Ministry of Land,
Infrastructure and Transport

Smart Construction Standards for Smarter and Safer Sites

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Dept. in Charge: **Technology Innovation Division, MOLIT**

Contact: Annie KIM / Global Media Communicator, MOLIT / audiis2@korea.kr / +82 44 201 3056

Establishment of standard specifications for construction automation technology and OSCs within the year to enhance efficiency and safety

The Ministry of Land, Infrastructure and Transport (MOLIT, Minister WON Hee-ryong) will be establishing standard specifications for construction automation technology* and OSCs** within the year to vitalize smart construction.

* A technology that automates all or part of the processes of surveying, component manufacturing, building, and quality controlling by fusing and converging construction technology with technologies in other fields such as information and communication, electronics, and machinery, etc.

** Off-Site Construction (OSC), which uses the method of designing and manufacturing construction components at a manufacturing plant and transporting them to the site for assembly and installation.

Construction automation technology and OSC method have various advantages such as shortening the construction period, securing construction quality, and preventing safety accidents, but there have been some difficulties in actively utilizing them due to the lack of common construction standards.

In this regard, the MOLIT has prepared the standard construction specifications containing essential matters for materials, equipment, construction, quality, and safety management of construction works with smart construction technology via the Korea Construction Standards Center under the Korea Institute of Civil Engineering and Building Technology (KICT, President KIM Byung-seok), and will make it pubic within the year after the recent review by the Deliberation Committees on Construction Technology (10 November).

On the other hand, the MOLIT announced a plan to revise construction standards for automation of construction machineries and introduction of construction site robots through the Smart Construction Revitalization Plan (July 2022) last year.

Earlier this year, considering the matured level and high utilization of automation technology for civil engineering equipment such as excavators, the MOLIT has announced the General Standard Construction Specifications (January 2023) on Machine Guidance (MG)* and Machine Control (MC)**, which are construction standards for automated equipment.

* A system that assists workers by automatically guiding work information through sensors and monitors

** A system in which a computer controls equipment through tilt sensors and GPS

The Director General for Technology and Safety Policy KIM Tae-oh of the MOLIT expressed, "We expect that new technologies could further spread to construction sites and improve the efficiency and safety of construction work through this announcement.", adding, "We are going to establish a development plan for smart construction standards (2024~2026) within the year, and continue to develop construction standards accordingly".