JPCI NEWSLETTER

No.9, September 2016

Japan Prestressed Concrete Institute

JPCI AWARD

Award for Outstanding Structures

● Tsubasa Bridge

Location	: Neak Loeung,Kandal,Cambodia
Structural Type	: 3-span PC cable stayed bridge (main), 5-span PC compo-bridge (approach)
Bridge Length	: 900m+640m+675m
Span	: 20@45m+(155m+330m+155m)+15@45m
Width	: 13.5m (effective width)
Design	: Chodai Co.,Ltd. Oriental Consultants Global Co., Ltd. JV
Construction	: Sumitomo Mitsui Construction Co., Ltd.

● Suita City Football Stadium

Location	: Suita City, Osaka
Structural Type	: RC+PC+S
Number of Stories	: 6 stories
Building use	: Football Stadium
Floor Space	: 24,717.59m^2
Total floor space	: 66,509.36m^2
Design	: Takenaka Corporation
Construction	: Takenaka Corporation

● Shiroganenooka Gakuen

Location	: Tokyo
Structural Type	: Low-rise building : Reinforced concrete (RC) structure In part precast prestressed concrete structure (PCaPC) Medium-rise building : Reinforced concrete (RC) structure
Number of Stories	: 1 basement level, 6 stories above ground, 1 penthouse level
Building use	: school facility
Floor Space	: 7,519.5m^2
Total floor space	: 17,967.66 m^2
Design	: NIKKEN SEKKEI
Construction	: TAISEI CORPORATION

● Futakotamagawa Rise II - a

Location	: Tokyo
Structural Type	: RC(Precast-Prestressed concrete), with base isolation system
Number of Stories	: penthouse 2 stories + 2 stories basement and 30 stories above ground
Building use	: Office and Hotel
Floor Space	: 22,466 m^2
Total floor space	: 156,422m^2(101,210m^2 for High-rise building)
Design	: NIKKEN SEKKEI／RIA／TOKYU ARCHITECTS & ENGINEERS JV
Construction	: KAJIMA CORPORATION

● The Main Stand of the Todoroki Athletics Stadium

Location	: Kanagawa Prefecture
Structural Type	: RC+S+Precast concrete
Number of Stories	: 6 stories
Building use	: Stadium
Floor Space	: 10,154.02m^2
Total floor space	: 21,853.86m^2
Design	: NIHON SEKKEI +TAISEI DESIGN PAE
Construction	: TAISEI・TOBISHIMA・OGAWA・NUMATA NIHON SEKKEI

Award for Outstanding Engineering Innovations

● Development of the widening method for PC bridge

Summary :

We developed widening construction method for the improvement of the function of PC bridge. Our results of research include.

- Development of intermediate anchorage device for connecting transverse PC tendon.
- Development of special connection device for connecting transverse PC tendon.
- Confirmation of construction method.
- Confirmation of performance of widening slab using these device.

Development :

- Metropolitan Expressway Co., Ltd.
- Sumitomo Mitsui Construction Co., Ltd.

Award for Outstanding Accomplishments of Constructions

● Development of the Construction Period Shortening Method for Prestressed Concrete LNG Storage Tank using precast concrete form (Dual PC Speed Erection Method)

Location	: Ishikari, Hokkaido
Structure	: LNG Storage Tank
Gross Capacity	: 200,000kl
Structural Type	: Full Containment LNG Tank
Outer wall type	: Prestressed Concrete outer wall
Inner Dim. of wall	: 83.2m
Height of wall	: 43.1m
Design	: Tasei Corporation
Construction	: Tasei Corporation

● Reinforcement work of Chuo-Expressway Kaminagafusa Bridge(up line)

Location	: Tokyo
Structural Type	: 3 span continuous non-synthetic steel girder bridge×2 series
Bridge Length	: 161.9m
Span	: 3@26.7m×2
Width	: 11.1m(effective width)
Design	: Central Nippon Highway Engineering Tokyo Company Limited Oriental Shiraishi Corporation
Construction	: Oriental Shiraishi Corporation
Summary	: Replacement of the slab by cross-section division(20.0m), Increasing the thickness of the upper surface of the slab by cross-section division(141.9m), Replacement of the expansion Metal spray of the bearing, Repainting of the pier.

EVENTS

Annual Symposium
- Coming symposium -

25th Symposium on Developments in Prestressed Concrete

October 20th – 21st, 2016

Kokura, Japan
http://www.jpci.or.jp/eng-index.htm

The topics of the next symposium are special lecture and technical tour. Just after the opening ceremony, Dr. Mohsen Shahawy, President of SDR Engineering Consultants, Inc. and Dr. Toyoaki Miyagawa, Professor of the Kyoto University, Board Member of Japan Prestressed Concrete Institute, will give special lectures. Technical Tour will be held on the 19st October 2016. Tour attendants are going to visit industrial historic area in Kitakyushyu.

- The last symposium -

The last symposium, "24th Symposium on Developments in Prestressed Concrete", was held on 22 and 23, October, 2015 at the Toyama Prefectural Civic Centre, Toyama. The purpose of the symposium is to attain further development of prestressed concrete technology by sharing valuable information among researchers.

Previous to the symposium, the Workshop was held. Activities of committees of the JPCI and Hokuriku branch of the Japan Prestressed Concrete Contractors Association were reported. Mr. Shin-ichi Tamai of the Japan Railway Construction, Transportation and Technology

Venue, Toyama Prefectural Civic Centre

Opening ceremony

Dr. Tor Ole Olsen

Dr. Yozo Fujino

Agency presented "Construction History of Shinkansen, - From Tokaido Shinkansen to Hokuriku Shinkansen - ". Associate Prof. Saiji Fukada of the Kanazawa University presented “Monitoring of Prestressed Concrete Bridges which Early Deterioration Occurred".

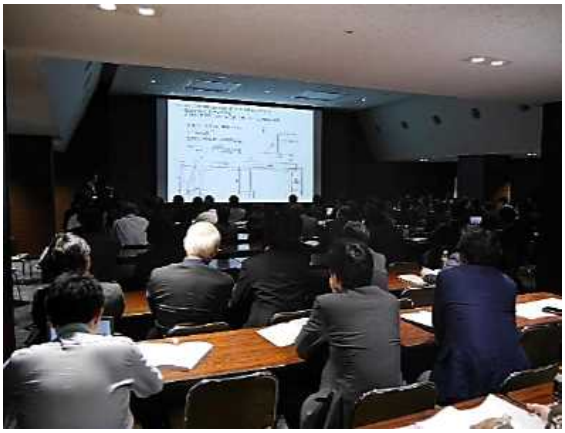
In the Opening Ceremony Dr. Prof. Susumu Inoue, professor of the Osaka Institute of Thecnology, the chairman of the Executive Committee of the symposium, gave opening address. History and outline of the symposium were introduced, and Dr. Prof. Minehiro Nishiyama, professor of the Kyoto Unoversity, the president of the JPCI gave an opening speech. Then, Yasuto Tsuji, Director of Department of Road, Hokuriku Regional Bureau, Ministry of Land, Infrastructure, Transport and Tourism gave a speech of greeting.

Dr. Tor Ole Olsen, Dr. techn. Olav Olsen, Norway and Dr. Yozo Fujino, Distinguished YNU prof., Institute of Advanced Sciences, Yokohama National University were invited and gave special lectures. Dr. Tor Ole Olsen presented “Concrete for Marine Structures”. He explained the reasons why Norway is very famous for marine concrete structures. Norway is not an island, but a country with a very long coastline. Conquering the sea has also been essential for Norway; for food, transport and communication, within the country and internationally. 45 years ago, hydrocarbons were discovered under the seabed outside Norway, on the Norwegian Continental Shelf. The Norwegian Continental Shelf is part of the North Sea, the Atlantic Ocean, having tough and harsh environment. Brave clients, contractors and engineers saw the potential of concrete structures for the development of the offshore oil and gas industry. By now, the Norwegian offshore concrete industry has built more than 3 million m^3 of concrete structures for the oil and gas industry, in Norway and abroad.

Dr. Yozo Fujino presented “Infrastructural Management and the Strategic Innovation Promotion Program (SIP) of Cabinet office, Government Japan”. Now these cultivated technologies are applied on other marine structures. The key word of SIP is “innovation by corporation”. Researches and developments concerning infrastructures are carried out for 5 years by cooperation between governments, national research institutes, universities and private companies. Themes of R&D are i) Inspection, monitoring and diagnosis, ii) Structural material, deterioration mechanism, repair and strengthening, iii) Information and communication, iv) Robot, v) Asset management. More than 60 programs are going right now.

In order to exchange information concerning activities, researches and original technologies of organizations, companies and universities in the Hokuriku region were

Technical exhibition



Parallel session

displayed at the Technical Exhibition. 37 groups participated in the exhibition. Booths were arranged for the exhibition, and presentations and discussions for each exhibition were made in the presentation space provided in the exhibition hall.

In the last symposium, 165 contributed papers and reports were presented in 19 sessions, and the participants were 649. From each session, the most excellent presenters were chosen and were given "Award of Excellent Presentation". Prize winners are as follows.

Session 1: *Ryoich Kawanaka*, P.S. Mitsubishi Construction Co., Ltd.
Session 2: *Isamu Takenoi*, Sumitomo Mitsui Construction Co., Ltd.
Session 3: *Yutaka Komura*, P.S. Mitsubishi Construction Co., Ltd.
Session 4: *Tetsunao Yonezawa*, Kindai University
Session 5: *Hirofumi Ohe*, P.S. Mitsubishi Construction Co., Ltd.
Session 6: *Masaya Kawane*, Sumitomo Mitsui Construction Co., Ltd.
Session 7: *Shoji Nojima*, Central Nippon Expressway Co., Ltd.
Session 8: *Naoki Hagiwara*, Nippon Expressway Research Institute Co., Ltd.
Session 9: *Hajime Ito*, Toyama Prefectural University
Session 10: *Kimihiko Amaya*, Nippon P.S C., Ltd.
Session 11: *Shyuich Oyanagi*, P.S. Mitsubishi Construction Co., Ltd.
Session 12: *Yasushi Yuasa*, West Japan Railway Company

Workshop

Award of excellent presentation

Session 13: *Shigehiko Saito*, University of Yamanashi
Session 14: *Katsuya Kono*, Taiheiyo Cement Corporation
Session 15: *Kei Hirai*, Kurosawa Construction Co., Ltd.
Session 16: *Yoshiaki Kumagai*, P.S. Mitsubishi Construction Co., Ltd.
Session 17: *Hiroshi Maruta*, Taiheiyo Cement Corporation
Session 18: *Takehiko Harada*, Oriental Consultants Co., Ltd.
Session 19: *Toshihiko Banba*, Nagaoka University of Thechnology

■ This newsletter contents current information on the activities and topics of JPCI.

■ If you have any comments and suggestions, please contact us by sending e-mail to: *kaiinka24@jpci.or.jp*

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