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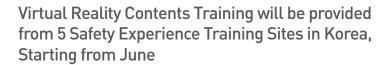
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VR to Provide Safety and Health Training





"...A worker wears a virtual reality experiencing apparatus, Head Mounted Display (HMD). A crane work site is displayed in front of him. The crane driver lifts a heavy object using a ceiling crane. The wire rope supporting the heavy object straps while transferring the object. The object falls on top of the worker...

- From the Safety and Health Training Utilizing Virtual Reality -

The Ministry of Employment and Labor and Korea Occupational Safety and Health Agency will provide safety and health training sessions using virtual reality (VR) at safety experience training sites located in 5 different areas in Korea starting from June this year.

The purpose of this safety and health training using virtual reality is to allow a worker wearing a VR equipment to directly experience safety accidents in a virtual space that is configured similar to an actual work site, thus to inspire safety awareness of workers through such training.

- This training is a program that takes approximately 1 hour, that proceeds in the order of \triangle introduction to the process of experiencing virtual reality and utilizing the equipment, \triangle demonstration on experiencing virtual reality, \triangle experience by workers and \triangle explanation on safety measures.
- The contents of the training consists of 3 types of accidents: \triangle crane operation accidents, \triangle robot operation accidents and \triangle fall accidents, that allow significant experiencing effects, of the large scale accidents running the risks of death and accidents in the occupational sites, each type of accidents taking about 4 minutes. The contents may be integrated with VR equipments based on smart phones, thus the contents are portable.
- The training will be provided to about 24,000 people each year at the safety experience training sites located in 5 areas (Gimhae, Damyang, Incheon, Gyeongsan, and Gongju).





VR to Provide Safety and Health Training

The contents were developed based on the 'Virtual Reality Contents Development MOU' signed between KOSHA and Samsung Institute of Safety and Environment, last October.

• Under this MOU, KOSHA supervised the development of virtual reality contents, while Samsung Institute of Safety and Environment provided approximately 200 million won of financial support for contents development as part of an effort of social contribution activity.

Further, besides the smart phone-based contents developed as aforementioned, the Ministry of Employment and Labor and KOSHA are planning to further develop a type of virtual experience contents utilizing simulators and two types of contents utilizing augmented reality, and disclose them during the Safety and Health Emphasize Week that will be held in the first week of July.

President Lee Young-Soon of KOSHA said "virtual reality contents increase the engagement of trainees, and effectively transfer the awareness of risk of occupational disasters", and also added "KOSHA will continue to develop safety and health contents integrated with the state-of-the art technologies such as virtual reality (VR) and augmented reality (AR), and make efforts to help the experience-oriented safety and health training take roots".

* What is virtual reality (VR)?

It is a human-computer interface providing a certain specific environment or situation made by a computer, as if the person using it is actually reacting with the surrounding situation and environment.

* What is augmented reality (AR)?

Technology of showing a 3-dimensional object in a real world. (ex: Pokemon Go)

- Doosan Encyclopedia Internet Version -



Easier and simpler OSH education on-site

10 mins OSH education contents available on KOSHA Website from July



KOSHA provides about 1,700 contents of '10 mins education before stating work' on its web-site for easier and simpler OSH-training on site, from the late of June.

- In accordance with the Occupational Safety and Health Act, it is mandatory for business owner to conduct OSH education to its' workers* more than 6 hours quarterly.
 - * For office workers, workers engaging in sales, whole sale business with less than 50 employees, accommodation or food service workers, it is mandatory to take more than 3 hours of OSH education quarterly
- This January, Korean government amended an regulation* on OSH education to increase onsite adaptability of OSH education in order that education, conducted for relatively short period of time (5~15 mins) on-site, will be counted as mandatory OSH education.
 - * Occupational Safety-Health Education Regulation (Notification No. 2017-5 of the Ministry of Employment and Labor) amended on January 19, 2017
- In this context, KOSHA created educational contents and provides them in order to activate 10-minute-onsite education before starting work.

The educational contents provided by KOSHA is OPL materials (One Point Lesson: in a form of leaflet) which are suitable for on-site education in a short time.

- For easier use of the material, KOSHA additionally creates 「10 mins OSH edu-contents」 in OSH materials category and provides the contents by machines/equipments; by works; by jobs or by seasons.
- In particular, extra educational materials for the 10 mins training were made by KOSHA and spreaded to businesses to increase the adaptability and use of education on-site. PRs are made through KOSHA website, KOSHA application, monthly publications of KOSHA and electronic display of KOSHA nationwide.





Easier and simpler OSH education on-site

President Lee Young-Soon of KOSHA announced "the 10 mins OSH education will be a ground-breaking chance for workplaces to practice autonomous accident prevention activities." "KOSHA will continually create and provide educational contents including videos and PPTs which are suitable for 10 mins education." added he.







Essential Information on Safety in Our Everyday Lives on Air

A TV program, 'Safe Korea, Promise of Zero' will be aired on a public network by KOSHA and KBS



KOSHA and Korean Broadcasting System (KBS) will broadcast a public program about safety starting from June 4 (13:50) on KBS 1TV.

Since a series of safety accidents that have become a social issue from the fire that broke out at a construction site in Kimpo multipurpose construction site last September where 4 people died and to the Samsung Heavy Industries crane accident where 6 workers died and 25 were injured, people are becoming interested in safety more than every before.

• KOSHA has been discussing with KBS since last year about launching a new safety program that could create a social consensus on safety. As a result, KOSHA and KBS decided to produce 「Safe Korea, Promise of Zero」

Safe Korea, Promise of Zero $_{\perp}$ is an information variety program that will provide the viewers with timely information and safety guidelines including the type of accidents per season, through corners such as \triangle analyses on type of accidents, \triangle replay theater, \triangle site experiment and \triangle visiting excellent work-places and the like.

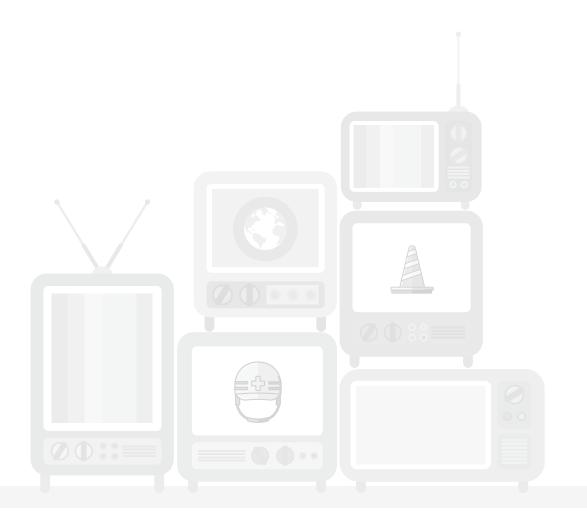
- The first episode will be broadcasted under the theme of prevention of accidents of two-wheeled vehicles and construction sites. This program will take a look at the risk of accidents of two-wheeled vehicles that take place due to Korea's hasteful culture, and will provide various information necessary to establish a safe delivery culture.
- The program will also provide essential safety information for preventing accidents in construction sites having high mortality risks and visit sites with excellent safety management to introduce knowhow for preventing accidents.





Essential Information on Safety in Our Everyday Lives on Air

President Lee Young-Soon of KOSHA said "by providing information about the high risks of industrial disasters through TV programs that everyone can see, we hope that people will be used to practicing safety and have it established as our culture, so that our society can be a safer and happier place".







Taking Responsibility of Military Personnel by Building Safety Culture

MoU between KOSHA-the Korean Army to establish safety culture

Pledging cooperation in fostering professional OSH drill sergeants and construct a systematic OSH management system.



KOSHA and the Korean Army (Chief of staff: Chang Jun-Gyu) signed an 「MOU to Establish Safety Culture」 at the Army Headquarters located in Gyeryong City, Chungcheongnam Province, on May 30.

- This MOU is promoted to raise the awareness of safety among related officials in the Korean Army by establishing safety culture, to secure the safety of military personnel by preventing safety accidents in the military and to strengthen the safety of organization based on a system.
 - * Summary of the MOU ceremony for establishment of safety culture
 - Time and venue: May 30, 2017 (Tue). 14:00, Korean Army Headquarters located in Gyerong City
 - Attendants: President Lee Young-Soon of KOSHA, Chief of staff Chang Jun-Gyu
- Under this MOU, KOSHA will provide \triangle safety and health training sessions, \triangle develop professional safety and health instructors, provide \triangle educational materials and \triangle construct resources for the safety of military personnel such as a safety and health management system.

President Lee Young-Soon of KOSHA said "by raising the wareness of military personnel regarding safety and health, who are waiting to enter the society and become our future industrial manpower, it is possible to prevent not only the safety accidents in the military but also prevent industrial disasters", and also added "KOSHA will make every effort by providing continued training and safety and training management system to the Army".

• Chief of staff, Chang Jun-Gyu said "the Korean Army itself made a lot of efforts so far, but if safety culture can be established in the military with this MOU, it will be a lot of help in preserving the combating power as well", and also added "moreover, the safety awareness that the military personnel obtained during their military service will be a great contribution for laying the foundations of a safe Korea as well".





Signs MOU for Expansion of Process Safety Culture





KOSHA and Korea National University of Transportation (President: Kim Young-Ho) will sign an MOU for 'Expansion of the Process Safety Culture' on May 15 (Tuesday), at the headquarters of KOSHA.

- The purpose of this MOU is to enhance the level of occupational safety and health, and expand the process safety culture by strengthening R&D and information exchange.
 - * Summary of MOU Ceremony for 'Expansion of the Process Safety Culture'
 - Time and Venue: May 16, 2017 (Tue) 11:15 ~ 14:30, Headquarters of KOSHA (Ulsan)
 - Attendance : Lee Young-Soon (President of KOSHA), Kim Young-Ho (President of Korea National University of Transportation), and other related officials.

Recently, big fires, explosions and leakage incidents have broken out in industrial compounds where factories are concentrated, or in places near general residential areas, intensifying concerns on danger of such incidents.

• Further, due to technological development of IoT, AI and industrial robots and the expected changes in social structure such as the changes in the forms of labor and the like, a change in the education of occupational safety and health is required.

Thus, KOSHA and Korea National University of Transportation are planning to develop professional manpower for the future process safety fields, enhance the level of Korea's process safety management based on strengthened R&D and information exchange, and carry out activities to expand the process safety culture through mutual cooperation.





Signs MOU for Expansion of Process Safety Culture

- KOSHA △ runs an exchange cooperation program, △ conducts joint research activities, △ supports safety inspections for prevention of accidents during school experiments
 practices · research activities for the development of manpower in the process safety fields.
- Korea National University of Transportation provides △ occupational safety and health training
 programs to future employees and executives occupational manpower, and △ provides the
 manpower · equipment · facilities and the like for the R&D and training.

President Lee Young-Soon of KOSHA said "this MOU will induce enhancement of the level of process safety management of our future occupational manpower, and expansion of the safety culture, and will thus contribute greatly in preventing occupational accidents.





OSHRI starts e-Research in May



Occupational Safety and Health Research Institute (OSHRI) of KOSHA posted 2 pieces of e-Research Review on its website.

• The e-Research Review was launched early this year to enhance people's approachability to research tasks related to occupational safety and health, and so far, 2 pieces of research review have been posted.

The most recently posted e-Research Review was written in an easily understandable way under the 2 themes: \triangle Registration and examination measures for trade secrets in MSDS (chemical materials research field), and \triangle Issues regarding revision of the occupational safety and health regulation and legislation system (political system).

- In the Research Review of 'Registration and examination measures for trade secrets in MSDS', the registration and examination institutions and operational state for trade secrets in MSDS of advanced countries (EU, Canada and USA) were reviewed, and measures that can be utilized as basic materials for improving related institutions were presented.
 - * MSDS: Materials explaining the maleficence and ways of handling chemical materials
- In the Research Review of 'Issues regarding revision of the occupational safety and health regulation and legislation system', the current occupational safety and health laws were reviewed and the current situation of the legislative system of the related laws and regulations were analyzed, to present the need to re-align sub section items and to revise the unclear terms based on the main contents.

Director General Kim Jang-Ho of OSHRI, said "we hope that with this May's e-Research Review, we will be able to enhance the understanding of our general readers on the occupational safety and health laws and regulations and increase their applicability to occupational sites, thus contributing to preventing industrial disasters".





Selecting Excellent PPE for the Safety of Workers

KOSHA holds the 21st Quality Grand Prize Show for Protection Apparatuses and Protection Hats Manufacturers of Protection Apparatuses and Protection Hats can Apply



KOSHA will hold the 'Protection apparatus-Protection Hats Quality Grand Prize Show_ to develop and award excellent safety products that are in use occupational sites.

- The Quality Grand Prize Show, which is in its 21st year, aims at inducing distribution and use of more safe products in occupational sites, thereby contributing to prevention of occupational disasters.
- All shields, protection apparatuses and hazardous electrical machinery and apparatuses, that acquired safety certifications before the application due date under the Occupation Safety and Health Act can apply to the Show.
 - * However, any product that received a prize in the past or any product of which the safety certification had been cancelled as a result of special inspection conducted by the Ministry of Employment and Labor will be excluded

KOSHA will evaluate the product shapes and appearances, structures and functional inventiveness, and convenience of use of all the products submitted for competition, and award prizes and plaques to 8 product types in 4 categories.

- A grand prize(the highest prize) of 2 million won will be awarded to 1 product; a disaster
 prevention innovation prize of 1 million won will be awarded to 1 product; a top prize of 1
 million won will be awarded to 3 products, and second prize of 500 thousand won will be
 awarded to 3 products together with the respective plaques.
- Last year, 40 products of 27 companies were submitted for competition. The grand prize was awarded to the protective clothing that proved its protection performance for all body parts for more than 1 hour against 15 types of chemical materials required under the safety certification product evaluation; the disaster prevention innovation prize was awarded to a total of 8 products including the 'safety hat' that showed improved working conditions such as in reduction of internal temperature of the safety hat using impact absorption blocks instead of the conventional Styrofoam absorption material.





Selecting Excellent PPE for the Safety of Workers

The result of the competition will be posted on the KOSHA website in June, and the products that win the awards will be exhibited at the KISS Exhibition Hall in COEX in July.

- Further, KOSHA is planning to exhibit the products that win the awards in the promotion exhibition hall in the headquarters of KOSHA all year round, and start posting, producing and distributing promotion brochures on the website as well, in order to let the public know the excellence of these products.
- For more details, please contact the website of KOSHA or call 052-703-0957 (telephone number of the official in charge of the Quality Grand Prize Show)

KOSHA officials said that "the purpose of the quality grand prize show is to make sure that highly safe products can be distributed in the occupational sites. Besides the quality grand prize show, KOSHA will endeavor to provide financial support to R&D of excellent products so that workers can work in more safe environments."





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