
Activity Report for TC- 28 Application of Monitoring Technology for Infrastructure Maintenance

Date: 2025.2.18

Name of Chair: Eiki YAMAGUCHI

Responsible Society: JSCE

1. Outline of TC

1.1. Objectives

Infrastructure is critical for economic prosperity, economic growth, and sustainable development. While many countries invest heavily in infrastructure construction, much less attention has been paid to maintenance work, which could generate a serious bottleneck to economic growth and public services in the long run. Utilizing new technologies for systematic infrastructure management is essential for both preventing accident and minimizing life-cycle-cost.

Civil Infrastructures have been constructed across the Asian region and maintenance has already become a big issue to be addressed. Although many monitoring technologies and products are developed, the administrators are struggling to choose technologies as the practical specifications are not sufficiently standardized. The objective of TC28 is to prepare the guidelines on the scheme for maintenance of infrastructures by demonstrating good use of monitoring technology for making maintenance works more sophisticated and efficient.

1.2. Terms of Reference

TC28 provides the guidelines and recommendations for utilization of monitoring technologies, which cover wide range of fields: namely, concrete decks, concrete beams, steel beams, salt environment, bridge piers and foundations, embankment and cutting slopes, and handling of monitoring data.

TC28 holds periodical meetings to share and discuss the maintenance and monitoring issues with members from various disciplines and sectors. Integration of knowledge and opinions leads to enhancement for quality of the guideline and practical applications of monitoring technologies in Asian countries.

1.3. Expected Outcomes

- ACECC guidelines for application of monitoring technology for infrastructure maintenance
- Reports on status and issues of maintenance and monitoring in the member countries
- Reports on introduction to latest technologies of monitoring and application examples
- Suggestions to promote practical applications of monitoring in Asia for the next generations.

1.4. Period of Activity (1) since TC's inception, and (2) for this Report (Month/Year to Month/Year)

October 2021 - October 2024 (4 years) *extended 1year and 1month

1.5. Members

Organization	Name	Affiliation
ASCE	Chungwook Sim	University of Nebraska at Lincoln
CICHE	Tzu-Kang Lin	University of Yanming-Chiaotung
EA	Shane Scriven	Engineers Australia's Asset Management Council
IEB	A.F.M.Saiful Amin	Bangladesh University of Engineering and Technology
IEP	Shamsoon Fareed	University of Engineering & Technology
IEP	Wajahat Nassar	Inventories/Warehousing
KSCE	Chang-Su Shim	Chung-Ang University
KSCE	Robin Eunju Kim	Seoul National University
PICE	Benito M. Pacheco	University of the Philippines Diliman
VFCEA	Pham Hoang Kien	University of Transport and Communication
VFCEA	Le Thanh Binh	Anglia Ruskin University, UK Ho Chi Minh city University of Transport, Vietnam
JSCE (Chair)	Eiki Yamaguchi	Kyushu Institute of Technology
JSCE	Masaaki Nakano	Nippon Koei
JSCE	Tetsuro Goda	Nippon Koei

1.6. Financial Background

NA

2. Recent Activities and Outcomes

We had the 4th meeting of TC28 on 5th of November 2024. The agenda was as follows; 1) Opening & Summary of the last meeting, 2) Discussion on each chapter of the guideline (2 Monitoring of Concrete Slabs, 3 Monitoring of Concrete Girders, 4 Monitoring of Steel Girders, 5 Monitoring in Salt-damaged Environments, 6 Monitoring of Bridge Piers and Foundations, 7 Monitoring of Glide Surfaces and Slopes, 8 Collection of Monitoring Data, 9 Data Storage and Utilization, 10 Cable-stayed Bridge (New chapter)), 3) Future work & Closing.

We confirmed the task distribution and the future schedule through the meeting.



3. Activity Plan towards Incoming CECAR

3.1. Session Title

Application of Monitoring Technology for Infrastructure Maintenance (Tentative)

3.2. List of Presentations

We will have presentations on the established monitoring guidelines for ACECC. We will decide the content of other presentations after discussion in TC meetings in future.

4. Other upcoming activities

We are planning to have the 5th TC meeting on March 6, 2025, to finalize the contents of the monitoring guideline for ACECC. After that, we will conduct an English proofreading of the guidelines, and the final results will be published on the ACECC website.

5. Any requested Action Items for TCC and /or EC

NA