In-Kuin Kim represented KSCE, stressing the importance of cooperative relations among the academia, industry and professional society for "Leadership Capacity Building" of civil engineers and proposing "New" civil engineer with interdisciplinary skills, management skills and communication skills.



ACECC Planning Committee Meeting held in Kaohsiung, Taiwan

## Business Performances of Top Korean General Contractors

Financial performances of Korean general contractors have improved due to the boom in housing construction since 2000. New contract amounts show steady increase since 1999. Contract amount in 2003 is 102.5 trillion won compared to 48 trillion won in 1998. The contract amount from public works in 2004 is estimated around 33.5 trillion won, a slight increase from the previous year. However, private sector takes 55.5 trillion won that is decreased from 70.3 trillion won in 2003.

## Contracts and Revenue

The total contracts by the top 11 contractors range from 274 billion to 1,618 billion won. The average revenue is 662 billion in 2003 that is 3% more than in 2002. Among the top 11 contractors, 7 contractors had an increase of more than 10% in revenue. On the other hand, Hyundai's revenue, ranked at the top, decreased by 20%.

Total contract amounts by year (unit: trillion won)

Sector	1997	1998	1999	2000	2001	2002	2003	2004 (est.)
Public	35.6	29.5	24.4	24.6	29.9	30.9	32.2	33.5
Private	44.3	18.4	26.7	35.5	37.9	52.3	70.3	55.5
Total	79.9	47.9	51.1	60.1	67.8	83.2	102.5	89.0

Sector	1997	1998	1999	2000	2001	2002	2003	2004 (est.)
Civil Infra.	33.8	29.5	24.4	24.6	29.9	30.9	32.2	33.5
Bldg. Const.	46.1	18.4	26.7	35.5	37.9	52.3	70.3	55.5
Total	79.9	47.9	51.1	60.1	67.8	83.2	102.5	89.0

\* From "Outlook of Construction Economy" (2004. 3) by CERIK

\*\* Average exchange rate in 2003 : 1 USD = 1,200 Korean Won

## Overseas Contracts

Six out of top 11 general contractors had overseas contracts. Hyundai has had over 500 billion won from overseas contracts since 1999 and had contracts valued at 595 billion won in 2003. Daewoo, Samsung, and LG had overseas contracts of 111 billion, 217 billion, and 36 billion won, respectively in 2003. Daelim's overseas work has had continuous decline since 1999 and had no contract from international market in 2003. The ratio between overseas contracts and total contracts by Hyundai, Samsung, Daewoo, and LG account for 37%, 28%, 9%, and 7%, respectively. Average ratio of overseas contracts of 11 contractors is 14% compared to 21% in 2002. Profit from international market is lower than expected. To achieve appropriate profit from the international projects, contractors should focus on bidding strategy, claim and contract management, as well as procurement management. Furthermore, contractors need to develop construction technologies and a globalization strategy.

## Per Capita Productivity

Average number of civil engineers of 11 contractors is 421, a decrease of 12% from the previous year. Five companies hired more civil engineers, but the remaining companies reduced their civil engineers by 7%. The per capita productivity amounted to 1.57 billion won, which is an increase of 17% from the previous year.

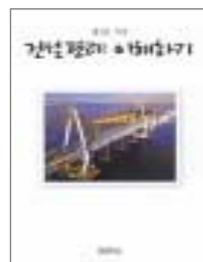
(The full text article, in Korean, by Chul-Ho Lieu and To-Moon Kim appeared in October 2004 issue of Civil Engineering, the monthly KSCE magazine.)

## New Book



Title: Solar City  
 Author: Hye-Jin Jung  
 Pages: 325, B5  
 Publisher: Gmulko  
 Date: November, 2004  
 Price: 12,000 won

The Solar City describes urban communities that constantly convert the fossil and nuclear energy systems to recycling energy systems. The solar city also has an objective that reduces materials that contribute to the green house effects. The author, who is a journalist specializing in environmental problems, carefully introduces the global 'Solar City' project and the world solar cities.



Title: Understanding of the Precedents Related to Construction  
 Author: Hyun Kim  
 Pages: 398, A5  
 Publisher: Bumwoo  
 Date: September, 2004  
 Price: 28,500 won

Civil engineering is a profession intimately related to everyday living. As the society places more value to quality of living, environment and sustainable development, some of the conflicts among parties of various interests cannot be settled by tradition and agreeable methods. Inevitably these conflicts have to be solved by legal proceedings and mediations. The author, who is a lawyer in Korea, presents well organized court precedents that are related to construction disputes.

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