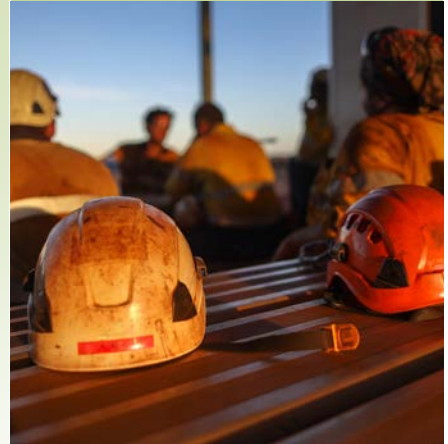




OH&S Safety Matters

February Issue 2024



AI-Powered Safety Wearables

As we look ahead, workplace safety continues to evolve driven by technological advancements, regulatory changes, and a growing emphasis on employee well-being.

The integration of Artificial Intelligence (AI) technology into workplace safety is accelerating. **Wearable devices, such as smart helmets and safety vests, are providing real-time data on workers health and safety.** The latest AI-driven safety gear is equipped with features that include real-time environmental monitoring, predictive risk analysis, and automated emergency response mechanisms.

Such capabilities enhance the immediate safety of the wearer and contribute to a broader understanding of workplace hazards, allowing for more effective safety planning and response strategies.

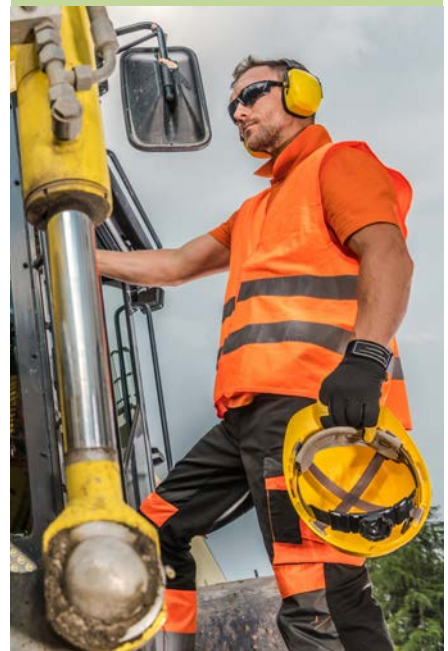
In the construction industry, AI-enabled helmets have significantly reduced accident rates by offering real-time alerts about potential hazards. These AI-powered safety solutions continuously monitor construction sites, detecting risks and unsafe behaviours, such as incorrect PPE usage or entering danger zones. In automotive manufacturing, the implementation of AI-equipped safety vests has played a crucial role in reducing workplace injuries. The integration of smart wearables with AI and haptic feedback from devices that create the illusion of substance and force within these vests assists workers in maintaining ergonomic postures, minimizing the risk of musculoskeletal disorders and related injuries. This approach is particularly effective in industries like logistics, warehousing, and manufacturing, where physical exertion and repetitive motions are common.

AI advanced features in PPE go beyond traditional PPE capabilities and will raise the bar for what constitutes adequate worker protection. This will not only influence regulatory standards but also encourage industries to adopt higher safety measures, fostering a culture of continuous improvement in occupational health and safety.

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Winching & Rigging

This winching and rigging training program has been designed for those with an occupational requirement to be trained to safely undertake work activities that involve the operation of a dozer winch, winch-assisted systems and the rigging systems that riggers use to perform work tasks.

Training specific to steep slope installations typically requires personnel to have an understanding of the following:

- Project Steep Slope Work Plan(s) and any other site specific relevant information.
- Communication procedures including designated radio call names/numbers.
- Emergency response plans and procedures.
- Equipment procedures for work on slopes and/or otherwise hazardous terrain.
- Procedures for use of mats on hazardous terrains.
- Equipment refuelling on slopes and/or other hazardous terrain.

Safety guidelines for working on hazardous terrain, especially that of steep slopes (e.g., hills, mountains, steep or otherwise hazardous inclines, unstable slope conditions) are necessary to encourage work practices that promote high standards for safety of workers and equipment.

Steep slopes are typically categorized as having a measured gradient of 30% (16.7 degrees), or greater.

Steep slope winching operations encompass a wide variation of hazards and workers must be

Steep Slope



New Safety Program

made aware of these hazards and must be protected against the risks associated with the hazards.

This program will provide the participant with the necessary knowledge regarding:

- Legislation, company policies and procedures.
- Work site inspection and hazard awareness
- Winch and winch-assisted system team safety awareness
- Winch operator and winching team worker responsibilities
- Rigging team and rigger responsibilities
- Describe various winching techniques
- Identify the components, controls and safe operating principles for winching and winch-assisted systems
- Describe winching and winch assist working methods
- Perform winching tasks, and setup rigging components and systems for winching operations

Winch-assist, cable-assist, traction-assist, and tethering are all terms that have been used to describe the practice of attaching

a cable or cables to a piece of equipment to increase its operability on slopes. The cable's tension increases the machine's traction to prevent slippage and to increase the machine's stability on slopes. The increase in traction allows the machine to work on steeper slopes while reducing its ground disturbance.

The fundamental principle to winch-assist systems is that the machine working on the slope must remain stable and have traction without the cable that is attached to the anchor machine. The cable is attached to the machine working the slope only as a traction assist.

In some industries it is common for operators to work on steep slopes. Dozers, excavators, and support equipment is required to climb grades that is inaccessible without assistance. A dozer can be used to support equipment up and down hillsides by winch. For hazardous terrain, especially that of steep slopes, unstable

slopes, and when heavy loads are being moved, a towing winch line is one of the only safe ways to work.

A Job Safety Analysis must be completed prior to recovery of any compromised or unstable equipment. The job safety analysis will address the specific hazards associated with the equipment and ground conditions as well as the required steps to safely extract the equipment.

All personnel involved in steep slope winching and rigging tasks must have received necessary training to complete the task safely. Workers are to be familiar with rigging practices and have reviewed the applicable hazard assessments for equipment operation, rigging and towing.

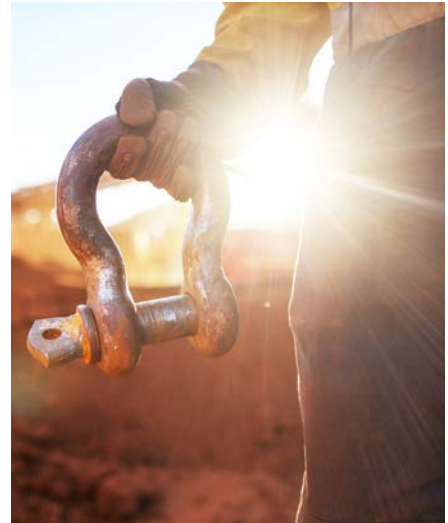
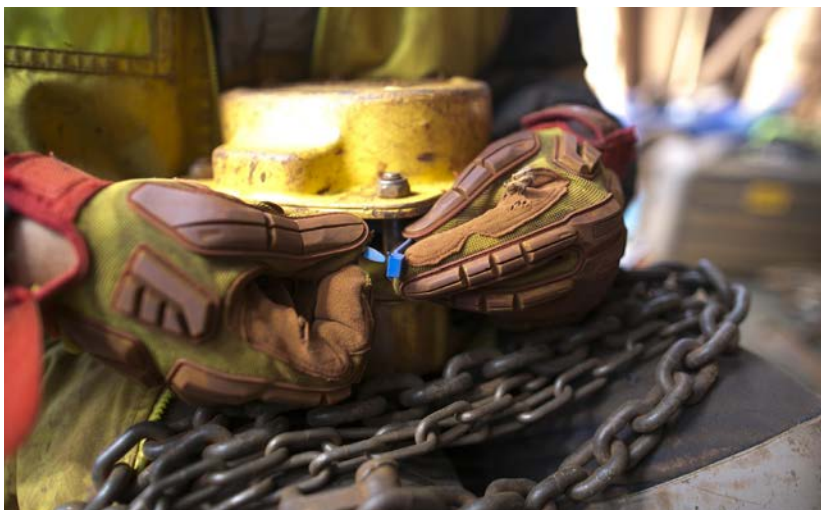
Training and experience enable riggers to recognize hazards that can impact a winching operation. Riggers are responsible to assemble, install, position and secure the rigging required to undertake winching projects. They determine the most effective equipment to be used to accomplish the work task.

They install and secure cables, pulleys and winches, as well as inspect, repair and maintain rigging equipment.

As many construction projects traverse through steep terrain, supervisors, heavy equipment operators and rigging crews are facing a number of challenges to safe operations on increasingly steep slopes.

The *Winching & Rigging Steep Slope Crew Safety* course is delivered in a format that uses a half day classroom session followed by a day and a half of hands-on skill practice and skills evaluation. The course has been designed to provide enough general knowledge to maintain personal safety and help steep slope crews to understand their responsibilities and to manage those responsibilities to protect their health and safety and the health and safety of their co-workers.

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Instructor Certification

When workers need to learn a safety skill, instructor-led training is the superior option. The benefit to workers participating in Instructor-led training is that it facilitates in-depth discussions of complicated safety issues allowing for direct response from a skilled, practiced and certified instructor.

Workers also benefit from their interactions with their fellow co-workers as questions and comments made about the training are discussed. When a specific safety skill set must be learned, instructor-led training and hands-on practice fulfills worker continuing education needs.

As always, we thank you for your continued dedication to safety training and we look forward to serving you!

AR & VR Safety Training Platforms

Safety training is shifting to a virtual model on AR and VR platforms. Training will become more interactive and tailored to individual needs. Virtual reality (VR) and (AR) augmented reality will be used for realistic safety simulations and training, ensuring that employees are well-prepared for various work tasks.

While both technologies involve simulated reality, AR and VR rely on different underlying elements. In VR (virtual reality), the user almost always wears an eye covering headset & headphones to completely replace the real world with the virtual one. In AR (augmented reality), a virtual environment is designed to coexist with the real environment, with the goal of being informative and providing additional data about the real world, which a user can access without having

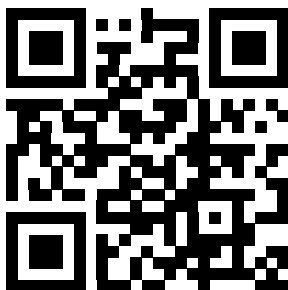


to do a search. The user relies on a smartphone or tablet screen to accomplish this, aiming the phone's camera at a point, and generating a live-streaming video of that scene on the screen. Industry is using AR technology to provide an immersive experience when training workers, allowing them to comprehensively visualize new concepts.

The future is promising to be transformative for workplace safety. Stay tuned for AR and VR advances as safety takes centre stage in the workplace

For more Information

Point your smartphone camera at this QR code and take a picture to be redirected to the OH&S Registry Website. www.ohsregistry.com



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