

Joint Online Seminar: JSCE & Faculty of Engineering, Kasetsart University “Current situation regarding concrete structures under chloride attack in Thailand and Japan, and effective maintenance technologies”

This joint seminar, cosponsored by the Concrete Committee of the Japan Society of Civil Engineers (JSCE) and the Faculty of Engineering, Kasetsart University (KU), was held on September 28th, 2021. It was a response to the increasing infrastructure maintenance burden in the ASEAN economic community, especially in Thailand, where chloride attack is causing exceptional levels of concrete infrastructure deterioration. As a first step toward matching needs and deployment of technology for preventing chloride attack, the seminar was an opportunity to share information about the current state of infrastructure and the maintenance techniques deployed in Japan and Thailand. This was the second online seminar on the topic, following one last year.

Six leading experts and researchers, including a road administrator and contractor, were invited to speak. The opening remarks were given by Dr. Oshima, chair of the Sub-committee on International Affairs of the JSCE Concrete Committee. He discussed the history of concrete structure maintenance in Japan and the significance of proper control of structures throughout the design, construction, and maintenance processes.

In the first session, Dr. Koike of Kagoshima University gave a presentation on concrete durability in port and harbor facilities and how it can be enhanced, while Dr. Wanchai of Kasetsart University talked about techniques for predicting the chloride content of concrete and also explained Thailand’s maintenance specifications. In the second session, Dr. Makita of NEXCO offered a presentation about maintenance techniques for road structures in Japan, Dr. Skit of DOH described the current state of infrastructure in Thailand, Mr. Kobayashi of Kajima Corporation introduced a technique for enhancing concrete durability using a water-repellent agent, and Dr. Chawis of CPAC SB&M explained current the infrastructure maintenance methodology in Thailand, respectively.

In the question and answer (Q&A) session that followed, many participants asked questions ranging from practical issues, such as the applicability and economic performance of particular maintenance techniques, to research questions. At the end of the proceedings, closing remarks were given by Dr. Wancai of Kasetsart University, in which he commented that the presentations were fruitful and would help maintain the infrastructure of both countries in a safe condition, and the seminar ended on a high note.

Over 100 people participated, and the nationality of those pre-registering for the seminar was as follows: approximately 20% from Indonesia and Japan, 10% from Thailand, Myanmar and the Philippines, and the remainder from over 30 countries including Bangladesh, Vietnam, China, Hong Kong, Pakistan and India. This spread of nationalities illustrates the advantage of holding such seminars online.

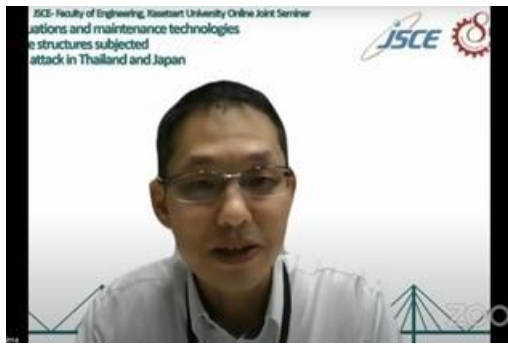


Photo-1 Dr. Yoshinobu Ooshima giving his opening remarks



Photo-2 Prof. Wanchai Yodsudjai giving his closing remarks



Photo-3 Some of the participants

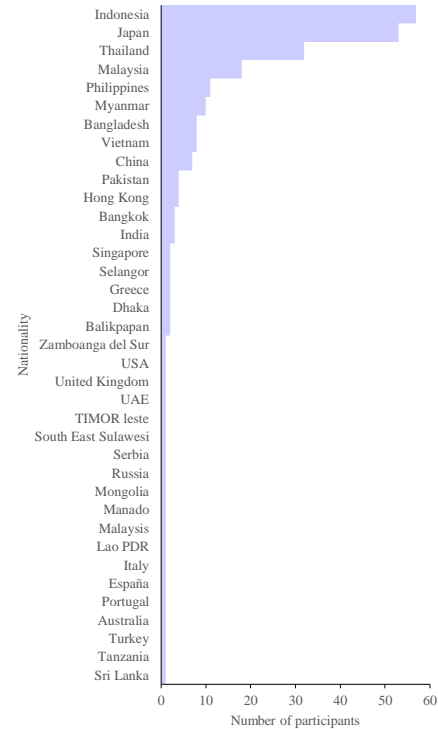


Figure-1 Breakdown of participants

Table-1 Speakers and their presentations

Schedule				
Time		Title	Presenter	Affiliation
(GMT+7)	(GMT+9)			
1.00 ~ 1.10 (10 min)	3.00 ~ 3.10 (10 min)	Opening remarks (Dr. Yoshinobu Ooshima, chairperson, JSCE Concrete Committee, Sub-committee on International Affairs)		
1.10 ~ 1.50 (40 min = 20 min x 2)	3.10 ~ 3.50 (40 min = 20 min x 2)	Durability and its enhancing method in Port and Harbor Concrete Facilities	Dr. Kentaro Koike	Kagoshima University / Port and Airport Research Institute
		Part I: Thai standard for chloride attack Part II: Relationship between concrete conductivity and chloride content	Dr. Wanchai Yodsudjai	Kasetsart University
1.50 ~ 2.10 (20 min)	3.50 ~ 4.10 (20 min)	Q&A session		
2.10 ~ 3.30 (80 min = 20min x 4)	4.10 ~ 5.30 (80 min = 20min x 4)	Rehabilitation and Strengthening of Bridges in the NEXCO Central Expressway Network	Dr. Tohru Makita	Central Nippon Expressway Co., Ltd. (NEXCO)
		Challenges and Practice for	Dr. Sukit	Ministry of Transport,

		Reservation Program of DOH Bridges Subjected to Corrosion.	Yindeesuk	Department of Highways (DOH)
		Concrete Durability Enhancing Technique Using Mixed Silane and Siloxane Water Repellent Agent	Mr. Satoru Kobayashi	Kajima Corporation
		Examples of chloride attack and prospects for future repair method development in Thailand	Dr. Chawis Thongyothee	CPAC SB&M Lifetime Solution Co., Ltd.
3.30 ~3.50 (20 min)	5.30 ~5.50 (20 min)	Q&A session		
3.50 ~ 4.00 (10 min)	5.50 ~ 6.00 (10 min)	Photo session and closing remarks (Dr. Wanchai Yodsudjai, Professor, Vice Dean of Research Faculty of Engineering, Kasetsart University)		