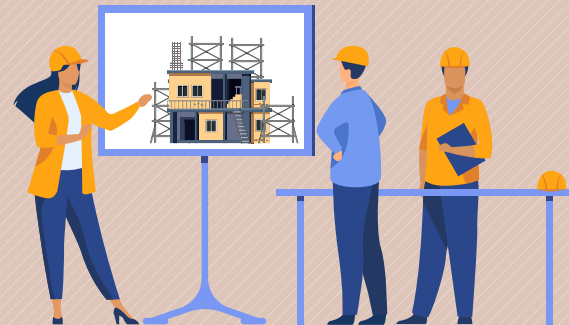


New Fall-prevention Technology Transferred Free for Commercial Use at Industrial Sites

OSHRI transfers patented scaffolding free of charge to use on construction sites



Related accident cases

1. (April 2022) A worker fell (about 5.5m) to his/her death while dismantling a steel pipe scaffolding at a construction site for a multiunit residential building
2. (August 2021) A worker fell (about 8.3 m) and died while dismantling a system scaffolding at a commercial property construction site
3. (May 2021) A worker suffered a fatal fall (about 7.7m) from a work platform on a system scaffolding on a construction site for a business center

- The Occupational Safety and Health Research Institute (OSHRI, Director General Kim Eun-A) has researched and developed a “precedence horizontal safety railing platform for system scaffolding” in an attempt to prevent falls during scaffolding operations at construction sites. OSHRI has transferred the technology for this safety system to private sector enterprises, which have commercialized it.

* Name: Precedence Horizontal Safety Railing Platform with Supplementary Vertical Members, Patent No. 10-2374870 (date: March 1, 2022)

- The patent for the precedence guardrail platform was registered in March of this year, after which OSHRI transferred the technology free of charge to eight domestic small- and medium-size enterprises. Three of these companies* have subsequently obtained safety certification (self-assembly guardrail) and commercialized their designs.

* DHK Tech Industries Co., Ltd.; Gwandeok Steel Co., Ltd.; and Jina Steel Co., Ltd

- When the exterior scaffolding is installed at domestic construction sites, the work platforms are first put in place, starting from the lower level, and working upward. When the scaffolding is dismantled, the safety railings are removed first. Thus, the workers are exposed to a high risk of falling off the edge of the work platforms.

* Scaffolding is a temporary structure that is assembled and installed around the outside of a building or other structural object that is under construction. It is used as a passageway during the construction project or a platform upon which construction work is carried out.

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› To remedy this situation, the OSHRI research team(Bak Ju-dong, et al.) completed development in October 2020 of a technology that greatly improves the way for installing the safety railings on system scaffolding.

- The precedence guardrail platform concept lets workers install the safety railings onto and dismantle them from the edges of the work platforms, starting from the lowest level of the scaffolding and proceeding upward. The system is designed so that the workers remain safe on the lower level work platforms with the safety railings still in place even while the scaffold is being dismantled higher up.

* Refer to [Attachment 1] for data on the work of scaffolding installation and dismantlement.

› OSHRI produced a video presentation to publicize how this technology is applied at construction sites, and the video was posted on YouTube. The technology was put on display at the Korea International Safety & Health Show(KISS), held during Occupational Health and Safety Week in July of this year, and the response from showgoers was excellent.

* Channel name: Occupational Safety and Health Research Institute, "Development of the Precedence Guardrail Platform to Prevent Falls in the Construction Industry." Refer to [Attachment 2].

› Recently orders were placed for the new system at private sector(Geoje, Gyeongsang-namdo) as well as public sector worksites, where it was put into use for the first time, and the assessment by the workers was positive.

* The banner is attached at the public and private sector worksites that ordered the precedence guardrail platform. Refer to [Attachment 3].

- KOSHA's Occupational Safety and Health Research Institute Director General Kim Eun-A says: "We are urging the use of the precedence guardrail platform to prevent falls during the installation and dismantlement of scaffolding at construction sites. Going forward, we intent to step up practical research efforts to prevent fatal accidents at their source on industrial sites.