May 2021 | Vol.15 No.3

safety solutions

health & safety at work

MEETING THE CONDITIONS

FIT-FOR-PURPOSE MINING BOOTS

COMBO PROTECTION
WELDER SAFEGUARDS

SONAR TECHNOLOGY
TIME TO SURFACE

EVACUATION PLANNING
TIPS FOR CONSTRUCTION

PP 100007391

construction | infrastructure | health care | utilities | mining | manufacturing | transport

GRAPHEX®
SUPERIOR CUT PROTECTION

Cut Level F. Smashed.

Designed from the yarn up using quantum level engineering, the new Graphex® Quantum series of hand protection utilizes the strongest material known, Graphene, to create the world's thinnest, lightest and most comfortable Cut Level F certified glove. Available with and without impact protection, and new extended thumb and forefinger saddle.

This is dramatic advancement. This is abrupt change.
This is Graphex® Quantum.

GFPR505 Quantum ***GFPR506 Quantum+***

Graphex Superior Cut Protection ***GraphexGloves.com***

CONTENTS

Cover image ©stock.adobe.com/au/Sam Edwards/KOTO

READ ONLINE! *This issue is available to read and download at*
www.SafetySolutions.net.au/magazine

GRAPHEX SUPERIOR CUT PROTECTION
Proudly sponsored by
www.graphexgloves.com

FROM THE EDITOR

Welcome to the May 2021 issue of ***Safety Solutions***. The feature contributors in this edition delve into a diverse range of work health and safety topics. In the protection stakes, David Chippendale explains the dangers of welding fume and the benefits of 'combo protection' solutions for welders, in particular through a look at headgear options that offer multiple levels of protection. From our heads to our feet, Adrian Blandford takes us through the features of mining work boots that make them fit for purpose and able to withstand the harsh conditions of mine sites.

As always, compliance is top of mind for our contributors. Leigh Harris provides a timely reminder of its importance in evacuation planning, sharing salient signage and other emergency planning tips for the construction industry; while Bronwyn Crabb combs through the findings of a 2020 report into silicosis among stonemasons, which serves to support the view that a greater emphasis on compliance and respiratory safeguards for these workers is needed.

Technology is another focus for our contributors. Leighton Haliday, for example, builds a case for sonar technology's time in the sun — with smarter sensors and better software delivering increased performance and management capabilities, all without any cost penalty. Also, Daryl Chambers demonstrates the power of the Internet of Things in our COVIDSafe future, across construction, mining and manufacturing. These features, among others, are rounded out by our usual coverage of the latest safety solutions, supported by a suite of solution-in-practice case studies.

Dr Joseph Brennan
Editor, Safety Solutions
ss@wfmedia.com.au

IN THE NEWS

SWA RELEASES COVID-19 VACCINE WHS GUIDELINES

Safe Work Australia has published guidance about work health and safety and the ongoing rollout of the COVID-19 vaccines. Per work health and safety (WHS) laws, employers have a duty to eliminate or, if that is not reasonably practicable, minimise the risk of exposure to COVID-19 in the workplace.

The new guidance provides information about rights and obligations under the model WHS laws and how they relate to COVID-19 vaccines, with specific information about vaccine work health and safety for employers, small businesses and workers in 37 different industries.

Safe Work Australia urges the community to remember that a safe and effective vaccine is only one part of keeping individuals safe and healthy.

To meet their WHS duties, employers must keep performing all other control measures that they have implemented to stop the spread of the virus, including physical distancing, good hygiene, regular cleaning and maintenance, and ensuring workers do not attend work if they are unwell. The guidance will be updated as more information becomes available.

CAR STACKER ELEVATOR ELECTROCUTION KILLS WORKER

A 21-year-old man died after being electrocuted while working alone in a West Melbourne building on Monday, 22 March.

It is believed that the young worker was undertaking electrical work on a car stacker elevator when the incident occurred.

The fatality brings the Victorian toll for workplace deaths to 10 for 2021.

WorkSafe Victoria is investigating.

QUEENSLAND UPDATES REGULATIONS FOR LOW DENSITY ASBESTOS BOARD

From 1 May 2021, low density asbestos fibre board (LDB) will be classed as a friable asbestos containing material and must only be removed by a class A licensed asbestos removalist. LDB is a lightly compressed board which looks similar to asbestos cement (AC) sheeting or plasterboard. It is different because it can be easily bent by hand or dented by soft pressure, and is sometimes referred to as asbestos insulating board.

Manufactured from the 1950s to the 1970s, LDB was used for wall and ceiling panels, thermal and acoustic insulation, fire protection and for general building work in industrial and commercial buildings, educational facilities and domestic premises. LDB was sold under product names such as 'Asbestolux' and 'Duralux'; it is unlikely to be found in buildings constructed after 1982.

LDB contains up to 70% by volume of asbestos fibres and is generally composed of amosite (brown asbestos) and chrysotile (white asbestos) in a calcium silicate plaster. If in good condition and left undisturbed, LDB presents a low risk of releasing asbestos fibres and causing harm; however, as it is softer than AC sheeting, LDB can break up more easily when disturbed, thereby increasing the likelihood of exposure to airborne fibres.

Maintenance and service tasks such as sawing, cutting or drilling into LDB without appropriate controls can lead to a significant release of asbestos fibres. Some maintenance and service work on LDB is permitted, when done in accordance with LDB approved methods, approved by Workplace Health and Safety Queensland (WHSQ). This includes minor repairs and minor damage, painting undamaged LDB, drilling holes up to 30 mm in diameter into LDB, temporarily moving a low density asbestos fibre board ceiling tile, and installing or removing fixtures or fittings to LDB.

The maintenance and service work described in the LDB approved methods does not have to be performed by a class A licensed asbestos removalist; however, workers must be familiar with the LDB approved methods and be competent to perform the work.

Per the Work Health and Safety Regulation 2011 (The Regulation), all workers carrying out asbestos-related work must be trained in the identification and safe handling of, and suitable control measures for, asbestos and ACMs. Training in relation to maintenance and service work on LDB must include identifying LDB, donning and removing personal protective equipment, decontaminating equipment, personal decontamination, and the transport and disposal of asbestos waste.

This issue is sponsored by — **Graphex** — www.graphexgloves.com

FIND THE RIGHT LABEL FOR YOUR JOB

AVERY INDUSTRIAL™

CREATE SIGNS AS YOU NEED

✓ HIGH PERFORMANCE MATERIALS

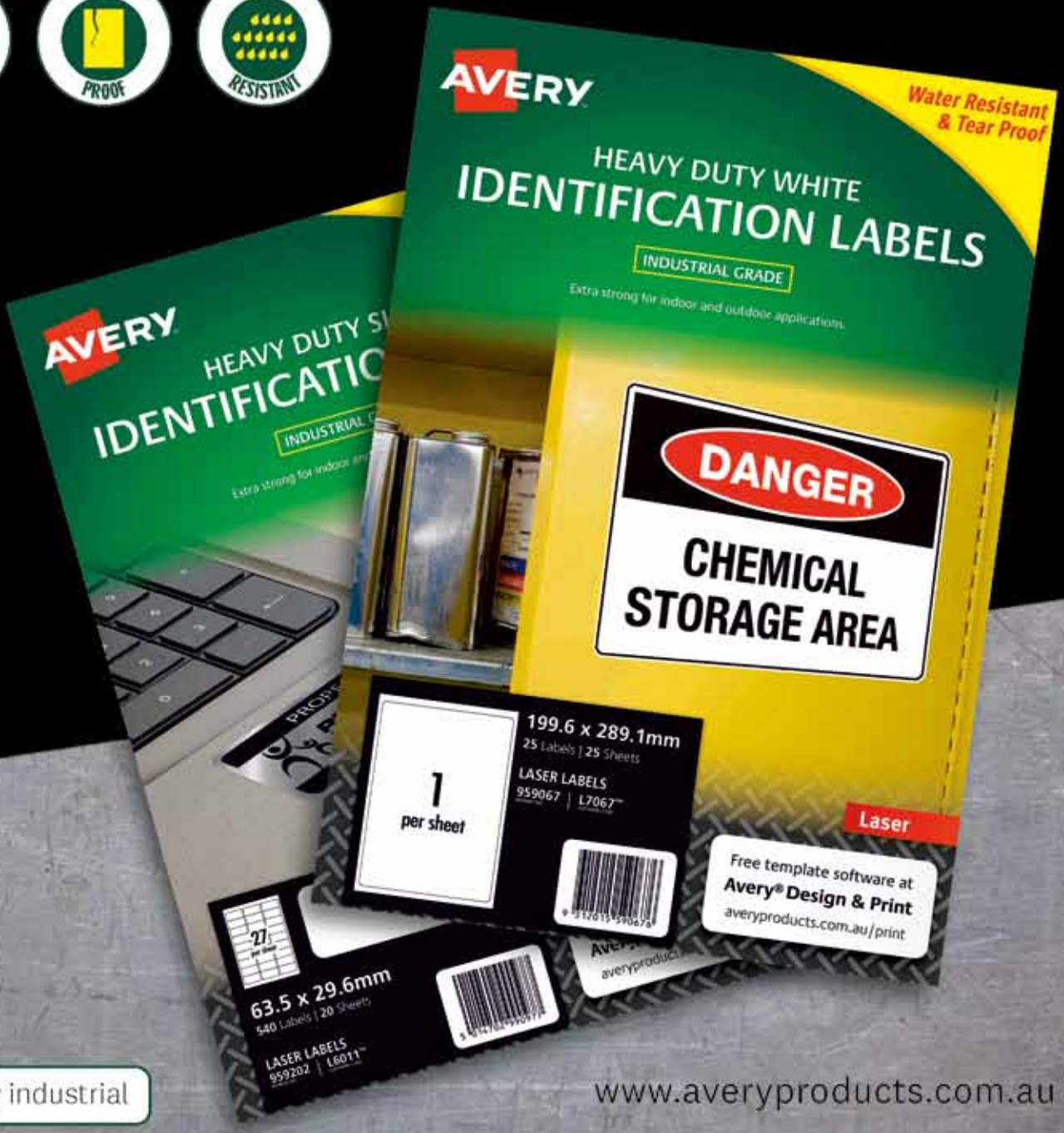
✓ EASY–TO–USE ONLINE TEMPLATES

✓ A FAST WAY TO CREATE CUSTOM LABELS

UV RESISTANT

TEAR PROOF

WATER RESISTANT



avery industrial

www.averyproducts.com.au

IN THE NEWS

CONTRACTOR CHARGED OVER FATAL BRICK WALL COLLAPSE

WorkSafe Victoria has charged contractor Horsham Back-hoe Pty Ltd with two alleged breaches of the Occupational Health and Safety Act for failing to provide a safe working environment, following the death of a worker at a residential building site in Ballarat.

The 56-year-old man was crushed when a brick wall collapsed onto him during demolition work at the Mount Pleasant property in September 2019. The company's alleged failure to establish and maintain an exclusion zone around live demolition areas breached section 21(2) (c) of the OHS Act.

WorkSafe Victoria also alleges that the company failed to provide the information, instruction and training needed to enable its workers to perform their work safely, thereby breaching section 21(2) (e) of the OHS Act.

The matter was addressed at a filing hearing at the Ballarat Magistrates' Court on 19 February 2021.

UNDERGROUND TRUCK CRASH SEES GOLDMINER FINED $150,000

Gold producer Northern Star Resources Ltd has been fined $150,000 in the Kalgoorlie Magistrates Court, after two workers were injured in a vehicle collision underground. The incident occurred at Northern Star's Millennium mine in December 2017, when a worker lost control of a light truck while travelling downhill and steered into the mine wall to slow the vehicle. The worker and passenger suffered injuries from the collision.

At the time of the incident, the truck displayed the incorrect load capacity signage and was carrying a load that exceeded the safe operating maximum by more than 1.9 tonnes. The worker driving the truck had not completed the required training and assessment to operate the vehicle.

Andrew Chaplyn, Director Mines Safety at the Department of Mines, Industry Regulation and Safety, said the incident highlighted the importance of instruction, training and supervision for employees, to allow them to work in a safe manner. Chaplyn added that site procedures should include upskilling operators in calculating the safe working load limit if necessary.

"It's up to mining operators to ensure workers have completed the required training and assessment for specific vehicles and sites. The incident also highlights the need for mining operators to conduct comprehensive risk assessments and ensure they have implemented the appropriate controls," said Chaplyn.

Chaplyn also emphasised that all equipment and vehicles must display signage that shows the correct safe carrying weight.

SHED COMPANY FACING CHARGES OVER WORKER FALL DEATH

WorkSafe WA has commenced prosecution action against a shed building company and its director. MT Sheds (WA) Pty Ltd and company director Mark Thomas Withers face a total of seven separate charges including charges relating to the death of worker Jake Williams and serious injuries to another worker, Fraser Pinchin, in 2020.

The charges relate to an incident which led to the death of one worker, with another worker sustaining serious injuries. The charges include one alleging circumstances of gross negligence against MT Sheds (for which a maximum penalty of a $2.7 million fine applies) and a charge against Mark Withers that alleges the company's gross negligence offence occurred with his consent or was attributable to his neglect (for which a maximum penalty of a $550,000 fine and five years' imprisonment applies).

Other charges include allegations that neither Mark Withers nor either of the two employees involved in the incident held high risk work licences for the work they were performing, and that MT Sheds allowed Jake Williams to perform construction work without holding a Construction Induction Training Certification ("white card").

On the day of the incident, the two workers were installing roof sheets on a shed they were constructing on a farm for agricultural purposes, without appropriate safety control measures in place. A strong wind lifted a sheet from the pack of roof sheets they were working near, causing them both to fall from a significant height.

It is alleged that Jake Williams fell approximately nine metres from the apex of the roof, suffering fatal injuries, while Fraser Pinchin fell seven metres from the roof's edge near the gutter line, suffering multiple fractures of the pelvis, hip, wrist and ribs.

This issue is sponsored by — **Graphex** — www.graphexgloves.com


Blundstone
TASMANIA AUSTRALIA · 1870
NEW STYLE.
SAME STRENGTH.
The New #984 is loaded with safety features
suited for the toughest environment.
EVERYWHERE
LIFE TAKES ME™
BLUNDSTONE.COM.AU

INTEGRATED WELDER SAFEGUARDS

COMBO PROTECTION FROM FUME AND OTHER HAZARDS

David Chippendale, Director of Sales & Marketing, AWS

This issue is sponsored by — **Graphex** — www.graphexgloves.com

©stock.adobe.com/au/HENADZY

Elimination and substitution give the highest level of worker protection and reliability in many industries but are often not practicable or possible when it comes to welding. Even when you can mitigate risk: if there is welding to be done, there will be welding fume. This makes personal protective equipment vital — integrated powered air purifying respirators in particular, which offer users multiple levels of protection from fume and other hazards welders face, and have distinct advantages over other protective options, such as half mask respirators.

The 2017 International Agency for Research on Cancer reclassification of welding fume as 'carcinogenic to humans' simply confirmed what was already known — welding fume is extremely bad for health and workplaces must protect their workers. The precedent for workers compensation based on a link between welding fume and cancer was established in the Australian courts back in 2014, opening the door for future compensation claims. Excessive exposure to welding fume can cause multiple types of cancer, including lung, larynx and urinary tract. "Welders present, on average, a 43% increased risk of lung cancer when compared with those who have never welded or been exposed to welding fume," Manoj Kumar Honaryar et al. write in a 2019 study published in *Occupational & Environmental Medicine*.

"This increased risk of lung cancer is regardless of the type of steel welded, the welding process and independent of exposure to smoking." Aside from cancer, welding fume can also cause serious long-term health effects like lung function abnormalities, including bronchial asthma, chronic obstructive pulmonary disease, pneumoconiosis and other pulmonary fibrosis, as well as stomach ulcers, kidney damage and nervous system damage. Recognising welding fume as carcinogenic and the other associated health risks should encourage all employers of welders to review their risk assessments and revise their control measures to ensure that workers have the best protection avail-

able to them, inclusive of personal protective equipment (PPE) that safeguards welders from a combination of hazards.

Exposure limits are just the beginning

The exposure standards in Australia and New Zealand "do not identify a dividing line between a healthy or unhealthy working environment", according to Safe Work Australia's 'Guidance on the interpretation of workplace exposure standards for airborne contaminants' document. They simply establish a legal maximum upper limit. "Therefore, exposure standards should not be considered as representing an acceptable level of exposure to workers" (ibid.). For example, a welder operating within the workplace exposure standards for general welding fume (5 mg/m^3) could still inhale up to 11 grams of a carcinogenic substance (welding fume) every year (based on the typical respiratory rate of 20 litres of air per minute or 2300 m^3 of air per year). Moreover, an Australian or New Zealand welder operating under the legal workplace exposure limits for welding fume in Australia is exposed to 4 times the level of a known carcinogen than that of a German welder working under the TGRS 528 (1.25 mg/m^3) exposure limits in Germany.

Action is required.

Mitigation of risk

The important point to understand is that while the risk posed by welding fume is serious, keeping yourself safe can be straightforward. As a result, there is a critical need to give workplaces clear and practical advice to ensure their workers are suitably protected. This begins with taking steps to mitigate the risks where possible.

Examples of mitigating risk include:

- Removing surface coatings on materials.
- Changing to less hazardous materials (both consumables and base materials).
- Using a welding technique that produces less fume (different application or working with lower amps).
- Where possible, workers positioning themselves to ensure they keep their heads away from the plume and also ensure any ventilation airflow moves the welding fume away from the breathing zone, not through it.

While elimination and substitution give the highest level of protection and reliability in many industries, they are often not practicable or possible when it comes to the welding industry. Substituting materials can result in quality issues and using lower amps is often not an option. Even when you can mitigate

This issue is sponsored by — **Graphex** — www.graphexgloves.com

COMPREHENSIVE PORTFOLIO OF SERVICE

THIS IS SICK

Sensor Intelligence.

SICK supports customers with a comprehensiveportfolio of service offerings and is a dedicated servicepartner throughout the lifetime of a product or system . **Consultancy**: Protects your investments. Consulting and design services. **Support:** Increased productivity. Product and system support. **Preventative care:** Increased security, optimization and control. **Refresh**: Performance improvement. **Education**: Increased expertise. Certified trainers to cater for clients need. **www.sick.com/au/en/service-and-support/c/services**

	Welding helmets with integrated respiratory protection	Half mask respirators
Protection factor (RMPF)	50 (or 100+*)	10
Fit testing required	No	Yes, recommended annually
Requirement to be clean-shaven	No	Yes
Breathing resistance	No	Yes
Comfort considerations	Steady flow of fresh air helps to cool and reduces seat and heat build-up. Approximately 1 kg worn on the welder's waist.	The negative pressure seal can result in an uncomfortable fit in welding conditions (sweat, heat). Can interfere with the welding helmet.
Cost considerations	A PAPR draws air into the system from behind the welder away from the greatest concentration of welding fume. For this reason, the filters on a PAPR will typically need to be changed far less frequently than a disposable respirator or reusable respiratory filters. Long term, a PAPR can be the more economical solution.	While half mask respirators have a lower upfront cost, they can be the more expensive long-term option. Worn on the welder's face in close proximity to the plume, filters can become loaded extremely quickly in certain welding environments.

**Welding helmets with integrated powered air respiratory protection have an RMPF of 50. Welding helmets with integrated supplied air respiratory protection have an RMPF of 100+.*

risk, *if there is welding to be done, there will be welding fume*. Welding fume is inherent in the process of welding. As a result, we see that in the welding industry, the higher levels of control can often only mitigate the risks associated with welding fume, making the lower levels of control essential.

Welding PPE

PPE is often referred to as the last resort in terms of welding fume control. However, when it comes to welding, suitable PPE must always be worn. PPE for respiratory protection from welding fume is commonly available in two main forms:

1. Welding helmets with integrated respiratory protection.
2. Half mask respirators.

Welding helmets with integrated respiratory protection

According to survey data, welding helmets with integrated powered air purifying respirators (PAPR) are the most widely used form of respiratory protection among welders in Australia and New Zealand and are mandatory within many businesses. They have a required minimum protection factor (RMPF) of 50, which means they supply breathing air a minimum 50 times cleaner than the welder would otherwise be breathing unprotected, while simultaneously protecting the welder's eyes and face from radiation and high velocity particles. Integrated hard hats (safety helmets) and earmuffs are also available with these systems to give welders five levels of protection (eye, face, respiratory, head, hearing).

With a flip-up welding helmet with powered air respiratory protection, welders can enjoy completely clear and uninhibited views of their workpiece and surroundings while maintaining their desired level of respiratory protection with no breathing resistance. The powered air respirator goes where the welder goes, allowing unrestricted movement around the workplace with clear vision, comfort and uninterrupted eye, face and respiratory protection. A recent study conducted within a large manufacturing company with more than 1500 employees, including 600 certified welders, found that "foreign body eye injuries decreased over 70% year-on-year in areas that implemented the PAPRs with integrated flip-up auto darkening welding helmets". Additionally, the same study also found that "worker compensation claims decreased markedly while employee morale increased substantially".

This issue is sponsored by — **Graphex** — www.graphexgloves.com

Identify and manage **Modern Slavery** **risks** in *your* supply chain.

Cm3 - Australia's leading **online** **Contractor Prequalification** and **Compliance Management** **solution,** can equip you with the tools required to meet your **Ethical Sourcing** & **Modern Slavery** reporting requirements.

Scan for more info or visit **cm3.com.au**

cm3

GREENCAP ONLINE RISK SOLUTIONS

PAPRs can provide protection to welders using the most common materials (aluminium, stainless steel, galvanised steel, etc) and applications (MMA, TIG, GMAW, FCAW, SAW) where there is an environment with general shop ventilation. In restricted spaces, a welding helmet with integrated supplied air respiratory protection will be effective. (A 'restricted space' for the purposes of this article refers to a situation where 1) local exhaust ventilation (LEV) fume extraction is not possible due to a limitation of space, 2) general plant air (dilution) cannot effectively reach the welder and 3) the space is not a confined space as defined by AS2865.)

Half mask respirators

Disposable or reusable half mask respirators can be worn underneath a welding helmet to provide an RMPF of 10. The welder must be fit tested (annually is recommended) and clean-shaven to ensure an effective negative pressure seal. When compared to disposable and reusable half face mask respiratory protection, PAPRs provide superior respiratory protection and comfort and do not require fit testing or a complete clean-shaven condition.

Practical ventilation controls

Ventilation can assist in reducing exposure to welding fume and other airborne contaminants. There are two key practical ventilation controls you can introduce: local exhaust ventilation and dilution or 'general shop' ventilation.

Local exhaust ventilation (LEV)

A properly located LEV system can capture welding fume at the source, which is the most effective way to collect and remove fumes. Popular options consist of fixed installations, portable systems and on-gun extraction.

It is recommended that respiratory PPE is always worn in combination with LEV.

Dilution ventilation (general shop ventilation)

'General shop ventilation', as it is known in the industry, occurs when contaminants released into the workshop mix with air flowing through the room. Dilution is not as effective as LEV in controlling welding fume exposure as large volumes of dilution air may be required and it is extremely difficult to control individual exposure near the contaminant source where dilution has not yet taken place. This option should only be used to control low levels of welding fume.

It is recommended that respiratory PPE is always worn in combination with general shop ventilation. It should be noted that natural ventilation (eg, wind) is not a reliable way of diluting or dispersing welding fume.

Who is responsible for ensuring workers are protected?

The employer has the primary responsibility to ensure that welding fume exposure is controlled, and welders are protected. The two key points regarding employer responsibility are as follows:

- If employers are unsure whether the welding fume exposures at their workplace exceed the relevant exposure standard, occupational health and safety regulations require that they must ensure air monitoring is carried out.
- Under both the Australian Model Work Health and Safety Laws and the New Zealand Health and Safety at Work Act 2015, the employer is financially responsible for providing PPE to workers and must not charge anyone for using PPE.

When selecting suitable PPE, the employer, where reasonable, should consult with the welders. A welder's knowledge, experience and personal preferences improve the overall decision-making process. As someone who is directly affected by welding hazards, a welder is entitled to take part in the consultation process and selection of suitable PPE. Personal preferences are the key to user acceptance — so welders should look for gear that they feel comfortable wearing. Welders should aim to educate themselves on the risks, understand the appropriate PPE available and look to become involved in the consultation process and ultimate selection of suitable PPE.

The world has shifted to more of a health and safety focus — the result of court cases and research. Subsequently, Australian and New Zealand companies are now completely changing their stance on welding fume and welders' protection. After all, if the proper precautions are taken and followed, protecting yourself and/or your welders can be straightforward.

AWS Pty Ltd
www.awsi.com.au

This issue is sponsored by — **Graphex** — www.graphexgloves.com

CleanSpace®

RESPIRATORS

A REVOLUTION IN RESPIRATORY PROTECTION

- High protection PAPR P3/TM3 99.95%
- Reusable and cost-effective
- No belts or hoses
- Comfortable and lightweight - 500g/1.1lb
- IP Rated 66 water tolerant
- AS/NZS 1716 & CE Approved

Request a Demonstration, Contact us at:
sales@cleanspacetechnology.com
CLEANSPACETECHNOLOGY.COM

IP66

EFFECTIVE EVACUATION PLANNING

TIPS FOR CONSTRUCTION

Leigh Harris, Director, Safety Graphics

There is no question that the current pandemic has compounded challenges faced by the construction industry, which is one of the most high-risk workplaces in Australia and one where many hazards are site- and task-specific. Here are some tips for effective evacuation planning in construction, covering topics such as compliance, training, evaluation and the importance of up-to-date signage.

Has your worksite conducted an evacuation drill in the last 12 months? If not, you should be placing this important exercise as a high priority. With supply chain disruptions, increased tightening of government regulations, stringent hygiene and social distancing measures due to COVID-19, the pressure to rapidly adapt has placed additional pressure on staff and contractors in the industry. It is no wonder, therefore, that activities such as evacuation exercises are at the bottom of the to-do list, as they require everyone onsite to 'drop their tools' and cease all work for a short time. There is a common misperception across most industries that evacuation drills are compliance-based only, thus a 'waste of time' or not representative of an actual emergency. This is often due to a lack of awareness or acceptance of the risks themselves (ie, 'that could never happen to us') or a lack of forethought into making these activities realistic and engaging for the workers.

To combat this, a top-down approach to emergency and safety awareness is vital. If the senior foremen do not take the exercise seriously or disparage the activity, it is hard to expect their crews to either. Although coronavirus (COVID-19) did not impact the construction industry as heavily as other industries such as retail or hospitality, the economic downturn has led owners and developers to hold off moving forward with new construction projects. This, in turn, prompted many construction firms to downsize and increase the levels of underemployment in this highly casualised industry. Staff disruptions compound the fact that the construction industry is one of the most high-risk workplaces in Australia. There are many hazards that are unique to these worksites that could jeopardise the safety of your staff and contractors.

We need to remember, emergencies aren't just fires, especially in construction. Some of the most common emergencies you may encounter at a construction site include:

- crane/machinery accidents (such as the '2012 University of Technology Sydney crane collapse');
- explosions (such as the '2014 Bridge Street potential explosion', when a Sydney gas main ruptured due to construction work);
- gas leaks and chemical spills (such as the '2017 Arncliffe gas leak', where 50 people needed to be evacuated); and
- personal injuries/fatalities onsite, especially due to structural collapse/falling debris (such as the '2019 Macquarie Park scaffolding collapse').

The above New South Wales scenarios are important to consider when planning and facilitating meaningful and productive evacuation exercises. Also important to remember is that each site will pose different and specific hazards, if you are working near or above a

This issue is sponsored by — **Graphex** — www.graphexgloves.com

major gas or fuel pipeline, for example. In short, your emergency response plan should ideally outlay the key risks so that you can exercise against these scenarios, rather than simply sounding a fire alarm for every drill. The following tips will help facilitate meaningful and practical evacuation exercises at your worksite.

Tips for effective evacuation planning

Take non-compliance seriously

The life-safety of yourself, staff and contractors takes precedence over deadlines and any project or tasks. Wardens should be trained and encouraged to take names and report non-conformers. If there is no policy regarding compliance to participating in emergency drills, consider developing a policy that defines the staff and contractor requirements during an emergency situation (including exercises). Once this is developed, inform all staff — including with the information on any site inductions — and follow through with any breaches. Formal warnings or other disciplinary actions can be enforced, if deemed necessary. If one person does not comply, you will generally see many others following suit, as they are 'following the herd'.

Ensure evacuation diagrams are up to date

In building construction, there will be various stages of the project where exits are accessible or blocked off. Site walkthroughs should be encouraged for all staff and contractors during different project phases to ensure that they know where to exit safely. Evacuation diagrams are required to be installed in prominent locations so that a person does not need to search for one in case of an emergency. Importantly, they must be accurate and not reflect previous phases of the project or previous building designs; therefore, updating the evacuation diagrams should be placed as part of the project scope. The last thing you want is a group of staff or contractors walking to a blocked exit.

The importance of keeping diagrams up to date applies even for workplaces (such as warehouses) that haven't been renovated/altered in the last five years. If this is the case in your place of work, ask yourself: when was the last time these diagrams were reviewed? All evacuation diagrams expire after five years as per AS 3745:2010, Planning for emergencies in facilities. *Why does it matter if we comply with this standard if they are correct?* Well, while accurate-but-out-of-date diagrams may not impede your staff and contractors' ability to evacuate safely in an emergency, if something goes wrong and you face a coronial inquest, non-compliance to the standard could potentially expose the company to civil or criminal action.

Employ scenario-based exercises that create a more realistic experience

It is ideal to use realistic scenarios that are based on the current risks of the workplace. However, it is critical to ensure that the complexity of the scenario matches the capability of your staff and wardens. If you make the exercise too difficult for staff, contractors and wardens to succeed, you potentially set them up for failure. This can lead to pushback from senior staff and decision-makers and cause yourself as the coordinator of the evacuation a lot of stress and unnecessary grief.

Consider multiple observers and surveys

Surveys are a great way to get feedback from the actual evacuees, because you can't be everywhere at once. Engage with staff and encourage them to participate with small items such as coffee vouchers, a team BBQ or another gesture to entice participation. Surveys can help to understand the current culture towards evacuation exercises, identify problems and frustrations among your staff and contractors, and, importantly, capture what information staff and contractors require from you to understand the process better.

Utilise external validation opportunities

While some large construction firms use internal subject matter experts to run the evacuation program, many have turned to external professional organisations to develop scenarios based on their sites' specific risk profile, train and educate staff members in emergency procedures, develop complaint and easy-to-read evacuation diagrams, and evaluate evacuation exercises. This external assistance can provide valuable insights and strategies to enhance the worksite's overall emergency resilience.

Safety Graphics
www.safetygraphics.com.au

SICK SUPPORT SERVICES

SICK is a leading manufacturer of sensor solutions for factory, logistics and process automation. By harnessing the power of innovation and focusing on customer needs, SICK has become a major player in many industries with a strong presence throughout the world. User requirements have been the driving force at SICK. Internal and external sources of technologies are used to create our innovative sensing solutions — from simple to state-of-the-art.

Our product portfolio is characterised by flexibility and cost effectiveness. Nearly all of our products adapt to varying automation and ease-of-use requirements. Our customers receive recommendations for solutions that meet their requirements.

SICK's recommendations are based on the task involved and are not limited by product range. SICK's decades long market presence ensures that users receive sophisticated, reliable products. For customers, that means greater peace of mind in the solution they have selected that is further enhanced by SICK's global support.

SICK supports our customers with a comprehensive portfolio of service offerings and serves as your service partner throughout the Lifetime of your product or system. SICK's full range of services is the perfect complement to its innovative products and systems to create a complete solution. Service offerings are categorised into several areas of competence. SICK's experience as a market leading service organisation provides you with the highest level of technical expertise, maximising your productivity and efficiency.

Consulting and Design
Technology support from planning to turn-key solution

Product and System Support
Fast and reliable, by on-site, remote access, or telephone

Verification and Optimisation
Performance checks and preventative maintenance for maximised uptime

Upgrade and Retrofits
Easy upgrades and technology updates

Training and Education
Continuous learning with product and systems training and industry standards education

Consultative and Design Safety

Using SICK's dedicated safety experts, we will evaluate existing design or turn-key solutions to ensure safety standards while meeting your productivity needs. Using SICK's systematic approach to safeguarding, we offer Consulting and Design services as well as verification safety services, which will be described further in the Verification and Optimisation section.

Product and System Support

On-Site Technical Support

When you simply want a SICK representative on-site for help, you can rely on SICK's experienced network of field service and application professionals. These individuals are strategically located throughout the US and can respond quickly to resolve product and system related issues.

24/7 Helpline Support

To accommodate customers who have extended hours of operation, SICK offers a program that grants phone access to Technical Support 24 hours a day, 7 days a week. Sold on an annual per-site basis, the 24/7 Helpline Support Program connects customers to a Technical Support team equipped to troubleshoot and diagnose product and system problems.

Remote Service

Remote service capabilities improve the ability to troubleshoot and reduce costly downtime. SICK's Remote Service Program was specifically designed for customers as a secure and safe way for SICK's authorised Field Service personnel to connect to a product and assist with problem diagnosis. Sold as a one-year subscription on a per-site basis, Remote Service requires hardware and/or software to be initially installed. Ideally, travel costs are eliminated as further technical help is received remotely instead of on-site.

Extended Warranty

SICK offers the option of Extended Warranties to its customers who want to have additional service protection for their products and systems beyond the original factory warranty period. The program is designed to provide an affordable and planned alternative to unpredictable repair expenses.

SICK Pty Ltd
www.sick.com.au

THIS IS SICK
Sensor Intelligence

This issue is sponsored by — **Graphex** — www.graphexgloves.com

©stock.adobe.com/au/dusanpetkovic1

SONAR
ITS TIME TO SURFACE

Leighton Haliday, Director, SonaSafe 20/20

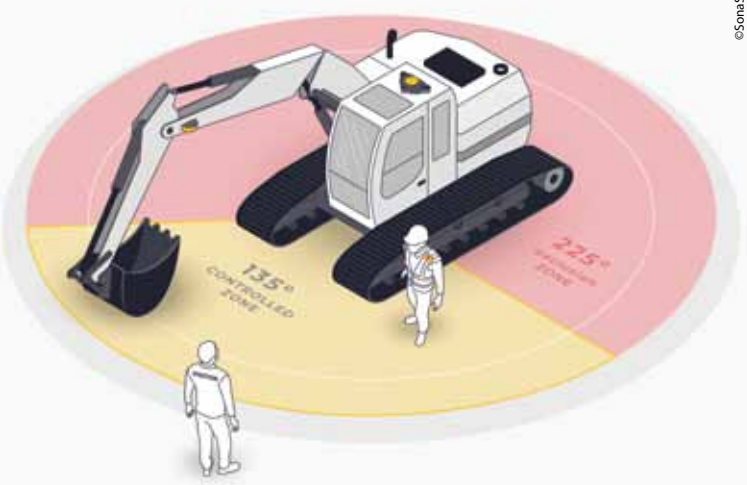
Smarter sensors and better software, delivering increased performance and management capabilities, all without any cost penalty, suggest that sonar technology's time in the sun is now.

Start talking about sonar technology and odds are that most people will immediately think of Gerard Butler in *Hunter Killer* or Sean Connery in *The Hunt for Red October*. Neither of which were exactly shining examples of professional health and safety practice in a working environment. However, in the non-Hollywood world, sonar technology has been quietly making inroads into risk management solutions, providing greatly increased flexibility of configuration and rich data analysis, to proactively refine safety management on an ongoing basis. Even five years ago, sonar was dismissed for use in mainstream workplace safety systems, due to perceived cost or lack of system configuration and management software. Decreasing sensor cost, more capable software and a steady trend towards cloud-based systems has begun to disarm these traditional objections.

Benefits of sonar

False positives are the bane of many workplace safety systems. Just like the non-gender-specific individual who cried wolf one too many times, false positives, in addition to being frustrating, are self-defeating. The more false positives a system generates, the more staff tend to ignore the warnings — which is the exact opposite of what safety management systems should achieve. Sonar-based systems avoid generating false positives by combining three-dimensional safety zones with software smart enough to track vehicle and person location and direction. Coupled with wearable personal detection units (PDUs), which are logged to specific individuals and include security and

SONAR-BASED SYSTEMS DELIVER MORE THAN A SIMPLE WARNING BUZZER. VOICE WARNINGS, ALARMS, TURNING A DRIVER'S SOUND SYSTEM DOWN OR OFF, COMPULSORY VEHICLE SLOWING OR STOPPING, ALONG WITH CUSTOMISED INTERVENTION MEASURES, ARE ALL AVAILABLE IN A SONAR-BASED SYSTEM.



©SonaSafe 20/20

access permissions, sonar-based systems essentially 'map' a location and then constantly monitor all movement within it. In addition, the rich granular information provided by the system offers many benefits beyond simply reporting near misses.

Sonar-based systems deliver more than a simple warning buzzer. Voice warnings, alarms, turning a driver's sound system down or off, compulsory vehicle slowing or stopping, along with customised intervention measures, are all available in a sonar-based system. Traditional systems can offer some of this functionality, but not the variable proximity 'bubbles' that are key to sonar-based systems. By the very nature of the technology, sonar-based systems are active in three dimensions. The latest generation of sonar proximity and safety systems can modulate and re-shape the size of the safety zone around a machine, based on speed, location, current operation and the permissions of approaching personnel.

Case studies

New Zealand Post

New Zealand Post Safety and Wellbeing Manager Arthur Preuss said the company is "very happy" with its sonar-based proximity safety system. "We started off in our tipper section. It's a confined space with four conveyor belts and several staff working in the area. The potential for interactions between people and fork hoists is potentially high. If something were to go wrong, that would be the most likely area," Preuss said. "In the first week we noted 100 near misses *per day* that might otherwise have gone unreported. Additional staff training on safety and operational procedures reduced the near misses to 10 per day by the fourth week."

A benefits example

A traditional warning beam across a vehicle access point automatically generates 50% false positives because the system doesn't know if the vehicle is coming or going... Sonar-based systems can tell the difference and will warn only in the required direction of vehicle travel and assuming there are one or more people within the safety exclusion zone.

In addition to recording near misses that might otherwise have gone unreported, the personalisation aspect of the PDUs makes it easier to identify those most at risk (aka repeat offenders). There is then the opportunity to provide them with further training and education, so they are safer at work. Preuss said that implementing the sonar-based proximity warning system provided unexpected additional benefits. "The system also helped us change people's attitudes to work safety, and that in turn changed our culture," Preuss said.

KiwiRail

KiwiRail, New Zealand's national railway operator, recently deployed a sonar-based safety system. Aside from wanting to improve overall safety — including reducing false positives in the existing system — the real-time dynamically configurable exclusion zones capability was of particular appeal. Rail track maintenance and cargo loading machinery have different safety zone requirements, based on current task, location and speed, further complicated by the access permissions of nearby or approaching staff. Because the shape of a real-time sonar-based proximity zone doesn't have to be confined to a regular shape (ie, circular or rectangular), the zone can change based on preset conditions. This not only improves overall safety but enhances staff operations.

For example, a rail track maintenance vehicle might have a pizza wedge access zone where authorised staff can approach if it is travelling under a certain speed. Unauthorised staff approaching, the vehicle travelling above a set speed or performing a certain category of operations automatically triggers a full 360° exclusion zone. If this zone is breached, the system automatically sounds a warning, reduces vehicle speed and this is followed by a compulsory stop, if required.

It's about culture actually

Behind the sensors and the PDUs and the configuration/management software of a modern sonar proximity system is rich data specific to a business location and its specific operations. This, in turn, provides actionable intelligence to be proactive as well as reactive with your safety management systems. Repeated staff training where required, coupled with refined operations, changes attitudes to health and safety. And as New Zealand Post — and others — have found, it can lead to a change in culture and a safer, happier workplace.

SonaSafe 20/20 Limited
www.sonasafe.co.nz

This issue is sponsored by — **Graphex** — www.graphexgloves.com

©stock.adobe.com/au/New Africa

YOU CAN CHANGE YOUR DRIVING HERE'S HOW

Craig Cockerton, Chief Operating Officer, Fleetcoach

We know that the way we drive is closely related to the way we live, so it can be tempting to think that our driving style is just the way it is — no chance of changing it. But this article aims to show just how unhelpful (and incorrect) that thinking really is.

Numerous studies have shown strong links between things such as sensation seeking, rule breaking and anger, and more crashes and incidents on the road. This shows that personality influences driving. But is personality fixed and unchanging? The research is clear on this too: absolutely not. While there may be some difficult-to-alter aspects of temperament as we age, personality traits have been shown to be changeable. Life circumstances and experience (trauma, becoming a parent, simply ageing) are great examples. Another is selecting a trait you'd like to change (how conscientious and committed you are, for example) and working hard for new behaviours to become habits (such as being on time and completing work you've said you'll do). Few people would be willing to accept that their behaviour (driving behaviour included) is rigid and unchangeable. If this were the case, why do we continue to set, and often meet, trait-based goals?

But perhaps it is preferable to talk about resources, rather than traits. A personality trait may indicate how you would tend to respond in a situation. However, the resources you have available to you at a given moment (how much energy/time you have, how exhausted/stressed you feel) affect which course of action you'll likely select. Being cut off in traffic after a gruelling day will likely evoke a different reaction from you than that same experience driving around an island on holiday when well rested and in no rush. This way of looking at things helps us look past generalisations about skill or personality and lets us see that maybe it has more to do with what I, as a driver, have available to me at a given time. It also helps us understand why other drivers might make poor choices — not just that they're an 'idiot' or a lazy driver, but that they might have less emotional and physical bandwidth at that current moment.

Of course, we also have clear evidence that we can, in fact, change our driving behaviour. Studies have shown that things like practising mindfulness, having eye contact with other drivers and perspective/attitude change all change driver behaviour. But not all interventions are created equal. We also know which things don't make a difference, such as prescriptive training, and the road safety campaign signs we can see from our cars. The way we live and drive are closely interlinked — so a calmer and safer drive home will have benefits long past getting out of the car, and a more stress-free commute has the same effect at work. Think for a moment how you feel after pushing your way distractedly through traffic to arrive somewhere, versus taking your time to get safely to your destination. Our in-car actions have flow-on effects for the rest of our day, our interactions, our work.

So, now you understand that it is possible to make changes to your driving behaviour, and 'it's just who I am' no longer passes as an excuse, here are some ways to do so:

- Driver training. There's strong evidence that coaching-style training programs work, whereas top-down instructional teaching does not.
- Mindfulness practice. Even a few moments of mindful awareness before you drive can make a big difference. Try sitting for a few minutes and notice things you can see, hear, taste, touch and smell.
- Awareness of your resources. While you're being mindful of the things around you, notice your internal state too. What resources are you currently working with, or are you running on empty? Are you hungry, tired, anxious, angry?
- Change your perspective. Try this next time someone on the road is frustrating you: imagine you are them. Transport yourself into their position and give them a name, a job, describe the day they've had, are they in pain? And so on. Doing this regularly helps to develop more compassion and understanding for other drivers.

'It's just the way I am, it's just the way I drive', is out, and 'I can change my driving' is in.

Fleetcoach
www.fleetcoach.com/driver-training

STONEMASON SILICOSIS
AS HIGH AS 30% ACCORDING TO A RECENT REPORT

Bronwyn Crabb, Sales Director Asia Pacific, CleanSpace Technology

A 2020 report, prepared by Monash University in collaboration with WorkSafe Victoria, has concerning statistics about the prevalence of silicosis among Victorian stonemasons, making the need for compliance and more powerful respiratory safeguards for workers more important than ever.

Monash University established a 'Screening and Disease Registry' to report on Victorian stonemason workers' health, treatment and recovery outcomes. As of July 2020, 456 workers have agreed to take part in the screening project and/or the disease registry, with 36 being the median age of workers at the time of assessment. Among these 456 workers, 133 (29%) cases of silicosis were identified. Of the 133 workers with a diagnosis, 102 had simple silicosis and 31 had more severe, complicated silicosis.

Findings

The study found that the reported use of respiratory protective equipment (RPE) has increased slightly; however, many workers reported ceasing RPE use after wet cutting processes were implemented. Further, opening a window/door and ventilation in the ceiling were the most common types of ventilation reported, which is unlikely to be effective in removing dust from the worker's breathing zone.

Other key findings included:

- Of the 324 workers in the stonemasons' screening project, 254 (78%) were referred for further follow-up.
- There were 211 (65%) workers who had clinical abnormalities (abnormal chest X-ray, and/or abnormal lung function, and/or significantly impacted respiratory function, and/or other symptoms or signs).
- Of the workers who were referred for further follow-up, 59 (26%) have a current silicosis diagnosis and 26 (11%) have possible silicosis.

In summary, this research has found a large burden of silica-associated disease in stonemasons working with artificial stone and demonstrated the need for ongoing screening of these workers and further research into the most effective screening methods to be used. These findings are also likely to have implications for silica-exposed workers in other industry sectors.

Respiratory protection available

Disposable masks vs powered air purifying respirators

When looking to protect yourself or your workers from any airborne contaminants, powered air purifying respirators (PAPRs) offer high and reliable protection, far exceeding disposable masks. Compared to disposable masks, PAPRs are high-protection, reusable devices with economic advantages, as the annual cost of replacing disposables stacks up. Disposable masks are well known for causing fogging and discomfort, leading to low compliance, frequent stopping or mask changes.

This issue is sponsored by — **Graphex** — www.graphexgloves.com


©CleanSpace Technology

©stock.adobe.com/au/ BillionPhotos.com

The report is titled 'Silica-associated lung disease health screening research: phase one final report' and is available at www.worksafe.vic.gov.au/resources/silica-associated-lung-disease-health-screening-research-phase-one-final-report. Phase two is currently underway, with the final report due in September.

Silica dust

Silica dust is harmful when inhaled into your lungs. It is 100 times smaller than a grain of sand, so small it can be inhaled without knowing. Respirable crystalline silica exposure can cause silicosis, a debilitating and irreversible lung condition that can cut short careers, reduce quality of life and lead to death. Respirable silica is also linked to lung cancer, chronic obstructive pulmonary disease and kidney disease.

To guard against silica exposure, state and territory regulators have moved to recommending workers wear powered respiratory protection using a minimum of a P2 filter, though it is certainly worth considering respirators that meet and exceed these requirements with a P3 filter. Under the standards, all worn tight-fitting respirators (regardless of whether it's a disposable mask or powered respirator) must achieve a correct fit to ensure the wearer is protected.

CleanSpace Technology Pty Ltd
www.cleanspacetechnology.com

WE SEE YOU
GAINING
AN EDGE

ADVANCE YOUR CAREER AND SPECIALISE WITH CQUNIVERSITY

For those working in safety, keeping up to date with contemporary issues in the field is vital.

Ensure you're at the forefront of safety science practice with CQUniversity's course options in occupational health and safety.

Specialisation options include:
» Risk Engineering
» Human Factors Engineering
» Accident Forensics
» Transport Safety Management
» Emergency Services Safety.

Courses are offered via our flexible and renowned online education mode, with entry options for those holding formal qualifications, as well as those with industry experience.

APPLY NOW
START THIS JULY OR MARCH, 2022

CRICOS: 00219C | RTO: 40939

CQUniversity AUSTRALIA

BE WHAT YOU WANT TO BE
cqu.edu.au

©stock.adobe.com/au/eric

MACHINERY COMPLIANCE

ENSURING YOUR SAFETY SYSTEM IS UP TO SPEC

Matt Turner, Managing Director, Plant Assessor

Safety legislation in Australia means that machinery compliance is a mandatory requirement, and for good reason.

According to Safe Work Australia's 'Work-related traumatic injury fatalities, Australia 2019' report, the breakdown agency of incident — which generally refers to the point at which things started to go wrong and ultimately led to a worker fatality — indicates that mobile plant and transport accounted for more than half (55%) of all workplace fatalities over the last five years and was the highest contributing category. Suffice to say, machinery compliance is a crucial part of workplace safety. On top of this, the consequences of safety breaches come with hefty financial penalties, convictions and reputational damage. So, knowing all this, how exactly do you safeguard yourself, your employees and your company from becoming another grim statistic?

1. Diagnose your current level of compliance

When it comes to machinery compliance what you don't know can be fatal. In order to gain insight and clarity around your current level of compliance it's essential that you run regular machinery compliance and safety checks. To assist with this, Plant Assessor has an easy to use self-assessment tool: *Machinery Safety System Health Check*. Designed to help people who use plant and machinery understand how sound their safety systems are, the *Machinery Safety System Health Check* covers everything from machinery pre-start checks through to service scheduling, information management, periodic plant inspection, contractor management and operator competency.

2. Find the gaps

Once you have a good understanding of how you're tracking in terms of your compliance, you'll then be able to see where your biggest safety gaps are. Additionally, on completion of your self-assessment, you'll be given an overall score, which will indicate the urgency of which your safety gaps need to be attended to.

3. Implement improvements

Now that you have identified any safety gaps within your processes and systems, you need to address them promptly. Time in the sense of safety and compliance can literally be the difference between life and death. Therefore, if you know you need to make safety improvements to your plant, machinery or processes, carry these out as your highest priority. To make this process as simple and efficient as possible, use purpose-built machinery compliance and risk assessment software tools. Not only will these streamline the work, a lot of this will also provide you with reminders and checks for the future so you won't fall behind the compliance eight ball again.

4. Ask for help when you need it

There can be no shortcuts when it comes to workplace safety, but this doesn't mean it has to be an overly time-consuming or complicated process. There are a range of businesses out there that you can go to for advice or to have your machinery compliance assessments managed entirely for you. For example, reputable services teams can travel to you with trained machinery experts, conduct any required risk assessments, photograph and catalogue machinery, supply and fit safety decals, assist you in understanding and managing any outstanding actions and ensure your machinery and equipment meets all your legal compliance obligations.

5. Don't run the risk

It is an unfortunate fact that all too often in Australia another machinery safety incident is reported that has either caused life-altering injuries or, in the worst case, fatalities. Aside from the devastating personal impacts of these incidents, there can also be significant financial costs along with potential jail time. The time to check how safe your systems are is right now. We urge you to undertake a machinery safety system health check assessment and get a better understanding of your system's health now, before it's too late.

Plant Assessor
www.assessor.com.au

This issue is sponsored by — **Graphex** — www.graphexgloves.com

Antimicrobial door decal

Help keep workplaces healthy and safe with the Safe to Touch (Push Here) door decals using antimicrobial protection, from Uniprint. Repositionable and featuring non-damaging application, these decals provide antimicrobial protection on doors and handles.

The protective door decals contain antimicrobial agents that inhibit and neutralise the growth of microbes on their surface, killing bacteria and viruses. The door decals are repositionable, non-damaging and feature surface-safe technology that can be applied to most surfaces, used for indoor and short-term outdoor use applications.

The decals are available in an Antimicrobial Safe to Touch (push here) door decal (two per pack), an Antimicrobial Safe to Touch door handle decal (four per pack) and an Antimicrobial Safe to Touch (push and pull) door decal (set of two).

With a lifespan of 365 harsh washes, antimicrobial adhesive film can be purchased separately and can be applied to any high touch surface or printed material. This antimicrobial film is made of clear cast PVC with a thickness of 60 microns.

It contains antimicrobial agents that inhibit and neutralise the growth of microbes on its surface. This technologically advanced film has been tested by the Pasteur Institute and proven to protect 24/7 over the period of its life against dangerous microbes, reducing approximately 99.9% of bacteria.

UniPrint Pty Ltd

www.uniprint.com.au

CONTRACTORS
LOCKOUT KIT
CLK-1

KIT INCLUDES:

1 x LCB-1 Carry Bag
2 x UCL-1 Universal Lockout Devices for Miniature CB's
1 x UCL-2 Universal Lockout Device for Moulded Case CB's
1 x UFL-2 Universal Lockout Device for Fuse Holders
1 x MFL-2 Multi-Function Cable Lockout Device with 1m steel cable
1 x SLH-30 Stainless Steel Lockout Hasp
1 x SLP- 150-RED Red Safety Lockout Padlock
4 x SDT-1 Danger Tags
2 x SDT-2 Out of Service Tags
Pen, Screwdriver and Cable-ties

Other great value Lockout Kits are also available – including custom made Lockout Kits. The CLK – kits are made in Australia by Cirlock, Australia's original lockout manufacturer. Items can also be purchased separately.

AUSTRALIAN MADE

See our website for more information
www.cirlock.com.au
lockout@cirlock.com.au P 07 5445 2910

CIRLOCK
LOCKOUT / TAGOUT EQUIPMENT

Power tool battery charging solution

The Makinex Mobile Charge Pod is a power tool battery charging solution that is designed to provide improved safety and security. This product enables contractors on construction sites to safely store power tool batteries, chargers and mobile devices while charging.

The product has six lockers that are large enough for multi battery bank charges and provides a protected GPO for each locker. The GPOs are positioned such that the plugs are outside of the locker, to enable safety inspectors and others to inspect tags on the electrical equipment. Each locker also has large holes in the doors for inspection and air ventilation.

With the Mobile Charge Pod, users can save unexpected work gear replacement costs and prevent battery charging hazards associated with temporary power boards.

Makinex Construction Products

www.makinex.com.au

Leuze

Forerunner
Yesterday.
Today.
Tomorrow.

The Sensor People have been setting technological standards in industrial automation for more than 50 years. In the field of safety at work, we convince from the start with trend-setting inventions, such as the development of the first protective sensor ever, to our latest safety innovation, "Smart Process Gating" – the space-saving solution for access guarding on conveyor lines.
This is how we ensure the success of our customers in an industry that is ever evolving.

Safety at Leuze

sales.au@leuze.com www.leuze.com.au

Driver safety training program

Fleetcoach has developed a range of training plans to help companies enhance driver training, addressing three main priorities: fleet management, driver safety and wellbeing. If a company wishes to focus on more than one of these priorities, they can also be combined to cover all the areas needed.

Subscribing is simple and flexible; instead of subscribing individuals, companies can purchase annual 'seats', with volume discounts and no minimum quantities. Simply choose the number of training seats needed, click and start training. If anyone leaves or changes roles, another person can be swapped out into their seat at no extra cost.

Fleetcoach's main aim is to support companies to build and maintain a company-wide driver safety culture. Its driver safety programs are effective because they are based on extensive behavioural science research. The driver safety programs are also a fun way to build and develop road safety and awareness skills.

All programs are fully online, easy to deliver and accessible at drivers' homes or offices.

Fleetcoach

www.fleetcoach.com

Preset fluid regulator

In applications where health standards are rigorous, the use of lead-free materials is an increasing priority. The Protect-Air EcoReg preset fluid regulator is made of the synthetic material Grivory GV-5 FWA and high-quality stainless steel, making it suitable for applications in areas such as drinking water, the food industry and medical industry. Grivory GV-5 FWA conforms to the DIN 50930-6 / FDA/EU drinking water directives and is FDA certified.

Drinking water is considered the most vital element for life next to air/oxygen. Since there is no alternative to this finite resource, protecting and securing the standard and quality of drinking water is a top priority for engineers, planners and technicians as well as system operators.

The EcoReg fluid regulator is an independent diaphragm pressure regulator that can be installed in all fluid systems. It ensures a constant and precise output pressure independent from the input pressure. The pressure value is factory set and cannot be changed, ensuring that no-one can manipulate the specified pressure.

Particularly important for liquid dosing machinery, the EcoReg inline fluid regulator can protect all downstream installations, devices and components by ensuring the correct operating pressure and preventing expensive loss of production.

Compressed Air Australia Pty Ltd

www.caasafety.com.au

Fall protection harness

The MSA V-SERIES harness line is a fall protection harness, with unique features to provide long-term comfort. An exclusive racing-style buckle allows for a close, comfortable-fitting harness — eliminating the need for bulky chest straps or cumbersome buckles.

The racing-style buckle creates an athletic cut, contouring the harness to the body for improved upper torso movement on the job. A pull-down adjustment allows the user to quickly get the right fit that is designed to last throughout the workday.

MSA Australia Pty Ltd
au.msasafety.com

Safety helmets

The KASK Zenith series of Safety Helmets is AS/NZS 1801 Type I certified, providing additional protection from front, rear and lateral impacts, in compliance with EN 12492. The Safety Helmets also provide protection from electrical shocks, in compliance with EN 50265 standard.

KASK safety helmets are all lined internally with expanded polystyrene (EPS), for an extra level of security. The helmets also feature an integrated structure system developed by the KASK team, which combines protection with light weight, to provide comfort and safety for the wearer.

A range of accessories enhances user safety and comfort in different environments, even when multiple set-up options are required. All KASK products are 100% made in Italy and passed through KASK's safety and quality tests.

KASK S.p.a.
www.kask.com

Cut-resistant gloves

Designed using quantum level engineering, the Graphex Quantum series of hand protection utilises graphene, an allotrope of carbon, represented as a one-atom-thick hexagonal lattice structure.

Proportionally, graphene is about 100 times stronger than steel and harder than diamond. It can conduct heat and electricity efficiently, yet is almost transparent. Recent scientific advancements have allowed for graphene's extraction and commercial production.

Through nanotechnology, graphene has been incorporated into the manufacture of the Graphex Quantum Series of cut-resistant gloves. By incorporating this material in the production of its yarns, Graphex has been able to produce thin, lightweight and comfortable Cut Level F certified gloves. They are available in two styles: with and without impact protection and feature an extended thumb and forefinger saddle.

Graphex gloves are worn in mining, construction, tunnelling and offshore operations. The combination of cut protection and dexterity allows the wearer to perform intricate tasks, wherever necessary, without sacrificing safety.

All performance levels are certified by an independent Notifying Body (BSI Group) to Australian and European Standards (AS/NZS 2161.3:2020 and EN388:2106). This certification ensures peace of mind for all stakeholders, from the distributor to the employer, and most importantly to the employee, the wearer of the gloves.

For more information: www.graphexgloves.com.

Private Brands Pty Ltd
www.privatebrands.com.au

Pallet racking upright protection

Rack Armour's pallet racking upright protection is designed to minimise damage caused by forklift and warehouse operations. Manufactured locally, the Rack Armour range is made from high-quality materials and has a patented ergonomic design. Rack Armour is designed with features and benefits to help clients reduce costs in pallet rack repairs, maintenance and downtime.

The Rack Armour range is designed to maintain its performance in cold stores, in temperatures as low as -40°C, without rusting or corroding, making it a suitable alternative to traditional steel protectors.

The range does not require bolts, thereby eliminating potential damage to flooring and make good costs associated with bolted protectors. Rack Armour offers clients the option to self-install using their installation tool or can provide quotes for professional installers.

Rack Armour Australia Pty Ltd
www.rackarmour.com.au

Welding safety campaign

The 'Working Around Welders' campaign from AWS addresses the risks of working near welding fumes. In early 2017, the International Agency for the Research on Cancer (IARC) reclassified welding fume as carcinogenic.

These risks apply not only to the welders themselves, but also to the non-welders who work in close proximity to them. As such, as it important for all workers and businesses to educate themselves on the dangers of welding fume, as well as the available protective options.

Welding fume participles can remain in the air for up to 48 hours; this is vital to remember when sharing a work environment with welders, as the air contains respiratory hazards long after welding has been completed.

There are many product control options for workers who are around those conducting direct welding. Local exhaust ventilation (LEV) and the use of personal protective equipment (PPE) including powered air purifying respirators (PAPR) are effective product control options to limit exposure to welding fume for non-welders.

AWS Pty Ltd
www.awsi.com.au

©stock.adobe.com/au/Syda Productions

COVIDSAFE CONSTRUCTION DOES IoT HOLD THE KEY?

Daryl Chambers, Director, M2M Connectivity

Construction has always been a hands-on, physical industry; one that, in some respects, has historically been resistant to the digital revolution around it. But as construction finds itself at the centre of national efforts for our country's economic recovery, what role can digital safety innovation play in keeping jobsites operational in a 'COVIDSafe' way — both amid and beyond COVID-19? And could the 'Internet of Things' and its technological quest for new ways to facilitate a pressing transition across this industry to a more digitised and automated worksite environment hold the key to construction and other industrial sectors' future success?

As construction work increases across Australia following the easing of coronavirus (COVID-19) restrictions, ensuring the safety of workers from the ongoing threat of COVID-19 remains the industry's number one priority. The issue of safety is nothing new, but the complexity of construction sites, new safe work regulations and an increased desire for firms and sites to be seen to be 'taking action' by industry bodies and policymakers has created a platform to relook at site safety — and consider new approaches. Like many aspects of our lives impacted by COVID-19, a good starting point is to accept that things will never be the same. From large groups gathering for smokos to staggered hours, shared equipment to strict sanitisation, the industry will continue to adapt.

The new normal

In year two of the pandemic, it is still unclear what the 'new normal' will be for construction. But two things are certain, while workers may be resistant to restrictions, they want to work. And while site operators and managers will see dips in productivity, due to regulations, they need to maximise safety and minimise risk. According to a report in the US by the Sheet Metal and Air

Conditioning Contractors' National Association, COVID-19 mitigation has seen construction site productivity drop by an average of 17.9%. In the UK, a report by Turner and Townsend cites an average figure of 20%. The numbers in Australia are less clear, but the impact is undeniable.

This environment has created a great deal of tension. And such tension has been heightened by a reliance on manual monitoring and processes, which has also left the industry searching for a sweet spot, which may not exist. That one spot that sits between regulation and productivity — and helps them to remain profitable. Another certainty is that technology is playing a significant role in Australia's COVID-19 recovery. And at the heart of each new technology we see launched — from mobile apps that track our location to fever readers at restaurants — is safety.

COVIDSafe technologies: the Internet of Things

'COVIDSafe' technologies have been deployed across construction. Common examples include digital project management tools that decrease the number of people onsite, supply chain software to increase the efficiency of material delivery and sensors to track the wearing of face masks. Construction has always been a very hands-on, physical industry and often resistant to the digital revolution around it. So, finding new types of technology that help facilitate the transition to a more digitised and automated work site environment will be the key to construction's future success. The Internet of Things (IoT) is a relatively untapped technology in the construction industry, but it has been proven in sectors that share similar safety challenges.

IoT is a term used to describe a group of technologies which are connected to the internet and, using sensors and cameras, can monitor, track and collect data in different environments. This data can then be analysed and shared so processes can be tweaked, errors identified and efficiencies gained. At its most basic level, it is used by councils to track when city bins are full and need collecting. At its most sophisticated, it can be used to automatically identify an individual with a fever, and alert authorities, in a crowd of hundreds of people. A 2020 analysis by IoT Analytics showed that IoT was most commonly deployed in manufacturing and industrial settings (22%), followed by transportation (15%) and energy (14%).

Other industries' IoT innovations

Mining

Like construction, the mining industry faces unique safety challenges linked to hazardous materials, harsh environments and heavy machinery, but they are also a leading light in how IoT technology can be used to minimise safety risks. A major consideration in underground mining is providing workers with clean air. A key to ventilation and toxicity management is monitoring and analysing airflow.

One solution that has been trialled in Western Australia is a 'digital canary', which allows workers to check air quality from the surface before entering a mine. The smart system uses air quality sensors to measures gases present at different points in the mine. The system is linked to oxygen pumps which can be automatically turned on or off to regulate the air and keep workers safe. All of the data is wirelessly transmitted 'back to base' and closely monitored.

Construction can take cues from industries like mining, but the industry also has its own unique set of safety challenges. The current trend is a very linear approach to the problem. Construction companies are seeking out one technology to solve one safety problem. This is a short-term approach, which does not maximise the potential IoT systems offer. IoT systems deliver the most benefit when devices and sensors are linked, talking to each other, and creating rich datasets — the full picture — about people, assets and the work environment.

> FOR CONSTRUCTION TO HARNESS THE POTENTIAL OF IOT AND TO MAXIMISE SAFETY, THERE NEEDS TO BE A CULTURAL SHIFT FROM PRODUCTS (INDIVIDUAL DEVICES) TO PLATFORMS (SOLUTIONS).

Manufacturing

In manufacturing, IoT devices are commonly used to track machinery and assets — particularly in factory settings. Recently, a major aviation manufacturer deployed what it calls an 'enterprise sensor integration' software platform. Using a suite of wireless sensors and devices worn by workers, and installed on machinery and factory assets, the system combines all of the data collected (location and movement) to create a complete picture of the 'health' of the factory floor. This has enhanced safety and productivity. There are hundreds of IoT sensors and devices on the market today. Smart cameras can measure physical distance and fever, and monitor face masks and other personal protective equipment, while smart sensors can monitor air and water quality, and wearables can be used to pinpoint workers in real time.

Harnessing the potential in construction

For construction to harness the potential of IoT and to maximise safety, there needs to be a cultural shift from products (individual devices) to platforms (solutions). IoT vendors are also starting to make this shift. New solutions with safety in mind are becoming increasingly common. For example, a new system in Australia has been designed to track tools and equipment, using a visual operating system monitored online, with the idea of minimising distractions, and enabling workers to focus on their core task of building. Real-time location systems are also on the rise, recognising the need to increase safety when workers and machinery work side by side.

These systems use bluetooth tags that can be worn or attached to equipment. The information they capture can also be used to create digital twins of work sites — essentially a game-like representation of every asset and its location. We are also seeing new types of smart badges, worn like lanyards. Using wireless technology, they can track workers at close proximity and enable workplaces to back-trace if there is a COVID-19 outbreak or a health, safety and environment incident. There is no doubt that the adoption of technology will grow from the current pandemic and this can only have positive safety outcomes. However, it will be important for the construction industry to think more broadly about the technologies it chooses, and how they work together to mitigate COVID-19 risks.

IoT technology has incredible potential for the industry but it is not a silver bullet solution. Facilitating the shift from manual to automated tasks will be where IoT delivers the most value. If successful, construction workers and site managers will be freed up and be able to focus on the core task of building. With construction making up 13% of Australia's annual gross domestic product, money will not be an issue. For this digital safety evolution to happen, the industry will need to think differently, find the right technology partners and, like most initiatives that seek to shift culture, invest in the right training.

M2M Connectivity
www.m2mconnectivity.com.au

This issue is sponsored by — **Graphex** — www.graphexgloves.com

CASE STUDY

Cooling vest lowers the risk of fatal heatstroke

©stock.adobe.com/au/Chamchai saeheng

A medical- and military-grade, self-powered, endothermic cooling device has been released as a solution to immediately treat heatstroke in high-risk industries such as mining, construction and agriculture. ERVest, certified as safe and effective for use worldwide by the CE, FDA and TGA, could save many lives lost to heatstroke. A key challenge to treatment of heatstroke is the speed at which it can attack the vital organs. Professor Stephen Bernard, Medical Director of Ambulance Victoria, said the main danger of delaying treatment is the fast escalation to vital organ damage or death. This presents a particular challenge to the mining, construction and agriculture industries. "Not only do these industries have many workers in hot environments, but they are also in remote environments," Professor Bernard said. "Add to that unpredictable heatwaves, and the risk of heat illness is very high."

Developed by CoolVest, the ERVest is able to cool a body from a fatal 42˚C to the safe core temperature of 37˚C in under an hour. Professor Bernard welcomed the introduction of this technology to Australia, adding that there are many workers in Australia who are at real risk of heatstroke, with very few effective ways to treat them onsite. "In some remote communities, you simply cannot get medical help to a person within that time," Professor Bernard said. "The next best treatment option would be immersion in ice cold water, or placing ice packs over various parts of the body — but again, in a remote location, this is often not practical." Professor Bernard added that in the instance of heatstroke in a remote location, the ERVest could be the difference between life and death.

"To me, this is a crucial piece of equipment that should be on every worksite, where it is likely the employee is exposed to heat, as part of an employer's duty of care to their workers' health," Professor Bernard said. "It should sit alongside your defibrillator, your fire extinguisher, first-aid kit and so on." As tougher manslaughter laws are introduced across Australia, CoolVest CEO Jonathan Weinberg, is urging employers across at-risk industries to be prepared with the necessary equipment. "If every work environment with employees at risk of sustaining a heat-related injury, and first responder vehicle, had access to life-saving medical equipment like the ERVest, the 500+ lives lost each year to heat-related conditions could potentially be saved," Weinberg said.

CoolVest Pty Ltd
www.coolvest.com.au

©ERVest

CASE STUDY

App ups construction contractor onsite safety

Australian fitout and refurbishment specialist SHAPE has made its SHAPE Minimum Standards (SMS) app available to the public. The app provides construction workers quick and easy access to environmental, health, safety and quality management information from any mobile device. The app will assist contractors in developing safe systems of work, conducting risk assessments and recognising potential onsite safety hazards in real time. The app contains the key expectations of SHAPE's environmental, health, safety and quality management systems, along with relevant work health and safety legislation, Australian Standards and Codes of Practice.

©stock.adobe.com/au/Trevor Adeline/KOTO

The SMS app was developed in partnership with SHAPE's site managers and contractors to address common safety hazards and create a streamlined approach for safety onsite, simplifying policies and procedures into dot points, images and diagrams. SHAPE has also made the app freely available on any Australian worksite, to boost industry safety standards. The app was trialled on SHAPE's worksites and was found to help increase subcontractors' awareness and understanding of common site hazards such as asbestos and electricity. Within six months of app testing, SHAPE's electrical incidents decreased by 67%, while asbestos-related incidents fell by 29%. SHAPE has also utilised the app as a tool for communicating site coronavirus (COVID-19) safety information, by breaking down content from the 'Coronavirus Action Plan', site implementation guidelines and other resources on topics including temperature screening, personal protective equipment requirements and physical distancing.

Phillip Smith, Australia Group Executive of Environment, Health, Safety and Quality at SHAPE, said that ensuring people and contractors have the right tools for the job and get home safely at the end of the day is the company's top priority. "We also want to see safety standards improve across the entire construction industry, which is why we're extremely proud to offer the industry-first SMS app publicly and hope it can help lift the safety outcomes on construction sites nationwide," Smith said. Erick Davey, contractor for Key Services, said his team is more productive with the ease of having information at their fingertips, enabling them to reference the SMS app wherever they go. The app also helps users identify potential risks in real time, which helps to ensure workers go home safe. "SHAPE has always gone above and beyond industry regulations for safety and the SMS app is no exception," Davey said.

Phillip Smith, Australia Group Executive of Environment, Health, Safety & Quality with SHAPE

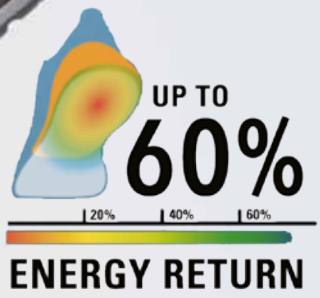
"Everyone who works in my company uses the SMS app for all onsite activity daily. Even when not on a SHAPE worksite, I have still been able to use the SMS app to ensure the highest level of safety standards are being met. Everyone in my team carries a phone with them, so it means that they have immediate access to the app and are able to take the necessary steps to mitigate risk for all onsite activities as it occurs," said Mark Anglicas, contractor for Sommerville Electric. The SMS app is available for free download from the Google Play and Apple app stores.

SHAPE
shape.com.au

This issue is sponsored by — **Graphex** — www.graphexgloves.com

PUMA SAFETY

SAFETY WITH STYLE



Lightweight Safety | Anti-fatigue Technology | Australian Standards AS2210.3:2019

MOTION CLOUD SAFETY RANGE

644497 **SPEED**
black/red

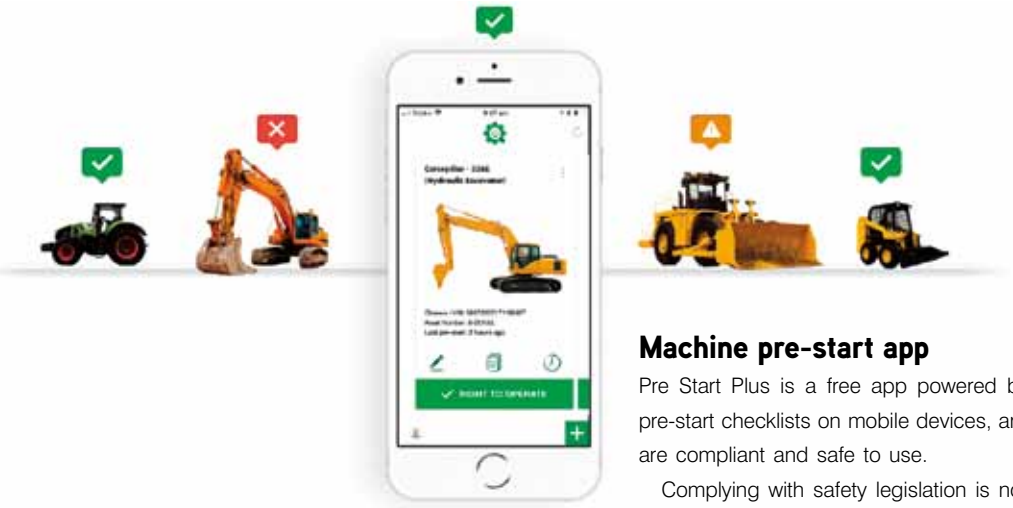
644567 **PURSUIT**
black/grey

URBAN EFFECT SAFETY RANGE

644627 **AIRTWIST**
blue/white

644657 **AIRTWIST**
black/white

TRADING DOWNUNDER PTY LTD - MANUFACTURER & IMPORTER OF PREMIUM SAFETY FOOTWEAR
Tel: 02 8678 1546 Fax: 02 8678 1573 Email: sales@tradingdownunder.com.au www.tradingdownunder.com.au



Machine pre-start app

Pre Start Plus is a free app powered by Plant Assessor that provides machine-specific pre-start checklists on mobile devices, and lets operators know instantly whether machines are compliant and safe to use.

Complying with safety legislation is not only mandatory, it's critical. The consequences of failing to comply can be fatal and financially very costly. Pre Start Plus guides operators through the required checks for their equipment, and lets them know straight away whether they're good to go or if there's a potential hazard. It is also easy to share the completed assessment with co-workers or contractors. The app is built with onsite use in mind and enables operators to complete pre-start checks quickly, even when they don't have an internet connection.

Pre Start Plus is hooked up to Plant Assessor's database of over 110,000 different makes, models, and types of machinery and equipment, so operators know that their pre-start checks are tailor-made for their machines.

The app also works with Plant Assessor, so all machines are there and ready to go when users log in to Pre Start Plus with their account. It is quick, easy and free to use Pre Start Plus.

Plant Assessor

www.assessor.com.au

Safety shoe range

The new model of safety shoes in the Puma Safety MOTION CLOUD range incorporates athletic design with cushioning, energy return and stability. The Puma Safety MOTION CLOUD are suitable for workers on their feet all day.

The IMPULSE. FOAM sole technology reacts to every step with an energy impulse that gives the wearer a feeling of 'walking on clouds'. Incorporating the new POWER PLATE torsion control element that is unique in safety shoes due to its size and shape, it extends from the middle of the sole to the heel, providing stability to the whole foot while increasing the energy return effect of the IMPULSE. FOAM.

A lightweight composite/fibreglass toe-cap provides extra toe space and 200 J impact protection, combined with a 300°C heat-resistant anti-slip rubber outsole.

The MOTION CLOUD range is available in ladies' sizes from UK 3–6.5 (Euro size 36–40) and men's sizes UK 7–12 (Euro 41–47). The MOTION CLOUD range is also certified to Australian Standards AS 2210.3/2019.

Trading Downunder

www.tradingdownunder.com.au

Public access automated external defibrillators

ZOLL offers a range of public access automated external defibrillators (AEDs) that are designed with lay rescuers in mind, to provide critical early defibrillation when treating sudden cardiac arrest (SCA). ZOLL AEDs include Real CPR Help technology, which prompts users step by step through the rescue, providing real-time CPR feedback on the depth and rate of chest compressions to help deliver high-quality CPR.

The ZOLL AED 3 defibrillator features real-time CPR feedback, full-colour rescue images, a touchscreen display and an integrated child mode, making it simple to treat both adult and paediatric victims of SCA. ZOLL AED 3 includes long-life consumables and Wi-Fi connectivity for remote monitoring of the AED's status.

The ZOLL AED Plus defibrillator with Real CPR Help technology helps rescuers provide high-quality CPR and will deliver a shock if needed. Real-time CPR feedback on compression rate and depth provides confidence and clarity to lay rescuers throughout the rescue.

The PlucTrac AED program management software helps users track and manage consumable items such as pads and batteries. It also monitors the certification expiration dates of volunteer responders, thereby helping users keep their AED ready for the day they need it.

ZOLL Medical Australia

www.zoll.com.au

This issue is sponsored by — **Graphex** — www.graphexgloves.com

MEETING THE CONDITIONS

FEATURES THAT MAKE MINING BOOTS FIT FOR PURPOSE

Adrian Blandford, Global Work & Safety Range Manager, Blundstone

©Blundstone

A pair of work boots is simply not fit for purpose unless safe and comfortable. Often designed for specific conditions, safety boots are built around features that keep feet secure — in all kinds of environments, while still being comfortable and supportive. The challenge for safety footwear is to fulfil a range of roles and functions simultaneously while ensuring it is fit for purpose. Accident prevention is fundamentally important, but it is supplemented by increased awareness of long-term occupational health issues. The advent of longer shifts, changing work practices, varied environments, and the implications of an ageing and gender-diverse workforce are all factors that need to be considered when designing safety footwear for the mining industry.

The choice of safety footwear is a subjective one, involving a range of practical and emotional considerations. Perhaps more than any other item of apparel, footwear has a strong bearing on the comfort and wellbeing of the wearer. Deficiencies in this area can be detrimental to the wearer's physical and mental health, and their performance in their work. To ensure adequate protection for miners, it is the responsibility of both the employer and employee to ensure that the correct personal protective equipment is worn. The suitability of safety footwear to provide adequate protection is accepted by occupational health and safety professionals and consumers alike, as being defined by written standards, with the Australian Standard being AS 2210.3:2019.

Standard

National and international standards address specific aspects of the use of safety footwear and encompass a range of specialised fit-for-purpose applications. The testing for standard AS 2210.3:2019 compliance covers many facets of the footwear construction, including design, upper construction (including leather properties), linings, durability and slip resistance of outsole materials, insoles, toe protection and specific ergonomic features. Certain workplace environments require additional protective features in footwear, including penetration resistance, electrical properties, water resistance and metatarsal protection — requirements that are also addressed in additional clauses in the above standard.

Features

Mining boots require a number of features to provide adequate protection and need to be able to withstand the harsh conditions of mine sites. These features include slip resistance, tread pattern, shanks and steel top caps. Rubber outsoles should offer heat resistance and provide slip resistance in varied environments, including resistance to cuts, abrasion and microbial attack, and be oil, acid and organic fat resistant. To enhance underfoot stability in muddy, rugged and outdoor conditions, boots should have a heavy-duty tread pattern. The tread pattern should be designed to promote natural dislodgement of small rocks and dirt. Another key feature of a mining boot is the shank, which ensures correct flex point and torsional stability. Steel toe caps for boots are essential for the mining industry as they provide maximum protection against impact, cuts, penetration and rolling forces, such as heavy moving machinery. Most importantly, boots must be breathable and comfortable, as miners spend extended hours on their feet, often on uneven and unstable surfaces.

Some other boot components that provide extra protection for miners include penetration-resistant insoles, metatarsal protection and Kevlar stitching. Penetration-resistant insoles provide maximum resistance against penetration of objects through the soles of the footwear. Fractures of the metatarsal bones are one of the most common traumatic foot injuries, so it is important to have a metatarsal guard for boots to reduce the risk of injury. Additionally, Kevlar stitching reduces the risk of abrasion along seams in such harsh environments. The best way to satisfy workers who have to wear protective footwear every day is to create truly fit-for-purpose products that are comfortable, tailored to performance and easy to wear; provide the protection they need; and are as unobtrusive as possible.

Blundstone Australia Pty Ltd
www.blundstone.com.au

CASE STUDY

Hi-vis maternity range advocates industrial inclusion

A collaboration between BHP, Blackwoods and Co Gear has led to the redesign of women's high-visibility maternity wear, at a time when industrial and trade businesses across Australia are striving to increase the number of women taking on industrial and trade roles across a range of industries. Co Gear Founder and Director Kym O'Leary said industries have been discussing inclusion and diversity initiatives in their workplaces, but the needle has been slow to move, despite a growing number of women in industrial and trade roles within these industries. "There is a growing number of women looking to pivot away from roles in metro areas and take on industrial and trade roles with some of the biggest mining and construction companies in Australia," O'Leary said. "But they are holding themselves back because things like workwear are not always suited for women."

Many women requiring high-visibility workwear that is compliant, durable, functional and correctly fitted have a limited number of options to select from — and for expecting mothers, the choices are even fewer. "While some businesses may not see the introduction of workwear for women as a significant change, it is actually an immediate and tangible output that can demonstrate commitment to progress. [B]usinesses need to go beyond creating committees and implementing policies, assuming the job is done. They need to make broader strides and take immediate action where they can, even if it is bucking the one-size-fits-all mentality around workwear," O'Leary said.

Mother-to-be and North Queensland fly-in fly-out worker Rejoice Jacobs said more mining and construction companies should offer maternity wear on their workwear lists. "Having workwear designed to accommodate for the changes you go through during pregnancy is great," Jacobs said. "After all, it's not only a woman's belly that grows during pregnancy. It's so nice having a comfortable option that will take me through my whole pregnancy, without needing to order larger sizes every few months. I think having this as an option for more women will help them to feel more included at work." O'Leary said the real-world application of the Co Gear range was a key factor to perfecting the final designs.

The maternity workwear designs were subject to considerable research and development testing across the Bowen Basin and Pilbara mining regions, to ensure they stood up to the practical challenges faced by women onsite. "When we started working on the redesigns for our range of women's workwear, we knew that collaboration was going to be a major contributor to our success, and fortunately we had plenty of support from industry leaders such as BHP and Blackwoods," O'Leary said. Based in Toowoomba, Queensland, Co Gear is collaborating with industry leaders to design a range of high-quality workwear that is comfortable and practical for women working across different industrial and trade sectors. "The feedback we received from women across varying roles in often challenging conditions was very positive," O'Leary said, "and further highlighted the need for businesses to re-evaluate the workwear options they are offering staff."

Co Gear
www.cogear.com.au

This issue is sponsored by — **Graphex** — www.graphexgloves.com


WORKPLACE
HEALTH &
SAFETY
SHOW 2021
TUES 7 – WED 8
SEPTEMBER 2021
SYDNEY SHOWGROUND
SYDNEY OLYMPIC PARK
THE MUST ATTEND EVENT FOR
ALL SAFETY PROFESSIONALS
FREE REGISTRATION
whsshow.com.au
T: 03 9596 9205 E: whsvisitor@iecgroup.com.au

CASE STUDY

Hydraulics-focused training academy boosts distributor safety

Hydraulink Academy training in Central Queensland. Hydraulink trainer Gary Howes (front left) with participants from distributors Hose Corp and Nebo Motors.

A nationally recognised training program run by the Hydraulink Academy is bolstering the safety qualifications of two Queensland distributors, Hose Corp and Nebo Motors. The distributors attended the training sessions because many of their customers requested this level of nationally recognised safety and environmental training. The Hydraulink Academy offers a range of hydraulics-focused training programs, including a number of nationally recognised units. The programs — which can be tailored to suit particular requirements — are run by qualified trainers either onsite at a customer facility or at a dedicated Hydraulink venue in Australia or New Zealand. The Queensland training session was conducted by qualified Hydraulink trainer Gary Howes, who has decades of experience working with hydraulics.

Howes travelled to two sites convenient to both distributors, and found COVIDSafe venues with adequate space to perform the theory and practical elements of the course. "Safety is front of mind for the customers of these distributors," Howes said. "In the areas they serve, there are some major coal companies that wouldn't even consider a supplier's business without the assurance of nationally recognised training, such as the type provided by the Hydraulink Academy." The course focused on areas such as hose assemblies, isolation, manual tools, silver soldering, work health and safety, customer service and communications. The programs aim to provide a well-rounded course that prepares participants for real-world situations and equips participants with the safety, environmental and quality experience to deliver superior results for their customers.

The training sessions apply to customers and staff of Hydraulink's 400 service points across Australia, New Zealand and the Pacific Islands, as well as customers, distributors, original equipment manufacturers and end users. Hose Corp and Nebo Motors serve a range of industries in Central Queensland, with Hose Corp focusing on general industry, sugar cane and coalmining while Nebo Motors focuses on transport, heavy vehicle and diesel mechanic works, with some overlap into mining. "Hydraulink's dedication to quality, safety and service extends not just throughout the entire organisation, but into its distributors too, where a safety-first culture is instilled throughout the partnership with these valued members of our national network," Howes said.

Hydraulink
www.hydraulink.com.au

wfmedia
connecting industry

Westwick-Farrow Media
A.B.N. 22 152 305 336

www.wfmedia.com.au

Head Office:
Unit 7, 6–8 Byfield Street,
(Locked Bag 2226)
North Ryde BC NSW 1670,
AUSTRALIA
Ph: +61 2 9168 2500

Editor: Dr Joseph Brennan
ss@wfmedia.com.au

Editorial Assistant: Ashna Mehta

Publishing Director: Geoff Hird

Art Director/Production Manager: Julie Wright

Art/Production: Colleen Sam, Veronica King

Circulation: Dianna Alberry, Sue Lavery
circulation@wfmedia.com.au

Copy Control: Mitchie Mullins
copy@wfmedia.com.au

National Group Sales Manager:
Nicola Fender-Fox
Ph: 0414 703 780
nfender-fox@wfmedia.com.au

If you have any queries regarding our privacy policy please email privacy@wfmedia.com.au

Subscriptions:
For unregistered readers - price on application

ISSN 1447-8277
PP 100007391

Printed and bound by Bluestar

All material published in this magazine is published in good faith and every care is taken to accurately relay information provided to us. Readers are advised by the publishers to ensure that all necessary safety devices and precautions are installed and safe working procedures adopted before the use of any equipment found or purchased through the information we provide. Further, all performance criteria was provided by the representative company concerned and any dispute should be referred to them. Information indicating that products are made in Australia or New Zealand is supplied by the source company. Westwick-Farrow Pty Ltd does not quantify the amount of local content or the accuracy of the statement made by the source.

This issue is sponsored by — **Graphex** — www.graphexgloves.com

DESIGNED FOR THE TOUGHEST ENVIRONMENTS

PILOT 2 NEO ENSURES GREATER SAFETY, RELIABILITY AND COMFORT, IN THE MOST EXTREME TEMPERATURES.

- Equipped with our exclusive PLATINUM® anti-fog & anti-scratch coating applied on both sides of the lens.
- Pilot 2 Neo's adjustable neoprene strap provides an excellent chemical resistance and increases its longevity.
- Available in CSP version, Pilot 2 Neo is an asset for all activities that alternate exposure to bright and low light.
- Pilot 2 Neo vented frame is wide enough to be worn with prescription glasses.

PILOT 2 NEO

Available in clear and CSP versions

Request a sample!

bollesafety.com.au

bollé SAFETY

Sundström

NEW

PAPR HOODS

MICROCHEM® 4000

Multi-layer
Robust
Organic chemicals
Inorganic chemicals

MICROCHEM® 2800

Light-weight
Comfortable
Inorganic chemicals
Biological hazards

SR602

SR601

The S.E.A. Group®

sea.com.au
SEA.Enquiries@sea.com.au
+61 2 9910 7500
1800 655 129
theseagroup
theseagroup
TheSEAgroupChannel

Certified System
Quality
ISO 9001

BUY A PRODUCT | GET A SYSTEM