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safety

solutions

health
&
safety
at work

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it's time to prevent
hearing loss

Proactive approach to
mental health and
bullying issues

Personal fall protection 101



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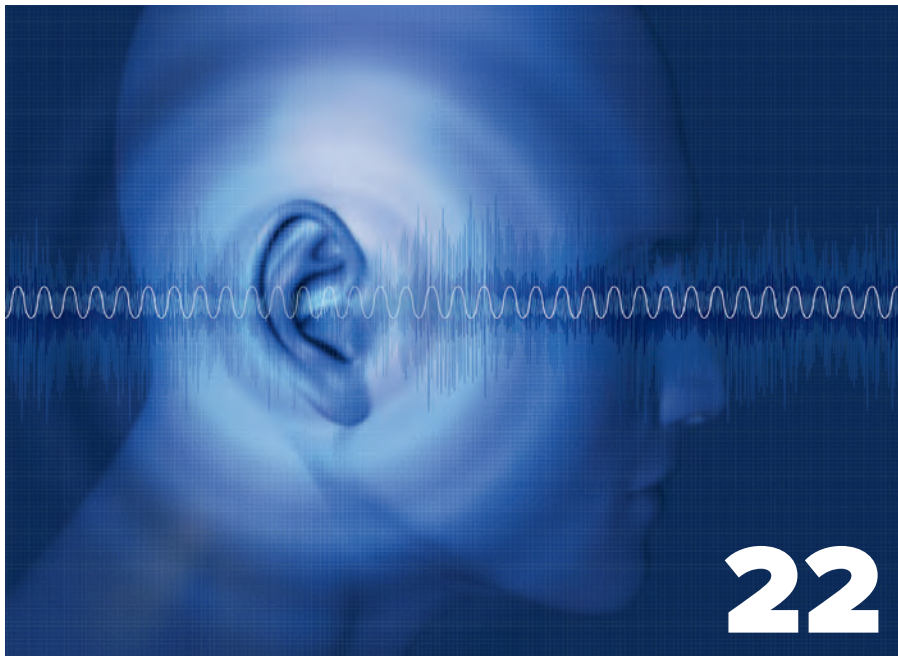
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WORDS FROM THE EDITOR



It has been estimated that 125 Australian workers have been killed at work in 2016. These alarming statistics highlight how crucial it is to keep safety at the forefront of every worker's mind in order to prevent accidents from happening.

Unlike physical workplace safety issues, mental health and bullying issues can often be placed in the too-hard basket, but bullying can present a serious threat to workers' mental health. There are, however, some solutions that organisations can implement to help manage the risks associated with these issues. See page 6 for further details.

Now as the weather starts to warm up across Australia, heat stress can become a safety issue in the workplace. We ask Occupational Hygienist Samantha Sims, how hot is too hot? Find out some solutions she suggests for managing heat stress in the workplace on page 34.

Noisy workplaces are another occupational hazard that can affect many workers. Hearing loss is not often talked about, as it usually happens gradually over a long period of time. However, once hearing is damaged, it cannot be repaired, so it is crucial to prevent it from happening in the first place. Find out more about preventing hearing loss in our hearing and sight feature, which starts on page 20.

Also featured in this issue is height safety, with details about selecting the right type of PPE for the job included on page 12. It's all about providing the right equipment and training to ensure that a person working at height, and the tools they carry, come back down safely on the worker's terms and not that of gravity.

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**PROACTIVELY
ADDRESSING
THE WORKPLACE
CHALLENGES**



Bullying and mental health issues in the workplace are two related topics which are often put in the 'too hard' basket for organisations. As early as 2008, statistics released from the Australian Bureau of Statistics indicated that 45% of Australians will experience a mental health issue in their lifetime^[1]. A 2012 study conducted by SafeWork Australia also found that 6.8% of workers had experienced bullying in the workplace in the last 6 months^[2].

Unlike physical workplace safety issues, there can appear to be no easy fixes in this increasingly complex area. However, employers should not be discouraged by these numbers or the 'uphill battle' that this topic often conjures up. Although there are various legal exposures that need to be carefully considered, there are also practical solutions that can be implemented in the workplace to reduce the risks associated with workplace bullying and mental health.

WORKPLACE BULLYING AND ITS IMPACT

While there is no universal legal definition of 'bullying', workplace bullying is generally accepted to be repeated and unreasonable behaviour directed towards a worker or a group of workers that creates a risk to health and safety, and this is reflected in the legislation. Although bullying can take on many different forms, it is generally considered to be consistent behaviour that is victimising, humiliating, intimidating or threatening in nature. This may include, but is not limited to:

- name calling or derogatory comments;
- using a position of power to unreasonably pressure a worker;
- creating a hostile working environment;
- unreasonably excluding someone from work-related activities;
- setting unreasonable timelines or constantly changing deadlines;
- setting tasks that are unreasonably below or beyond a person's skill level;
- physical contact or assault;
- practical jokes.

Importantly, bullying can occur between peers or a supervisor and a subordinate (and can include 'upwards' bullying of a supervisor by a subordinate or subordinates).

As the saying goes, every rule has an exception and bullying will not include:

- reasonable management action carried out in a reasonable manner (for example, performance management or disciplinary

action where an employer can show the organisation has followed a fair process); or

- one-off instances of rudeness, insensitivity or other inappropriate behaviour.

KEY LEGAL EXPOSURES

The major legal risks associated with mental health and bullying in the workplace are the work health and safety exposures. In short, employers have a responsibility to eliminate or, where this is not possible, take reasonable steps to reduce the risk of injury to workers. While much of the focus traditionally has been on managing physical injuries, employers are equally required to ensure, so far as is reasonably practicable, the mental health and safety of their workers. This includes not exacerbating pre-existing mental health conditions.

Bullying can present a serious threat to workers' mental health which, if not adequately addressed, could result in the following exposures:

- Prosecution under work health and safety laws;
- Liability for workers compensation claims;
- Adverse action and disability discrimination claims;
- Bullying applications before the Fair Work Commission; and/or
- Breach of contract and personal injury claims.

THREE EXAMPLES OF WHERE EMPLOYERS ARE GOING WRONG

Employers are open to a raft of potential employee claims relating to stress and anxiety which, if left to fester, can result in significant compensatory claims for diagnosed psychological injury.

Example 1 — Failing to recognise bullying upwards

More commonly, employers are faced with 'downwards' bullying complaints, being those from junior staff members about their superiors. It is therefore often forgotten that bullying can occur at any level and in any direction.



For instance, in *State of NSW v Manall*^[3] it was found that the employer had, for a significant period of time, failed to respond to a team leader's request to help her deal with disruptive and uncooperative direct reports. The Court held that these issues were well known to the employer and should have been addressed, but were not. As a result, the team leader suffered significant psychiatric injury and was awarded \$339,722 in damages.

Example 2 — Management action BUT in an unreasonable manner

It is important to remember that poor performance by an employee will not excuse unreasonable behaviour of an employer in addressing performance issues. For instance, in *Krysmen-Yeates v State of Victoria*^[4], although there were genuine performance issues in play, an underperforming teacher succeeded in her workers compensation claim because of the unreasonable manner in which her performance management process was carried out. The teacher developed an anxiety and depression adjustment disorder after being faced with delivery of a detailed letter criticising her performance on her first day back from long service leave. Crucially, there had been no prior discussions about any performance concerns with the teacher, and in addition subsequent to this letter, no proper performance feedback was given.

Example 3 — Too slow to respond to complaints

An organisation's failure to take steps to respond to employee complaints quickly is a common mistake. In a case involving a prominent investment bank an employee made a complaint to HR regarding a series of alleged malicious personal attacks and verbal abuse by his immediate supervisor, but did not get a final response for

approximately six months. It was found that no proper investigation of the complaint had occurred. The employee, Mr Nikolich, suffered depression and stress as a result of the situation which was allowed to continue. Mr Nikolich was ultimately awarded just over half a million dollars for suffering a psychiatric injury at the hands of his employer and for breach of contract.

PRACTICAL TIPS FOR GETTING IT RIGHT

There are some solutions that organisations should be implementing to help manage the risks associated with workplace bullying and mental health. These include:

- **Practical policies** — Having a written grievance and bullying policy is a must. Just be careful what you include in these as overcommitment and excessive promissory language can cause more harm than good.
- **Implement the policies** — Seems simple, right? This is where many organisations fall down. When a complaint is raised, your first port of call should be reviewing the relevant policies and then following them. This is why having practical and easy-to-follow policies will pay dividends.
- **Investigate** — So you have received a complaint, now it is time to investigate. This does not need to be a gruelling process, but should be taken seriously and conducted promptly and confidentially. If an employee has disclosed a mental health issue you may need to make adjustments to your process to ensure that, in all the circumstances, the process is reasonable.
- **Tough conversations** — Do not shirk from performance discussions and disciplinary action, where required. More often than not it is when something comes as a complete surprise that an employee

claims that this has caused them to experience stress, anxiety or depression. Ensuring such conversations are carried out in a reasonable manner and there are genuine performance grounds for such a talk is absolutely key.

- **Follow up poor behaviour** — Do not let single incidents go unchecked. Although bullying is defined as more than one incident of unreasonable behaviour, all poor behaviour starts somewhere and should be stopped immediately.
- **Medical information** — If an employee has disclosed a mental health issue, then managing this is just as important as addressing any allegations of bullying. Asking for information from an employee's doctor is acceptable (although it does require employee consent). Seeking independent medical information may also be appropriate. Subject to the medical information received, accommodations and reasonable adjustments may be required for the employee.

In summary, a lot of employers are left paralysed by allegations of bullying and harm to mental health and safety. Don't get caught out by this inaction. By utilising the above tips, organisations will be on the right path to minimising the psychological risks associated with potential workplace bullying.

References

- [1] National Survey of Mental Health & Wellbeing, Australian Bureau of Statistics, 23 October 2008.
- [2] The Australian Workplace Barometer: Report on Psychosocial Safety Climate and Worker Health in Australia, Safe Work Australia, December 2012.
- [3] *State of NSW v Manall* [2005] NSWCA 367.
- [4] *Krysmen-Yeates v State of Victoria* [2011] VMC 57.

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MODULAR SYSTEMS SAVE THE DAY AT TRAM WORKSHOP

Redevelopment of the Preston Tram Depot Workshop in Melbourne commenced in 2014 and was completed in mid-2016. At an estimated cost of \$190 million, the project encompassed redesigning the existing 7-hectare workshop site on St Georges Road into a comprehensive maintenance facility. Included in the redevelopment was provision for laying seven kilometres of new tracks within the depot, reconfiguring the heavy maintenance facilities and many other extensive modifications.

Extensive collaboration between Sayfa's design team and the project's construction crew was necessary at every stage of the works to ensure that the products

Their modular, no-weld installation and ability to be adjusted on-site to exact requirements ensured the installation process ran extremely smoothly and time effectively. Flat pack deliveries were also able to be sent to specific locations around the works.

Raptor Overhead Rigid Rail Systems were used in the new maintenance areas and they provide an effective fall arrest system for maintenance workers. The proprietary Raptor rail system allows for several workers to operate the system at one time, which is of huge benefit to a large maintenance facility where time is always a major consideration. The system is also extremely user friendly and can be easily extended should this be a requirement in future redevelopment.

Static line systems, also an integral part of the design, now allow safe and secure access to areas requiring regular maintenance and these systems were installed on many areas of the roof. The addition of Sentry guardrails and Pace600 walkways also provides a high level of fall protection and safe access to roof-mounted machinery, ensuring optimum worker safety.

Due to the level of roof incline there was also a requirement to supply a large quantity of step ladders, stairs and platforms. The Alto range was provided to offer compliant access and egress to varying roof levels and to supply access to difficult-to-reach areas. Their lightweight, robust aluminium construction makes them ideally suited to provide frequent access to areas requiring periodic maintenance.

Supply of operation and maintenance manuals at handover now ensures that all operators can confidently use the systems correctly, effectively and efficiently. The Preston Workshop now has the peace of mind that only comes from installing easy-to-use, compliant systems.



and systems installed met the criteria required of all roof access and height safety systems: compliance, quality, durability and functionality.

There was a plethora of challenges on this project, and supplying the buildings (which incorporated many steep skillion roof pitches) with adequate protection required some innovative and 'out-of-the-box' thinking. Frequent site visits and discussions were necessary to determine the appropriate systems that would be required for the many applications.

Factors that had to be taken into consideration were:

- standard and regulatory requirements;
- frequency of access;
- user competence; and
- aesthetic appearance and impact.

A large number of Katt modular ladders and fully adjustable modular cages were installed on the rooftops.

Since 2002, Sayfa Group has been a market leader in roof access and fall protection systems and it's their mission to bring every worker home safely. Its sales team is available to offer assistance for installation enquiries and its in-house design team can offer help for companies designing and specifying height safety systems. Additionally, its accredited height safety inspectors can visit buildings to audit existing systems and can offer cost-effective solutions should the systems require recertification or updating. Contact 1300 301 755 or sales@sayfa.com.au for further information.

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WHAT YOU NEED TO KNOW ABOUT FALL PROTECTION GEAR



For workers at height the number one safety concern is preventing a fall, whether it be a person or an object. According to Safe Work Australia, falls are a major cause of death and serious injury in Australian workplaces, and being struck by a falling object is a leading cause of injury for workers and the fourth-highest cause of death in the workplace*.

Fall protection' has historically referred to the harness and gear that either prevents a person from falling or protects them in the event of a fall. Today, many organisations are starting to understand that fall protection should refer to anything that can fall, including tools and equipment. But with tools and equipment, it's not about catching the objects that fall, we have to stop them from falling in the first place.

Despite the alarming statistics, and the fact that many of these fatalities and injuries could have been prevented with the right safety gear, numerous companies do not take the necessary precautions to prevent fall-related injuries by providing their workers with personal fall protection systems for themselves and for their tools. What goes up must come down. It's all about providing the right equipment and training to ensure that a person, and the tools they carry, comes back down safely on the worker's terms and not that of gravity.

Providing workers with the right equipment is simply not enough. Unlike hard hats, safety glasses and gloves (which are intuitive to use and don't require training), fall protection gear is highly specialised, and initially most workers don't know how to use it correctly. The effectiveness of fall protection gear, no matter how durable or reliable, is compromised when not used correctly. That's why organisations should always enlist a specialist to show their workers not only what tools to use but how to use them.

HOW TO SELECT FALL PROTECTION GEAR

At the most basic level, fall protection equipment is about creating connection points for at-height workers and objects. For a worker at height, a personal fall protection system prevents them from falling or arrests their fall if one does occur. For tools and equipment, a lanyard, cable or safe bucket can be used to prevent objects from falling. Any dropped object, whether it be a person

or tool, can be fatal to workers at height and on the ground, their co-workers and innocent bystanders.

The right fall protection gear can help prevent serious injury or death to workers at height. Today, fall protection equipment is becoming more accessible, intuitive and affordable than ever before. It also offers new, advanced features to help workers stay safe without adversely impacting their day-to-day work activities. For example, harnesses for workers have been improved to offer more comfort, as well as convenient connection points for tool lanyards that won't interfere with a worker's needs while working at height.

Before deciding what gear to get, take the time to educate yourself on how recent advances in fall protection equipment can improve the way your company operates, which might cause you to reassess your current equipment inventory. Don't just rely on information online, but take the time to explore hands-on demonstration opportunities from fall protection experts and manufacturers.

When selecting fall protection gear, be sure to select durable, user-friendly equipment that includes the advanced features that will not only help workers remain as productive as possible, but provide them with an added incentive to use it consistently. Also, ensure the tools selected match the manner in which they will be used.

For example, if you're working long shifts, is the personal fall protection harness comfortable enough so you can wear it throughout the workday and feel minimal discomfort after taking it off? If you're using an assortment of tools at height, do you have a bucket that supports their weight and can secure them from falling?

PERSONAL FALL PROTECTION EQUIPMENT 101

Active fall protection gear, such as a harness or a self-retracting lifeline (SRL), can mitigate the risk of serious injury if workers learn how to wear and use the equipment properly,

and how to conduct regular inspection and maintenance of the equipment.

There are five functional categories of fall protection equipment:

1. **Fall arrest** — A fall arrest system is required if there is any risk a worker may fall from an elevated position. They are designed to arrest a fall in progress and are typically composed of a full-body harness with a shock-absorbing lanyard or retractable lifeline, an anchor point and a means of rescue.
2. **Restraint** — Restraint systems typically include a full-body harness and a lanyard or restraint line that prevent the user from reaching a fall hazard.
3. **Work positioning** — A positioning system holds the worker in place while keeping his or her hands free to work. It typically includes a full-body harness, a positioning lanyard and a backup fall arrest system.
4. **Ladder climbing** — A climbing system prevents the user from falling when climbing a ladder or other structure and typically comprises a full-body harness, vertical cable or rail attachment and climbing sleeve.
5. **Descent and rescue** — In the event of a fall, retrieval equipment is needed to rescue or remove a worker and return him or her to a safe level. These devices include tripods, davit arms, winches and comprehensive rescue systems, and can allow for either a self-rescue or a peer-rescue, depending on the situation. For all at-height workers a rescue plan should be in place to minimise the time it takes to return a fallen worker to safety.

FALL PROTECTION FOR TOOLS: DROPPED OBJECT PREVENTION

Many companies overlook the importance of personal fall arrest systems, but even more fail to address systems designed to keep tools from falling. All too often they rely on secondary systems such as debris nets, toe boards and personal protective equipment (PPE) to catch the tool or to limit the damage that it does to the worker. Little thought is put

into stopping the tool from falling in the first place.

The danger of a dropped object is often underestimated. Even the smallest object dropped from a height as low as 200 cm can result in serious injury or death.

One common misconception is that hard hats are an acceptable line of defence against dropped objects. But the truth is that hard hats only provide limited protection and cannot prevent workers from being injured by all dropped objects... only dropped object prevention does.

THE CATEGORIES OF FALL PROTECTION FOR TOOLS

- Attachment points — Attachment points such as a D-Ring make it possible to tie off any tool in a matter of seconds — without defacing or structurally modifying the tool.
- Lanyards — Tool lanyards are suitable for virtually any tool. Hard hats, radios, hand tools, even tools weighing up to 36 kg.
- Pouches — Pouches are built specifically to prevent dropped objects and are available in a number of variations. A key element of a good pouch is a self-closure system. Once an object is placed in the pouch, a self-closure system helps prevent objects from falling out.
- Buckets — Buckets are designed to help workers transport objects from one area to another. These objects are typically larger in size, including scaffold poles, torque wrenches and pipe wrenches. A bucket should come with an effective closure system such as a hook and loop closure system, allowing the user to lock it or use it easily.

USING FALL PROTECTION GEAR

In order to make the most of your safety gear, first familiarise yourself with your fall protection program and then be sure you understand how to use the equipment safely, within the context of your plan and job site.

For example, does your equipment match your job site and provide a safe amount of fall clearance so a worker is not at risk of hitting anything below in the event of a fall?



Providing workers with the right equipment is simply not enough ... fall protection gear is highly specialised, and initially most workers don't know how to use it correctly.

Do you have a safe, secure anchor point and connection for yourself and your equipment?

Make sure you also know not only how to use the gear, but how to set it up properly. For example, a tool that isn't attached correctly to a D-ring can lead to preventable accidents and even tragedies.

On-site training courses allow participants to apply the training, and gear, directly to their worksite, and to their specific daily activities.

INSPECTING AND MAINTAINING FALL PROTECTION GEAR

A full inspection of all fall protection equipment should be completed before and after each use to ensure that the items are in good working order, and the results should be documented in an inspection log. In addition, a competent person should conduct regular inspections as outlined in AS/NZS 1891.

Always replace any equipment that looks damaged and be sure to stay up to date on all training courses. If you are diligent in inspecting and updating your fall protection and dropped object prevention gear, keeping it clean and storing it properly, it should perform properly in the event you or your tools fall from height.

CONCLUSION

Safety isn't something that can be bought. It's a culture that starts at the top and must be ingrained in safe work practices by employees every day. If senior management demonstrates an earnest commitment to safety, so will their employees.

Too often companies only invest in safety after a tragic event occurs. Although most companies now recognise the hazards of working at height, the next step is for them to realise that fall protection and dropped object prevention must be addressed before an incident, not after, to help improve the personal safety of workers while working at height.

**Source: SafeWork Australia Notified Fatalities 2014*

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The Euchner CKS-AS key adapter is an electronic key system based on transponder technology that now comes with integrated AS-interface. It consists of a coded key and key adapter with integrated evaluation unit.

The product can be used in various applications, such as an electronic lockout mechanism, a key transfer system or for assigning access rights to use an operating mode.

For operation on the AS-i safety bus, the product is integrated directly as a slave. When a valid key is inserted, a safe code sequence is sent directly to the safety monitor via the bus. Depending on the program stored in the monitor, the safety outputs are switched or system start-up is enabled.

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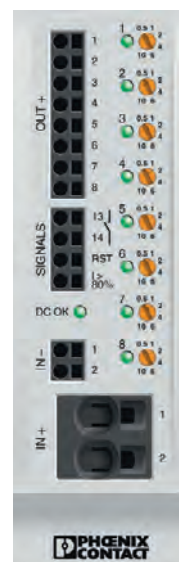
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HOTPRODUCTS

Drop prevention lanyard for hard hat

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A 45 cm coiled hard hat lanyard secures the hard hat firmly to the worker's clothing with a clamp option or to a harness with a buckle option that offers more comfort than chin straps.

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Executive safety shoe

Ascent Footwear has developed an executive safety shoe with a versatile business shoe look, built on its Diamond Grip slip-resistant outsole and featuring a steel safety toecap. The use of an integrated midfoot stabiliser which wraps up on the medial side adds additional stability when walking over uneven surfaces while a firm thermoplastic heel counter provides lasting ankle support.

The next-generation 'Bungee' insole and responsive cushioning under the heel is designed to help wearers work harder and longer with significantly less foot pain.

Ascent's anti-slip design, Diamond Grip, is set to the highest Australian safety standards for slip-resistant footwear and certified to AS/NZS 2210.3:2009 TYPE 1 E HRO SRC.

The shoe is available in sizes USM 7–12, 13 (2E width).

Dominion Cross Pty Ltd

www.ascentfootwear.com.au



Radar speed gun

The Stalker PROII radar speed gun has the capability to track objects moving both away from and towards the radar simultaneously. It has several different modes of operation (Carnival, Baseball, Vehicle and Tennis), allowing the user to adjust the internal settings to suit their specific target. It is available to rent at TechRentals.

The product has a wide speed range and fast acquisition time, making it suitable for any activity that requires accurate speed measurement. The kit includes a speed radar gun, a tripod and a large 3.5-digit display. The digits on the display are 20 cm high, making it easier to view results at a distance.

Features include a 1–800 mph (1287 km/h) speed range; measures mph, km/h, knots and m/s; 10 ms acquisition time; and recall up to 10 previous displays.

TechRentals

www.techrentals.com.au



Electrolyte hydration sachets

Sqwincher has developed a range of low-cost, portable electrolyte hydration sachets, designed to ensure that workers are properly hydrated.

The Sqwincher Lite product is suitable for mobile workers on the go. It is a colour-free, clear electrolyte drink, sweetened naturally with 40% less sugar than standard Sqwincher and flavoured with all-natural flavours.

The product is a premix powder that only needs added water and is available in bulk powder packs.

Pryme Australia Pty Ltd

www.pryme.net.au



Full and half-face respirators

Your lungs are vital to your health — if hazardous particles reach the lungs they can damage the delicate tissue and cause illness. Your body has some natural defences against airborne particulate hazards but if the contaminant is in a large enough quantity and/or made up of very small particles, these defences may be overcome, resulting in ill health and increased risk of diseases such as occupational asthma, pulmonary fibrosis and cancer.

Respiratory protection is only effective if it is correctly selected, fitted and worn throughout the time when the wearer is exposed to respiratory contaminants.

The low-maintenance 3M full (6800 series) and half-face (7500 series) respirators are simple to use and feature a soft silicone face seal for comfort and durability. Available in three sizes, all respirators feature the 3M Bayonet system allowing the filters to be clicked into place ensuring ease of use. When combined with the broad range of filters or cartridges available, the respirators provide respiratory protection against particulates and a variety of gases and vapours.

Compatible with 3M re-usable respirators, 3M Organic Vapour Service Life Indicator Cartridges allow users to clearly see when their respirator cartridge needs to be changed. In appropriate environments, the innovative Service Life Indicator takes the guesswork out of cartridge change timing and it optimises cartridge use by responding according to individual exposures and breathing patterns.

3M Personal Safety

www.3M.com.au/ppesafety

Lighting kits for vessel/tank inspections

The Wolf LinkEx LED Tank Lighting kits are IEC Ex certified and provide a low-voltage temporary lighting solution for Zone 1 and 2 (gas) and 21 and 22 (dust) hazardous areas where potentially explosive gases, vapours or mists may be present within a confined space.

The tank lighting kits allow for a flexible set-up and provide ambient LED lighting to suit working conditions in tanks and vessels. Luminaires can easily be linked to form a chain of lights for effective light distribution. Tank lighting kits are available through a simple configuration of either LinkEx LED and Fluorescent Temporary Luminaires or LinkEx LED Floodlights.

Other features include easy maintenance; transformer, 230 V or 110 to 24 V; range of cables, plugs and sockets types and power distribution systems; protective, fixing and mounting accessories.

Typical applications include vessel entry, tank cleaning and routine inspection work and programs of preventive maintenance shutdowns all encountered in the oil and gas markets.

JT Day Pty Ltd

www.jtday.com.au



Hearing

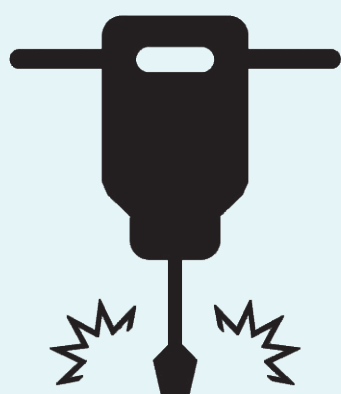


Damage to your hearing is often a gradual process

— the effects of noise exposure are permanent. Some of the early warning signs are: you can hear but not understand; you find it hard to hear in noisy situations or groups of people; you think

people mumble; you need turn the TV up louder than others; or, you don't always hear the doorbell or the phone.

Source: www.hearingawarenessweek.org.au



Over 20%

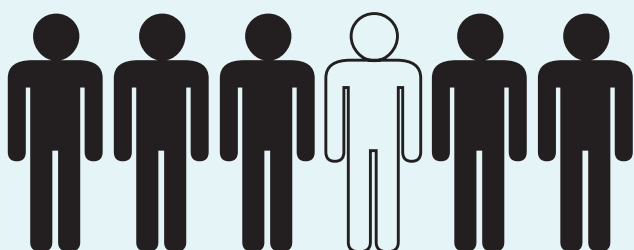
of the Australian workforce is exposed to dangerously loud noise at work, **primarily from tools and machinery**

Source: Audiology Australia, [Williams, W. (2013). The epidemiology of noise exposure in the Australian workforce. Noise & Health, 15, 326-331], audiology.asn.au

One in six

Australians have experienced hearing loss, with the figure predicted to **rise to one in four by 2050**

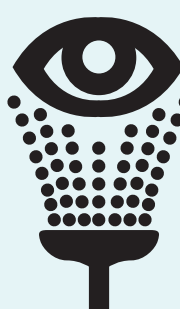
Source: Audiology Australia, audiology.asn.au



Vision

Eye injuries in Australia cost around **\$60 million** per year.

Up to 50,000 eye injuries occur per year — approximately **seven in 1000** workers sustain this kind of injury.



60%

of all eye injuries in Australia occur in the construction, mining, agriculture, forestry and fishing industries.

Source: Australian Government Commcare 'Eye health in the workplace' fact sheet 2015, www.comcare.gov.au

88%

of workers compensation claims for eye injury were made by **men**



Source: Safe Work Australia Work Related Eye Injuries Australia 2008 report, www.safeworkaustralia.gov.au



Work-related eye injuries result in **500 hospital admissions** per year

Source: Safe Work Australia Work Related Eye Injuries Australia 2008 report, www.safeworkaustralia.gov.au



Visual noise monitoring system

The SoundEar3 series of visual noise monitors and noise level recorders is now available in Australia and New Zealand.

The series can provide users with a more complete view of the noise situation compared with walking around with a noise meter.

The visual keys and data logging make it easy to see where users need to take action in order to reduce the risk of hearing loss and noise pollution.

The visual alarm instantly and clearly indicates where and when the preset noise limit is exceeded so the workers nearby can immediately take appropriate action to protect their hearing.

The series comes standard with an assortment of features including user-friendly management software for configuration and reporting.

All models in the series have several add-on options for connectivity, including: wireless, LAN and users can even send noise alerts to their phone.

All models come standard with an easy transfer of log data into the SoundEar software via USB. Up to 90 days of noise measurements can be recorded and users can capture LAeq, LCpeak, LAF and LAS.

Suitable for industrial, hospital and entertainment applications, the series is designed to provide a complete picture of noise conditions.

The SoundEar Software provides an easy-to-use interface for creating reports of noise levels and exposures. All measurements can be saved in a CSV format so users can also create their own reports.

Sound Safety

www.soundsafety.com.au

Prescription safety glasses with removable foil lens

The IC Safety System consists of a bendable prescription lens insert or 'foil' and matching frames and glasses (made of polycarbonate) to fit the foil. The foil clips into the frames and is easily removable.

If the frames are scratched, the prescription foil can be removed and simply clipped into another frame. This enables the worker to be back on the job quickly instead of having to wait for the delivery of a new set of prescription safety glasses. The system is also designed to be more affordable than replacing prescription glasses.

The IC range is suited to workplace and sports safety glasses applications and meets the requirements of the current standard AS/NZS1337.6 for protective eyewear.

New Eye Company Pty Ltd

www.neweyeco.com





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ONE IN SIX PEOPLE HAVE A HEARING HEALTH ISSUE

Keeping your hearing healthy is largely about knowing how much loud sound you're exposed to. A 'noise diet' can protect your hearing from future problems.

Most cases of deafness are caused by damage to the tiny hair cells in the inner ear. This damage can be the result of too much noise, and it's permanent. Noise-related hearing loss is usually irreversible.

The national consumer organisation Deafness Forum of Australia points out that damage to hearing due to noise exposure is cumulative.

"The louder the sound, the less time you can safely listen to it. Just because a sound isn't annoying doesn't make it safe," said its chair David Brady.

Noisy occupational environments are a leading cause of hearing loss.

You can lose some hearing after being exposed to loud noise

for too long. Or hearing can be damaged after a short burst of explosive noise.

HOW LOUD IS TOO LOUD?

According to the Deafness Forum, noise levels above 105 decibels can damage your hearing if endured for more than 15 minutes each week. But it also warns that lower levels, such as between 85 and 90 decibels, can cause permanent damage if you're exposed to them for hours every day.

The higher the number, the louder the noise. The Health and Safety Executive (HSE) says noise levels above 105 dB can damage your hearing if endured for more than 15 minutes each week. But lower levels, such as between 85 and 90 dB, can also cause permanent damage if

you're exposed to them for hours every day. Table 1 provides a guide to some typical noise levels measured in decibels, or dB.

Hearing loss is a paradox. It is so prevalent in the community, and yet has a generally low level of awareness and understanding.

"If you work or frequently spend time in a noisy place or listen to loud music a lot, you could be losing your hearing without even realising it," Brady said.

BARRIERS TO EFFECTIVE NOISE CONTROL

The gradual, hidden and often uncertain course of hearing loss tends to reduce its priority as a work health and safety issue. The most effective interventions are to:

- provide workforce education about the dangers of

exposure to loud noise and the risk it poses to hearing health;

- review and communicate a company's available noise control and hearing loss prevention options;
- be aware of and explain the importance of complying with noise control regulations, enforced by work health and safety regulatory authorities.

A national public campaign called Break The Sound Barrier educates the community on protecting its hearing. It calls on Australian governments to make hearing health and wellbeing a national priority. For further details, visit: www.breakthesoundbarrier.org.au.

Deafness Forum of Australia
www.deafnessforum.org.au/

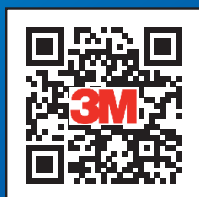
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LISTEN UP: CONSTRUCTION WORKERS SUFFERING HEARING LOSS



Construction workers regularly experience noise levels up to six times the legal exposure limit and up to 75% are developing tinnitus or permanent hearing loss as a result of their job — according to figures from Australian audiologist Dr Ross Dineen, who has extensively studied hearing loss and tinnitus in the construction industry.

Dineen and his colleagues studied noise exposure levels in construction and analysed the way personal protective equipment (PPE) and protective approaches are used.

“Dosimeters measured the real-time exposure to noise and worker behaviour was monitored. Their total dose [of sound] over the working day averaged over six times the legal exposure limit,” Dineen said.

“Over 75% of construction workers were experiencing hearing and communication problems,” he said, adding that this was based on hearing tests as well as feedback from family and friends.

Dineen said little has changed since his research and that noise-induced hearing loss (NIHL) and tinnitus remain a serious issue in construction.

“There’s nothing really being done to address it,” he said.

HEARING LOSS INCREASES PPE AVERSION

Reluctance to wearing PPE is a major cause of hearing loss in construction, according to Dineen, who said that hearing damage was compounding because as damage increases,

so too does reluctance to wearing hearing protection.

“If you have a pre-existing hearing injury then conventional hearing protection reduces the ability to hear speech and warning sounds and it means many workers are not inclined to wear hearing protection at all,” Dineen said.

“We conducted some focus groups asking why people were engaging in these behaviours and their immediate concern was being well enough to go home that night. They regularly see people around them injured or killed.”

With this in mind, he stressed the importance of preventing hearing loss early.

“The issue is to get people before they have injured their hearing when they can still hear while wearing conventional ear protection,” he said.

THE RIGHT CLASS OF PPE TO ENCOURAGE USE

Pro Choice Safety Gear Product Development Manager Brad Rodgers said the company’s new ProPod earplugs are a Class 3 decibel rating, which encourages wear by providing hearing protection while still allowing wearers to hear background noises such

as an approaching forklift or co-worker communications.

"Class 5 (the highest level of hearing protection) is not always the best solution. There are different designs for different ratings and uses which should be matched to the application and risk," Rodgers said.

The ProPod earplugs also reduce the chance of ear infections, with finger-holds allowing workers to take them in and out without tainting the component that sits in the ear canal, according to Rodgers.

"Some people don't clean their hands before rolling up earplugs so they are using dirty fingers, which can push bacteria in the ear and cause infections," he said.

TINNITUS (RINGING IN THE EARS)

A common symptom of hearing damage is tinnitus, the clinical term for ringing, whistling or hissing in one or both ears. Tinnitus is not a 'sound' but is the noise of the auditory system as the brain tries to adjust for the hearing damage, according to Dineen.

"Tinnitus, initially, is a warning sign that hearing damage is occurring," Dineen said,

adding that it is usually also combined with muffled hearing.

"Your ear is dampening to try and protect itself. If you're constantly working in a loud environment, that hearing loss doesn't come back."

He said symptoms of long-term tinnitus also include intolerance to some noises.

"Normal sounds that you could previously tolerate such as putting a cup on the bench or putting a saucepan in the sink become an unpleasant experience," Dineen said.

"There is no cure for tinnitus; however, a hearing aid should reduce awareness of it."

TRAINING AND EDUCATION CRITICAL TO PREVENTION AND DIAGNOSIS

Dineen said that training and education are critical to ensuring workers can self-diagnose when hearing damage is occurring and therefore take appropriate protective measures.

"It's really important that workers can identify the initial symptoms of hearing damage... recognition is often low until they get feedback from friends or family," he said,

adding that loud televisions or asking people to repeat themselves were obvious signs.

He suggested workers use the following self-testing of their hearing post shift using a car radio as a simple method to test for short-term hearing loss:

Post-work hearing test

Step 1: When driving home after work, set the car radio at a 'comfortable' volume so that you have a comparison point the next morning.

Step 2: When driving to work the next day, if the volume is no longer 'comfortable' (eg, it is too loud), it is an indication of short-term hearing damage the day before.

Further information is available in Pro Choice Safety Gear's Workplace Hearing Protection Guide.

ProChoice Safety Gear
www.prochoice.com.au

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KEEPING HOT HANDS COOL, DRY and PRODUCTIVE

One recurring demand arises in each and every conversation we have, comfort. Today 97 per cent of glove wearers claim that comfort is their number one priority when choosing gloves with the key challenge being hot hands. Why?



Image shows MaxiFlex® Ultimate™ 42-874
Patent Nr. EP1608808

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Powered air respirator

The Scott Safety Duraflow powered air respirator has real-time air flow control technology. It is suitable for a multitude of hazardous situations and industries.

The product's automatic monitoring feature ensures the airflow rate is maintained at the correct level. Visual and audible diagnostics alert the user of any drop in airflow below the required level, or when the battery needs recharging.

Two high-energy-density battery options are available, standard and extended duration, which can be selected depending on the shift coverage required.

The product is compatible with a range of headtops, filters and accessories, protecting workers from a variety of environmental hazards.

Scott Safety

www.scottsafety.com

Hearing protection technology

The Sensear SENS hearing protection technology enhances speech while suppressing background noise so users can maintain clear communications, protect their hearing and still maintain a 360° awareness of their surroundings in noisy environments.

Over the past 10 years, Sensear has collaborated with the University of Western Australia and Curtin University to develop industrial communication headsets for high-noise environments. The Sensear SENS technology is a result of this research.

The technology is used in a wide range of Sensear industrial communication headsets to maintain crystal clear communications either face to face or via a two-way radio or mobile phone. Included in the range are intrinsically safe versions as well as double protection for extreme high-noise environments and earplugs for hotter environments or for users wearing respirators. The range can also be connected wirelessly via Bluetooth or cable to all leading two-way radios and other communication devices.

Unlike traditional noise-cancelling solutions, which use a counter waveform to suppress all sound, SENS uses digital processing algorithms. Sound is received from four microphones at the front of the headset. These sound waves are converted into a high-resolution digital signal. SENS then processes the digital signal through algorithms which isolate and enhance the speech while suppressing dangerous background noise to a safe level (82 dB). Suppressors attenuate impact noise allowing the user to maintain situational awareness of alarms and other vital sounds.

The clear processed sound is then delivered to the user through the headset and also to the person on the other end of the two-way radio or mobile phone, allowing them to hear the user clearly even in very high-noise environments.

Sensear Pty Ltd

www.sensear.com

Hazardous area LED lighting

Control Logic has released the 6002 and 6402 series of LED lighting from R.STAHL that is suitable for nearly any environment. Explosion proof and energy efficient, the fittings are suitable for general lighting such as ceiling installation, pendant lights or pole lighting in zones 1, 21, 2 and 22. Using a familiar and widely used form factor ensures that changing over from traditional fluorescent tubes to LED light sources is an especially straightforward process.

The series utilises the latest LED technologies with one 52 W luminaire being equivalent to two conventional 36 W fluorescent lamps. This provides up to 100,000 hours of operation, while retaining a high luminous flux of up to 5800 lm and luminaire efficiency of well over 100 lm per W.

Both models feature a slim low-profile GRP housing that benefits from less weight. In addition to its IP66/IP67 design, the series can be used in harsh environmental temperatures from -30°C to a blistering +55°C. They are available in either economical 28 W or 52 W standard versions, with or without diffusers in lengths of 700 mm and 1310 mm respectively.

Control Logic Pty Ltd

www.control-logic.com.au



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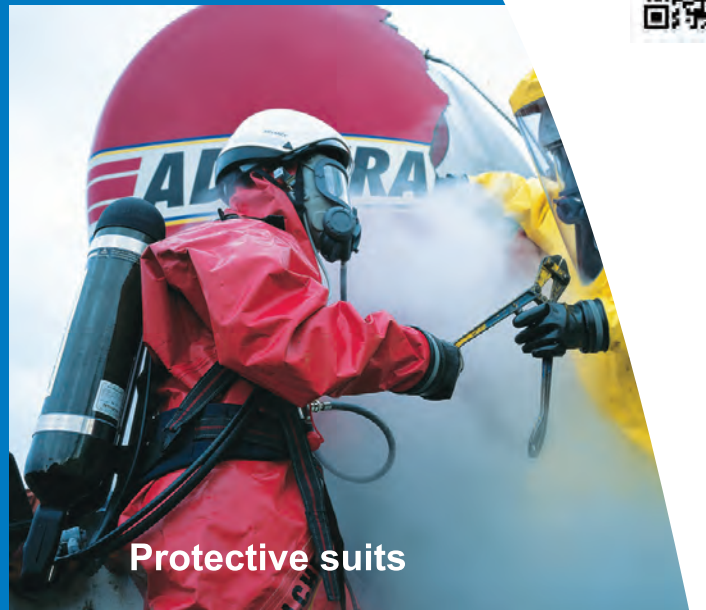
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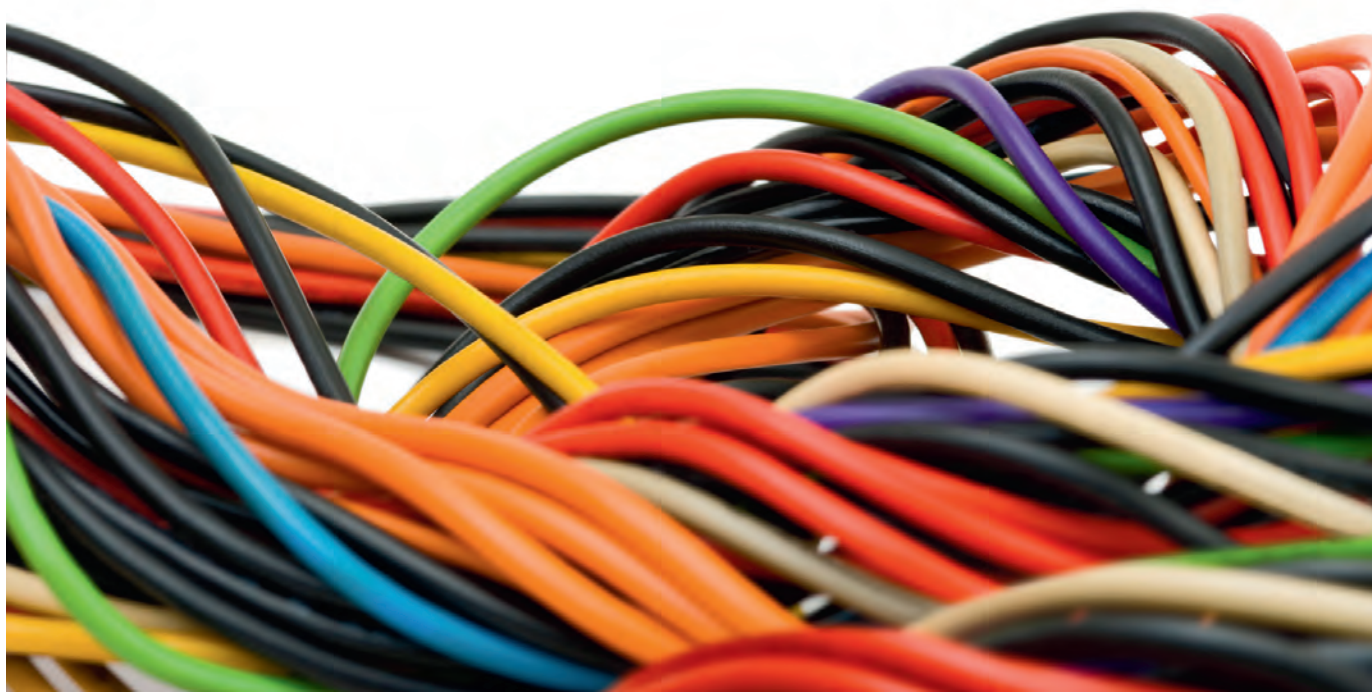
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TESTING AND TAGGING: FULFILLING YOUR DUTY OF CARE



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Regular testing and tagging of your organisation's electrical equipment is not just a legal requirement but a smart way to protect your business and its employees from the dangers of faulty electrical equipment.

At the extreme end, faulty equipment can cause electrical fires or shock, resulting in injuries that can sometimes be fatal. There is also the risk of equipment failure. While perhaps more benign from a safety perspective, the failure of a key electrical device can have serious impacts on business continuity.

Routine inspections can identify obvious signs of wear and tear but also other conditions that may render electrical equipment unsafe such as wiring faults or ineffective safety switches.

For all of these reasons, it's critical that you're familiar with the regulations around testing and tagging and the steps you can take to protect your business.

UNDERSTANDING THE REGULATORY LANDSCAPE

Organisations of all sizes are bound by regulatory obligations

to regularly test electrical equipment. These regulations vary amongst the different states and territories in Australia but all require testing at scheduled intervals. In manufacturing or other high-risk environments, routine testing is generally required every six months. There are also specific tests such as residual current device (RCD) testing which need to occur as often as every three months.

In addition, Safe Work Australia mandates that any person conducting a business or undertaking has a duty of care under the Work Health and Safety (WHS) Act "to ensure, as far as is reasonably practicable, that workers and other persons at the workplace are not exposed to electrical risks arising from the business or undertaking".

Safe Work Australia's Managing Electrical Risks in the Workplace Code of Practice also calls for regular testing of electrical equipment, which it

says may involve, in part:

- looking for obvious damage, defects or modifications to the electrical equipment, including accessories, connectors, plugs or cord extension sockets;
- looking for discolouration that may indicate exposure to excessive heat, chemicals or moisture;
- checking the integrity of protective earth and insulation resistance;
- checking that flexible cords are effectively anchored to equipment, plugs, connectors and cord extension sockets;
- looking for damage to flexible cords;
- checking that operating controls are in good working order ie, they are secure, aligned and appropriately identified;
- checking that covers, guards, etc are secured and working in the manner intended by the manufacturer or supplier;

- checking that ventilation inlets and exhausts are unobstructed; and
- checking that the current rating of the plug matches the current rating of the associated electrical equipment.

A NATIONAL STANDARD

Thorough guidance on testing and tagging can be found within the Australian and New Zealand standard AS/NZS 3760:2010. The standard specifies that the checking and tagging of equipment must be done by a 'competent person', meaning someone who has the necessary skills and training to undertake the required tasks.

Those with the right training and qualification should be aware of the AS/NZS 3760:2010 standard and the recommended

testing time frames and procedures for various equipment.

The standard specifies procedures for the safety inspection and testing of low-voltage single-phase and polyphase electrical equipment, connected to the electrical supply by a flexible cord or connecting device, and that:

- is new equipment placed into service for the first time;
- is already in-service;
- has been serviced or repaired;
- is returning to service from a second-hand sale; or
- is available for hire.

Whether you have the expertise in-house to complete the required testing and tagging or you are outsourcing this to a competent electrician, you should ensure these standards are followed.

- You should also keep detailed records of all testing, including the name of the person who carried out the testing; the date and outcome of the testing; and the date on which the next testing must be carried out.
- You may choose to capture these details in a database or log book or simply record the information on a tag attached to the electrical equipment tested. If using tags, they must be durable. Look for tags that are water resistant, non-metallic, self-adhesive or otherwise well secured and incapable of re-use. Tags should additionally have a bright, distinctive surface and may be colour-coded to identify the month in which the testing was carried out. Of course, tags should also

clearly identify any equipment which fails to pass inspection.

RESOURCES AND TRAINING

If the testing and tagging of electrical equipment is a new concept for you or your organisation, you can find further information on the Safe Work Australia website and also download the Australian and New Zealand standard AS/NZS 3760:2010 from the SAI Global website. There are additionally dedicated training courses for individuals who want to be able to carry out or manage the testing themselves. Some of these offer certification in as little as one day — well worth the investment of your time if the duty of care for electrical testing and tagging rests with you.

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PPE REDUCING THE RISK OF HEAT STRESS



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High temperatures are a cause for concern for outdoor workers and increase the risk of heat-related illness such as heat exhaustion, heat stress and heat stroke. Exacerbating this issue is the increasing trend between rapid development in hot countries and the number of labour-intensive industries such as construction, mining and oil and gas operations in these countries.

According to the UK's Health & Safety Executive (HSE), heat stress occurs when the body's means of controlling its internal temperature, such as sweating, starts to fail. Symptoms of the condition can include: fainting, heat stroke, heat exhaustion, muscle cramps, heat rash and severe thirst.

In addition to climatic changes, heat stress can be induced by other factors such as work rate, worker's clothing and PPE compatibility. Therefore it is imperative that manufacturers develop equipment that uses lightweight, breathable fabrics and materials where possible. There is a responsibility too on employers to choose the most appropriate equipment for the work and to ensure the correct training is given so that the worker wears the equipment properly.

"Scott Safety invests a considerable amount of time in the development of our personal protective equipment (PPE) to ensure we design lightweight products. We

use the best performing materials that offer the correct level of protection," explained Chris Ellerby, senior global product manager.

Ensuring workers wear PPE is an ongoing challenge, especially if the pieces are not designed to work together. PPE incompatibility makes the equipment uncomfortable and can lead to the worker getting unnecessarily hot. "Our range of PPE has been specifically developed so that it complements each other and can be worn comfortably, regardless of the heat. There is much research to show that good product compatibility will improve the overall comfort for the wearer, regardless of their working environment, and therefore ensure that the products will continue to be worn without detriment to the wearer."

Scott Safety's range of PPE includes the multiple application bump cap FirstBase 3. This innovative bump cap is designed to provide protection to the wearer against the effects of a head striking against hard, stationary objects. It is made from a

breathable fabric that allows high levels of ventilation that will reduce heat stress and improve wearer comfort. Additional features of the FirstBase 3 which works to reduce the effects of heat stress include the wide moisture wicking sweatband.

Chris Ellerby, who has worked on the designs of this product since its inception, explained: "Reducing heat and humidity on the head is a key customer need when it comes to bump or head protection in general. Scott Safety has done a huge amount of work in terms of analysing relative humidity on the head and implemented several improvements to improve airflow and permit moisture to be expelled; making the FirstBase bump cap collectively one of, if not the lowest, relative humidity bump caps on the marketplace."

However, compatibility does not just centre on weight and comfort. There is no governing body that dictates that all equipment must meet certain compatibility standards, making it harder for manufacturers to develop product

PPE incompatibility makes the equipment uncomfortable and can lead to the worker getting unnecessarily hot.

compatibility. Ultimately what this means is that unless equipment is purchased from the same manufacturer and therefore designed to work together, good fit and optimum comfort cannot necessarily be guaranteed.

And equipment designed and supplied from one manufacturer will most likely have been approved to work together too.

Working in environments where more substantial personal protection is required, such as confined spaces or contaminated air environments, is a growing trend in many countries. In these situations increased respiratory protection may well be required and this will involve wearing more complex equipment that could, if not designed well, add to heat stress levels. However, Scott Safety recently launched a new powered respirator specifically designed to reduce weight burden. Wearing a respirator over a period of hours can create a great physiological burden on the wearer because the sheer weight of the kit could increase the effort required to breathe. However, this new design incorporates a curved backplate and lightweight battery ensuring user comfort for long periods of use.

Scott Safety
www.scotsafety.com



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TR1620

MANAGING HEAT STRESS IN THE WORKPLACE

IN HOT WORKPLACE ENVIRONMENTS SUCH AS MANUFACTURING OR EXTRACTIVE PROCESSES WHERE HEAT IS ADDED TO THE ENVIRONMENT, HEAT STRESS CAN BE AN OCCUPATIONAL WORKPLACE CONCERN.

Australia's hot climate can also exacerbate extreme heat condition for some workers.

According to the American Conference of Governmental Industrial Hygienists, a worker's core temperature needs to be below 38°C to prevent heat stress effects. To put this figure in real terms, when core temperatures reach 40°C, a person can have symptoms such as: seizures, loss of consciousness or, worse still, death.

Heat stress was recently put under the spotlight at a food manufacturing site as some of its employees who worked near hot ovens were experiencing heat exhaustion symptoms such as headaches. The business decided its occupational responsibility was to perform heat stress monitoring to determine a solution.

A personal heat stress device was worn by an employee for half the shift and exceedances were recorded by the monitor. For an accurate prediction of an employee's body core temperature, a personal monitor is the best method to apply, as an earpiece records the wearer's personal temperature in real time.

During the monitoring period, the air temperature of the working conditions varied according to the work being performed. Normally the air temperature is 32°C, which may be bearable or equal to a hot Australian summer's day. But, when the employee was exposed to the oven area of operations, the air temperature was raised an additional 5°C to 37°C, and this resulted in increasing the employee's core temperature 2°C. The elevated body response was due to the operator's movement as well as the personal body's response to heat, producing a core temperature of 38.8°C for the employee.

In order to determine a solution to heat stress in a workplace, factors that should be considered include clothing, personal fitness, metabolic energy or personal core temperature, category of work practices, work break allocation and ambient temperature. All these factors can influence the core temperature.

In hot occupational workplace conditions, engineering controls can be implemented and should be the first heat stress reduction step before the use of PPE. Controls which can greatly improve a workplace's ambient environment include:

- introducing spot coolers, which can be directed to operating areas;
- improving heat barriers surrounding the heat source, which will prevent hot spots that can cause a sudden jump in an employee's core temperature;

For an accurate prediction of an employee's body core temperature, a personal monitor is the best method to apply, as an earpiece records the wearer's personal temperature in real time.

- installing an extractor system, which will release hot air outside and replace it with cooler ambient air;
- applying a cooling system to the whole area, which is the ultimate solution to eliminate temperatures that could cause heat stress.

PPE such as face shields and cooling vests should also be encouraged and can be worn to prevent a core temperature exceedance which occurs at 38°C.

Implementing procedures for 15-minute breaks every hour in an enclosed air-conditioned space nearby can also greatly reduce the risk of workers experiencing heat stress.

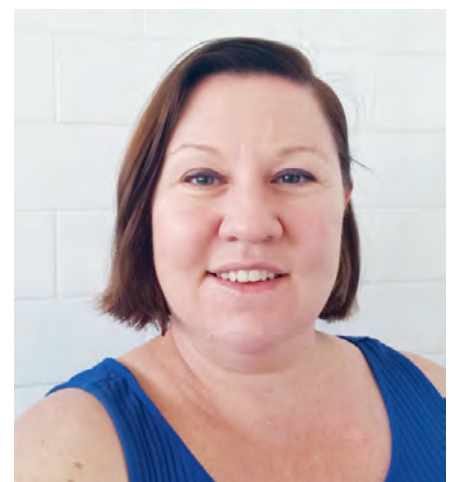
Other occupational workplace procedural additions that could help include:

- intermittent health checks on heart rate, fitness and medicine use (ensuring employee privacy is maintained);
- staff training on heat exposure and the importance of rehydrating and complying to heat stress PPE practices; and,
- supervisors to complete a staff heat exposure management practice to record shift ambient temperatures between lines, to ensure staff have no health complaints and are wearing additional heat stress PPE when working in hot environments, such as near the ovens in the example above.

Workplace environments ideally should be kept to 28°C temperature for a moderate work load or work rate category during the shift. Moderate work rate is typically 300 calories per hour used by the body's metabolism.

Heat stress is an important occupational exposure to monitor and prevent, especially in Australia.

Samantha Sims, Occupational Hygiene Consultant, Occupational Matters. The business aims to reduce occupational health exposure effects in Australia's industry. Its consultants provide advice in occupational hygiene contaminant exposure monitoring over all industries. It specialises in using scientific gas detectors, air sampling personal pumps, noise sound level meters, surface swabs and other hygiene sampling instruments.



Cargo restraint systems and accessories

The SafeQuip 'Boots on the Ground' range of cargo restraint systems and accessories is designed to allow truck drivers to keep their boots on the ground while loading and securing cargo in transit.

One of the key products in the range is the RatStrap Pro5.

It is designed to make taking a cargo strap up over and down the other side of a load quick, safe and simple, without the need for ladders and while keeping feet on the ground. The product operates with just 80 mm of clearance between the top of the load and the ceiling, allowing users to secure their cargo to meet chain of responsibility legislation.

Complementing the RatStrap Pro5 is the ProPole system, which comes with a variety of different head attachments to prevent any excuse to climb on the back of the vehicle. Some examples of attachments available with the system include: ProHook — for handling high-level strap fittings and many other tasks around the truck including retrieval of jammed straps; ProMulti — for placing of corner angles and repositioning straps at height; ProSlider — for positioning wear sleeves on straps; and ProSweep90 — to sweep the truck bed while standing safely on the ground.

Safequip

www.safequip.com.au

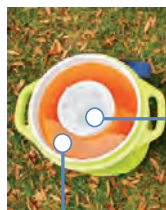


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Deb Australia Pty Ltd

www.debgroup.com/au/

Asbestos/dust respiratory kit

3M has a convenient respiratory kit designed for asbestos removal and environments containing dust. The kit comes complete with the 3M Half Face Reusable 7500 Series Respirator. It also includes two pairs of 3M Particulate Filters 6035 P2/P3, respirator cleaning wipes, earplugs, respiratory protection guide and a handy storage container.

The unique solid top particulate filter casing design reduces premature caking and clogging from dirt, grime, water or dust. The protective casing also aids decontamination practices.

3M Personal Safety

www.3M.com.au/ppesafety



Gas hazard area monitor

The Industrial Scientific Radius BZ1 Area Monitor detects up to seven gases and is suitable for long-term projects, routine maintenance and emergency response.

The rugged, transportable device can provide a run time of seven days (168 continuous hours). It offers good hazard communication, connectivity and ease of use.

When a gas hazard occurs, the product ensures that workers in industrial environments know that the instrument is alarming, as well as why this is the case. It has distinctive audio and visual cues and an extra-large display. Custom alarm action messages allow workers to focus on taking appropriate action depending on the present gas level.

The company also offers a proprietary wireless platform called LENS Wireless. The platform is a peer-to-peer communication system that enhances worker safety by sharing alarms and gas readings between monitors. It forms a network automatically without the need for a central controller, IT set-up or infrastructure. The simplicity of deploying and using the platform helps workers to respond faster with real-time information when gas emergencies occur.

The design of the area monitor also makes the instrument easy to maintain. It has intuitive, text-based navigation. The SafeCore Module allows safety personnel to automatically bump test, calibrate, manage settings and update software. This allows users to have a smaller, rotating fleet to ensure continuous gas detection coverage in the field.

Industrial Scientific Corporation

www.indsci.com



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Noise-attenuating communication headsets

3M Peltor Communication Headsets can help solve two critical problems of noisy environments: providing hearing protection and enabling effective communication.

Level-dependent, noise-attenuating communication headsets provide

key benefits for personal safety, productivity and all-day wearer comfort. The headsets allow users to clearly and comfortably communicate with co-workers over extended distances of up to 2000 m, hear ambient sounds such as conversations and warning signals, while at the same time blocking high-impact industrial noise that may be harmful to hearing.

3M's Peltor LiteCom Pro II 2-Way radio headsets make it easy to communicate in high-noise environments while helping to protect workers from hazardous sounds. It's an intrinsically safe UHF radio headset that is frequency programmable (450–520 MHz), making it suitable for manufacturing, oil and gas environments, as well as assembly line work.

Being intrinsically safe, the headsets are approved for use in potentially explosive atmospheres in accordance with the ATEX directive and the IECEx scheme for both gas dust and underground mining and meet the requirements AS/NZS 1270 of hearing protectors for Class 5 (SLC80 26 dB and above).

Headset communication technology is suitable for use in a wide variety of industrial applications to improve site safety, facilitate site activities and conserve hearing.

3M Personal Safety

www.3M.com.au/ppesafety

Hazardous area LED lighting range

The NHP range of Hazardous Area LED lighting products and in-house lighting designs can improve efficiency by lowering energy consumption, minimising maintenance requirements and reducing installation costs.

Unlike conventional lighting sources, there are limited maintenance costs during LED technology life span which is approximately 50,000 hours. In addition, LED is claimed to lower loss of brightness and increased resistance to shock and vibration, therefore, having a longer life in arduous installations.

The NHP Hazardous Area LED lighting provides high energy efficiency performance without compromising on light emission or quality of light.

To complement this product range, NHP can also assist with in-house lighting design.

NHP Electrical Engineering Products Pty Ltd

www.nhp.com.au



Bolt locking safety interlock

Schmersal has added the AZM 400 safety interlock to its line-up of guard locking devices, specifically designed for applications where large, heavy doors with high manual forces are present or in applications where motor-driven doors are used.

Using a motorised bolt locking mechanism provides a bi-stable operating principle, meaning in the case of a power loss the solenoid locking device will remain in its last known position. It is capable of a locking force of up to 10,000 N.

A lateral force on the door is also accepted up to 300 N while maintaining the ability to unlock the device under lateral load. The product also features an emergency exit or manual release.

High-level coding is possible by the inclusion of an RFID tag in the actuator. An RFID signal passes from the actuator to the locking device providing unique information about the actuator being used and thereby eliminating any potential for defeat of the safety system. Dual signal inputs for control of the locking pin and dual diagnostic outputs also allows for easy integration into existing safety systems, while dual safety outputs ensure the product is suitable for use in CAT PL safety systems.

Control Logic Pty Ltd

www.control-logic.com.au

HANDLING DOORS NOW A ONE-MAN TASK

Radiation Services Australia has been providing radiation shielding design and manufacture solutions to Australia, New Zealand and South-East Asia for nearly 30 years. The company manufactures lead shielded doors for use in hospitals and wherever radiation protection is required.

Each door weighs in the order of 160 kg, and in the past, handling these doors during the manufacturing process was a three- or four-man task. Now it's a one-man task thanks to the site's revised manufacturing layout, which includes a new milling machine and a Kockums gantry using a Tawi vacuum-assisted lifter.

The installation was challenging due to the low head height of the building. The gantry was supported directly from the base of the heavy-duty roof structure, and with modified VM2220 lift tubes it has been possible to provide an operating envelope adequate for the operator.

It is now a one-man task to pick door assemblies from a cart, move them to a sizing machine and then to the final form milling machine. The Tawi vacuum lifting mechanism assists in placing the door in the specific location on the milling machine between the clamps. The vacuum lifter is moved clear, and then the milling machine commences a program for precision sizing, including inserting view holes in the door. Special glass is used to fill the view holes to prevent radiation escape.



Transferring the door to the milling machine.

The upgrade to the site, which includes the Tawi Vacueasylift system, has resulted in improved safety and increased productivity.

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Safety footwear

The Oliver Footwear AT 55 Series of safety footwear offers a choice of 10 styles, including two that incorporate metatarsal protection for the foot.

The footwear is suitable for job or worksite conditions where lightweight comfort with heavyweight safety protection is required. A deeper tread profile and self-cleaning design create good grip and durability on the roughest of terrain.

The product's polyurethane and rubber sole combines a shock-absorbing, low-density polyurethane midsole with the hard-wearing rubber outer sole. The softer midsole core extends into the cleat, providing cushioning that absorbs the shock of rough workplaces.

The sole is also heat resistant to 300°C and exceeds all non-slip-resistant requirements under AS/NZS and international standards.

Comfort features include the moisture wicking lining, which absorbs and disperses moisture across the boot for quicker drying. It is also treated with a natural antimicrobial solution to control bacteria that create odour, stains and product deterioration.

The impact absorption system offers a combination of cellular urethane and performance cushioning to protect the heel and ball of the foot. The result is reduced foot, leg and lower back fatigue.

All styles have premium water-resistant nubuck and full-grain leather uppers, while stitching is enhanced on critical wear seams for maximum abrasion and chemical resistance.

Oliver Footwear

www.oliver.com.au



Stainless steel air-operated conveyors

The EXAIR ne303 stainless steel 3/8" and 1/2" Threaded Line Vac air-operated conveyors convert ordinary pipe into a conveying system for parts, scrap, trim and other bulk materials. Their small size makes them suitable for fitting in the tight confines of many production lines.

The product is designed to attach to plumbing pipe couplers, sanitary flanges and other pipe fittings, making it easy to build a complete system using ordinary pipe and fittings. The size of the product makes it easy to sample gas streams, sample grains or other ingredients, move small parts, or transport scrap or product out of small spaces.

The product ejects a small amount of compressed air to produce a vacuum on one end, with high output flows on the other. The response is instantaneous. Regulating the compressed air pressure provides control of the conveying rate. Applications include scrap trim removal, material conveying, part transfer, fibre tensioning, filling operations and sampling.

The product is CE compliant and suited to a wide variety of conveying applications. Larger threaded sizes in up to 3" and smooth end models for hose up to 5" are also available in aluminium, 303SS and 316SS.

Compressed Air Australia Pty Ltd
www.caasafety.com.au

In-mask thermal imaging intelligence system

The Scott Safety Scott Sight in-mask thermal imaging intelligence system uses hands-free thermal imaging technology to provide firefighters with a clear, unobstructed view of their surroundings. This can improve their situational intelligence and eradicates the need to stop searching or put the hose down to deploy a handheld camera.

The product weighs 240 g and produces 160 x 120 resolution at 9 frames/s through an infinity lens, which ensures a clear picture with no eye strain.

It supplements existing handheld technology by offering configurable hands-free visibility to the wearer in often inhospitable situations.

Scott Safety

www.scottsafety.com



APP TO ENSURE STAFF COMPLIANCE AT CHILDCARE BUSINESS

Team Holiday provides full-day activities to over 65,000 children aged 5–15 every year across Melbourne and greater Victoria. Its programs are suitable for working families or for children who are just looking for fun activities to do during their holiday break. More than 500 carers, including many fully qualified teachers, deliver a safe environment for the children. The business uses the CareMonkey system to streamline onboarding and ensure their 500+ staff have all the qualifications required to provide the important, and compliant, duty of care for the 65,000 children enrolled in its programs.

“The information we collect and store on CareMonkey forms our staff records, which helps us remain compliant within our industry regulations,” said Sam Hoath, founder of Team Holiday. “Emergency contacts, qualifications, personal information and other relevant information about all staff can be collected and available via the app anytime, anywhere.”

Prior to deploying CareMonkey, staff qualifications and certifications were entirely paper based and could easily lapse without the knowledge of Team Holiday or the teaching staff.

Today CareMonkey keeps track of certificate expiry dates and

reminds both staff and Team Holiday administration if they are expiring soon so they don't go to work without them. The app captures a photo of the certificate and these are all checked and confirmed by administration staff. Certificates include vital credentials such as an anaphylaxis training certificate, first aid certificate, asthma certificate, CPR certificate and lifeguard certification.

“Employee information like certificates and qualifications go out of date,” said Troy Westley, founder

of CareMonkey. “CareMonkey is different because it automatically chases people when information is missing or needs updating, to ensure accuracy.

“This process saves HR a lot of time, and we are now seeing CareMonkey used to collect employee information, bank details, collecting and ensuring licences and certificate information don't expire, sharing policies and training and capturing digital signatures afterwards to ensure employees understand the policy/training. It's even used by some businesses as an easier way of submitting leave requests,” said Westley.

CareMonkey Pty Ltd
www.caremonkey.com





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IMPLEMENTING PERSONAL EMERGENCY ID IN THE WORKPLACE

Personal emergency ID should be viewed as a critical component in the risk management toolbox for businesses, particularly for health and safety professionals in the construction industry.

The benefits of personal emergency ID become readily apparent when an incident occurs in the workplace. The following incident description highlights these operational benefits:

"During an electrical fault incident at a construction site, one worker was quickly overcome by fumes, tried to move away, but collapsed nearby. This worker had only recently started as a contractor on the site, and his colleagues were not very familiar with him. Fortunately for this worker, the site's health and safety manager had implemented a Personal Emergency ID regime. And although the worker's supervisor and colleagues knew little about this worker when paramedics attended the scene, they were able to immediately assess his ID and determine his full name, medical history and family contact.

"The details revealed that he had an underlying respiratory condition likely to have been severely exacerbated by the fire fumes. Having access to the ID meant that the situation was dealt with far more effectively than if this information had not been readily accessible. Thankfully in this incident example, there was a happy outcome and the worker returned to work a few weeks later."

Incidents like this example are happening worldwide across all industries and clearly demonstrate the importance of having some basic knowledge about an employee at a critical time. Efficient management at the beginning of an incident, or when a medical condition arises, increases the chances of a positive long-term outcome.

It is important to note that personal emergency ID is not just for workers who have a medical condition or who take medication, but

for anyone who is employed on the site. Employers can reasonably insist that an ID includes a worker's name and contact details for their manager. However, it should be an employee's choice as to which further information they supply. This encourages ownership of their health and safety, while ensuring that an organisation's compliance status is not compromised.

Low-tech personal emergency ID options range from dog tags to handwritten ID cards, wrist bags, as well as ID that adheres to hard hats and other PPE apparel. They are low cost and do not require a computer, a bar scanner or access to a cellular network. However, they must adhere to the C.A.R.R. principle to be effective — meaning that the ID needs to be conspicuous, accessible, relevant and resilient.

A further option is use of high-tech personal emergency ID. A memory card or chip allows detailed personal information to be stored and read, but is conditional on first responders and incident managers having access to a device that can read it. Some products use bar and QR codes, which can be scanned to access relevant information.

For lone workers and those working in the field, some types of personal emergency ID contain a tracking device so they can be easily located in the event of an incident. Many rely on the cellular network to pinpoint someone's remote location and provide voice contact using adapted smartphones.

The Vital ID personal emergency ID range is available from Safety Headquarters.

Safety Headquarters Pty Ltd
www.safetyheadquarters.com.au





Ladder rack system for utes

The Rhino-Rack Multi Slide Extension Ladder Rack is designed to add/remove heavy ladders from vehicles with minimal effort. Most ladder racks are up to 3 m long but this one is shorter at only 1.5 m in length, making it suitable for use on smaller vehicles including single- and dual-cab utes.

Utes have previously presented difficulties with racks because of the flexing and vibrations that happen between the cabin and the canopy. This movement has prevented joining the two components, as there could be potential for cracking of the canopy or, worse still, the roof. Negating the need for fixing the ladder rack to both the cabin and the canopy means that this is no longer an issue.

At 1.5 m, the Multi Slide Extension Ladder Rack can still carry long ladders and has all the features of Rhino-Rack's other ladder racks. This includes side rails that prevent lateral movement, as well as the innovative rear strap which reduces excess rope and straps and means users only need the one strap to secure the ladder to the rack.

The ladder rack system is fully OHS compliant and has been rigorously crash-tested across all trades.

Built to withstand the most extreme weather conditions, the rack is constructed from anti-corrosive materials. The system is compatible with any ute with a canopy via Rhino-Rack's range of Vortex and/or Heavy Duty bars (sold separately).

Other features include slide width of 470 mm and suitable for extension ladders.

Rhino-Rack Pty Ltd

www.rhinorack.com.au



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SAFETY



Machine videoscope

Catastrophic failure of machinery or structures is usually expensive to repair and can pose a threat to the safety of workers. The iPlex NX industrial videoscope, from Olympus, is therefore designed to help locate flaws of materials and components that were previously undetectable, as well as streamline inspections in difficult-to-reach areas.

The scope combines a high-pixel CCD chip, an ultrabright laser diode light system delivered through the tip of the probe and Olympus' PulsarPic processor to automatically adjust light output, delivering clear images in changeable inspection conditions. It can measure areas up to four times larger than conventional scopes, according to the company. The product also offers a multispot-ranging function that enables measurement of the distance from the scope tip to multiple points on the inspection surface, providing real-time surface shape information with no pause or break in the inspection.

The camera can be controlled remotely by an operator while it is inserted in the cavity to be inspected. Olympus' TrueFeel electric articulation has been enhanced with reduced mechanical lag and greater sensitivity, giving the product ultrasensitive articulation and an increased range of motion in four directions. The user has a choice between the touch screen or the ergonomically designed manual controls to suit the environment and inspection application.

The product is suitable for locations with limited operator access, including boilers or engines. The compact and robust construction has an IP55 rating and complies with stringent US military standards for dust and rain resistance, as well as drop testing.

Olympus Australia Pty Ltd
www.olympusaustralia.com.au

Transponder-coded safety switch

Euchner has expanded its range of transponder-coded safety switches with the CEM-AR-C40, which features solenoid and integrated evaluation electronics. The safety switch is used in applications that require guard locking for process protection. The solenoid achieves a locking force of 600 N and prevents safety devices from being opened unintentionally when guard locking is not active.

The transponder signals are evaluated in the safety switch when the safety guard is closed, and if the signals match, the two safe semiconductor outputs are switched. When controlling the solenoid, the guard locking is activated and the locking force tested. If the force is greater than 400 N, a status signal is transmitted to the control system.

The safety switch also features adhesive force adjustment and can be adjusted in three levels from 0 to 50 N. It offers various diagnostic options as well as 2 x 4 LEDs in the housing. The LEDs display important information about the product's status and are clearly visible from all directions. Electrical connection is simple via plug connectors.

For larger installations with several safety doors to be monitored, up to 20 CEM-AR-C40 devices or other Euchner AR products can be connected in a series.

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Pantograph reach truck

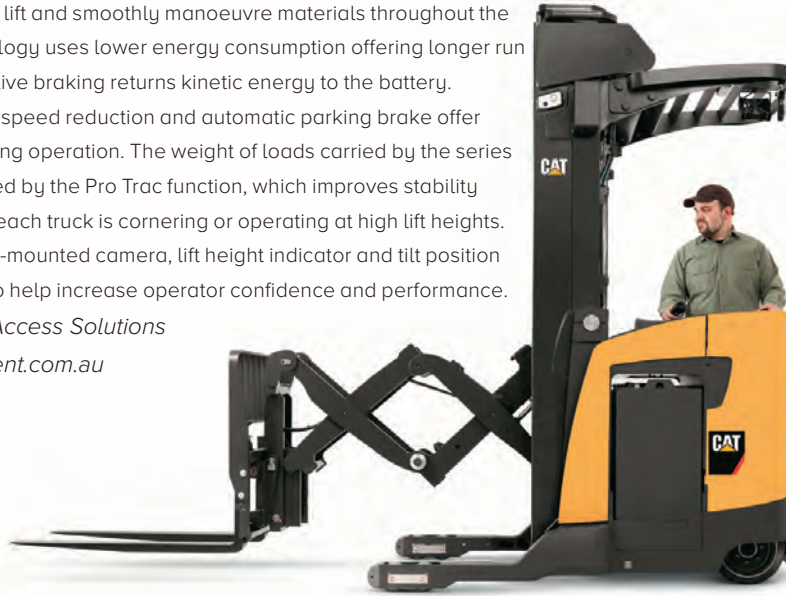
The CAT NR20-23/ND18 Series pantograph reach truck, available in 1500–2000 kg capacities, uses a scissor design reach mechanism to extend the lifting forks forward, allowing the vehicle to reach up to 11.5 m. The vehicles feature intuitive controls for efficient handling for users in warehousing, supply chain logistics, manufacturing and production, and storage and distribution facilities.

The reach trucks offer capacity retention to a maximum of 10.2 m and fast lift speeds up to 830 mm/s. Operators can select a single or double deep reach mast. The rigid design of the mast, with cushioning at all mast stage transitions, allows the operator to lift and smoothly manoeuvre materials throughout the shift. AC motor technology uses lower energy consumption offering longer run times, while regenerative braking returns kinetic energy to the battery.

An automatic curve speed reduction and automatic parking brake offer additional control during operation. The weight of loads carried by the series is also evenly balanced by the Pro Trac function, which improves stability and safety when the reach truck is cornering or operating at high lift heights. Options such as a fork-mounted camera, lift height indicator and tilt position assist can be added to help increase operator confidence and performance.

United Forklift and Access Solutions

www.unitedequipment.com.au



Safety cutter

The Martor Secumax 145 is a lightweight, compact safety knife.

Weighing just 12 g, the product is made of reinforced fibreglass and features a 0.5 mm blade. The blade head glides easily through cutting material with minimal effort, making it suitable for tasks such as easily opening cardboard boxes, cutting adhesive tape and cutting all kinds of foils.

While the blade itself cannot be changed, the blade head provides the user with two cutting edges. Both cutting edges are safely shielded to ensure that fingers, arms and the body are protected during cutting. The concealed blade also protects the goods inside the package.

A metal-detectable option is available, which is suitable for industries such as food and pharmaceuticals.

Martor Australia

www.martor.com.au

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Noise-reduction headset

The Sensear SMIP headset provides advanced features and benefits for safety, reliability and workplace efficiency. The industrial headset adheres to higher noise reduction standards. It enhances speech and suppresses noise, limiting 'in ear' exposure to 82 dB(A). The noise-cancelling boom mic filters out background noises, ensuring only speech is transmitted through the microphone.

In addition to higher noise reduction capabilities and upgraded Bluetooth, the headset allows four methods of communication. It has two-way radio, which is compatible with leading two-way radio models via cabled connection or Bluetooth; cellular Bluetooth for conversation and audio streaming; improved short-range headset-to-headset communications with additional channel banks and close range face to face.

The headset is easily programmable and can operate as a Smart Group headset, which is a useful setting for factory and plant tours, on-the-job training and work teams operating in high-noise environments.

Sensear Pty Ltd

www.sensear.com

AUSTRALASIAN OIL & GAS EXHIBITION AND CONFERENCE 2017

What: AOG 2017

When: 22–24 February 2017

Where: Perth Convention Centre

Web: www.aogexpo.com.au

AOG 2017 exhibition and conference will showcase the oil and gas industry over three days in Perth. The conference will be split into three streams including: Collaboration Forum, Subsea Forum and Knowledge Forum.

The exhibition's Health, Safety & Environment zone showcases

products, services and training for the HSE industry including protective equipment, communications technology, hazardous area products, spill control, emergency response, safety skills training, offshore and maritime safety training, and hot work management solutions.

HAZARDS AUSTRALASIA 2016

What: Hazards Australasia 2016

When: 23–24 November 2016

Where: MCG Melbourne, Australia

Web: www.icheme.org/hazardsaus2016

The Hazards Australasia 2016 conference is expected to attract 150 delegates when it runs in Melbourne this year.

Organised by the Institution of Chemical Engineers (IChemE), the event will focus on the topic of how to add value within process safety, without adding cost. The program will feature leading speakers from industry, academia and regulatory bodies, with over 60 high-level talks and presentations.

The conference will cover important aspects of process safety including culture, engineering and design, knowledge and competence, systems and procedures and human factors. There will be contributions from leading process safety companies such as ABB, Gexcon, HIMA Australia, MMI Engineering, Qenos, Refining New Zealand and WorleyParsons.

Former IChemE president and former chair of the UK Health and Safety Executive Dame Judith Hackitt will discuss the importance of creating a safety culture in her keynote talk 'Thinking outside the box'. Hackitt, who is currently chair of The Manufacturer's Organisation (EEF), said: "I am delighted to be presenting a

keynote at Hazards Australasia. This year's theme is especially exciting for me as it reinforces the idea that safety is as much about culture, processes and people as it is about resource and training. It provides an important reminder that safety is of the utmost importance in our industry. We are all responsible for our own safety and for the safety of those around us — regardless of role, seniority or job title."

Chair of Safe Work Australia and Broadspectrum Limited and President of Chief Executive Women Diane Smith-Gander will also deliver a keynote. She will be focusing on workplace health and safety to support sustainable practices and be joined by the chair of the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), Keith Spence, and WorkSafe New Zealand's general manager, Wayne Vernon.

IChemE Safety Centre Director Trish Kerin will host a networking session as part of the event and sharing the ISC's guidance at the exhibition.

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Thermal flow meter

The ST100 Series Thermal Flow Meter from Fluid Components International (FCI) provides precision mass flow measurement and is suitable for instrument and plant engineers responsible for managing processes with a wide range of hydrogen gas applications.

The flow meter can be calibrated to measure H₂ or virtually any process gas, including wet, mixed and dirty gases. The basic insertion-style air/gas meter features a thermal flow sensing element that measures flow from 0.07 to 305 NMPS with accuracy of $\pm 0.75\%$ of reading, $\pm 0.5\%$ of full scale. H₂ also can be measured safely at high flow rates from 0 to 3000 kg/h at 200 to 600 kPa.

Its no-moving-parts design also virtually eliminates wear, breakage and maintenance. Users can choose from various communication options including 4–20 mA analog, frequency/pulse or certified digital bus communications such as HART, Foundation Fieldbus, Profibus PA or Modbus RS485.

The device includes a graphical, multivariable backlit LCD display, which continuously displays all process measurements and alarm status for easy on-site viewing by technicians; and a user-selectable and programmable data logger, with readings stored in a removable, internal 2 GB micro-SD card.

The product is also certified to FM, FMc, ATEX, IECEx, EAC/TRCU, CPA, NEPSI and InMetro, and is CE approved.

AMS Instrumentation & Calibration Pty Ltd

www.ams-ic.com.au



Safety laser scanner

Leuze electronic has released its RSL 400 safety laser scanner, which is designed for simple and efficient area and access guarding. The product has two autonomous protective functions and can therefore act as two single laser scanners.

With a 270° scanning angle and operating range of 8.25 m, the device provides safeguarding at corners and edges. The scanner is mounted on a separate unit with integrated cable management, which provides faster device upgrades and sensor replacement without requiring electronic and mechanical realignment.

Leuze electronic Pty Ltd

www.leuze.com.au

Wirelessly monitored emergency pressure relief vents

Emerson has introduced wirelessly monitored Enardo 2000 emergency pressure relief vents (EPRVs) that provide safety control by managing abnormally high storage tank pressures in the oil and gas, chemical, petrochemical and pharmaceutical industries.

Under normal operating conditions, an EPRV remains closed. The immediate knowledge of an open position can be vital and should warrant quick investigation. However, because these EPRVs are located on top of storage tanks, they are difficult to monitor. Site managers are increasingly looking for ways to increase safety and efficiencies.

The new product design consists of a proximity indicator and wireless transmitter integrated with an EPRV. The proximity indicator senses movement of the emergency vent. 'Open' or 'closed' signals are received by the wireless transmitter and can be sent to a

control room via a WirelessHART gateway.

Emerson Process Management Aust P/L

www.emersonprocess.com.au



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MachineSAFE Introduction

The MachineSAFE Introduction course has been designed to provide a machinery safety overview and introduction. It has recently been updated to include: methodology for risk assessments, safety validation, guarding, safety principles and safety control systems with reference to WHS legislation and Australian Standard AS4024.1 – 2014 Safety of Machinery.

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Risk Assessment Workshop

The Risk Assessment Workshop course is specialised training developed in order to provide the extensive knowledge and skills needed to risk assess machinery in accordance with AS/NZ 4024.1-2014 Safety of Machinery explained in practical terms by our experts. Risk assessment is a fundamental aspect of machinery safety and the first step in complying with the WHS regulations and standards.

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MachineSAFE Advanced

The MachineSAFE Advanced course is a follow-on from the MachineSAFE Introduction training and has been specially developed to provide a detailed knowledge of machinery safety. This course explores in detail the key aspects of mechanical and electrical safety design for machinery with specific references to Australian/New Zealand legislation and standards.

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Certified Machinery Safety Expert Course

Machinery requirements have changed significantly over the past number of years with the increasing use of automation and robotic systems, resulting in the need for intelligent machinery safety strategies. A collaboration between two international leaders in their respective fields, Pilz and TUV NORD, Certified Machinery Safety Expert training is the foremost machinery safety training of its kind in the market.

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Safety Design Course AS4024.1503 (ISO 13849)

Safety Design AS4024.1503 Course is a dedicated course for Design of Safety Related Parts of Control Systems that enables delegates to develop a greater understanding of the safety requirements and guidance on the principles for the design and integration of safety-related parts of control systems (SRP/CS), including the design of software according to AS4024.1503 (ISO 13849-1/2).

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'ALWAYS ON' CULTURE CAN CAUSE BURNOUT

Employer expectations that emails will be monitored and responded to during non-work hours are the main reason employees are unable to disconnect from the workplace, new US research finds. The emotional stress and exhaustion that may result from such expectations has a negative effect on the individual's wellbeing and, ultimately, job performance.

William Becker, a Virginia Tech associate professor of management in the Pamplin College of Business and one of the study's co-authors, said that just the expectation itself that emails will be tended to "creates anticipatory stress" in employees.

His study notes that "even during the times when there are no actual emails to act upon, the mere norm of availability and the actual anticipation of work create a constant stressor that precludes an employee from work detachment".

"Such expectations — whether real or imagined — cause more problems, including burnout and work-life balance problems, than the actual time it takes to read and respond to after-hours emails," added Becker.

The study finds that those who are hardest hit by such organisational expectations are employees who fervently wish to keep work and family separate — those with a "strong segmentation preference".

Over time, however, the study adds, even employees who don't care as much about the work-

personal life separation will find the expectations problematic as well.

"An always on culture with high expectations to monitor and respond to emails during non-work time may prevent employees from ever fully disengaging from work, leading to chronic stress and emotional exhaustion," the study says.

What should employers do?

The study's results offer some practical insights to employers.

"Managers need to be cognisant of the consistent negative impact on individual perceptions and wellbeing that may prove to be especially onerous over time, not only to individuals, but also ultimately to organisational functioning," the study says.

"Accordingly, managers need to enforce organisational practices

that will help to mitigate these negative effects and protect their employees in the long run."

Becker, whose research interests include work emotion, turnover, organisational neuroscience and leadership, is based at Virginia Tech's National Capital Region campus in metro Washington, DC.

He co-authored the study, which was presented at the Academy of Management annual meeting in Anaheim, California, in August, with Liuba Y Belkin of Lehigh University and Samantha A Conroy of Colorado State University.

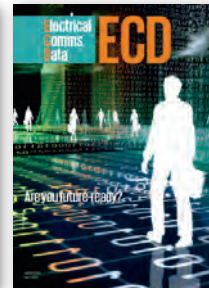
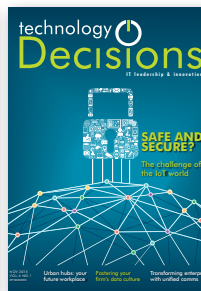
The study, the authors noted, is one of the first to show the critical role of email-related expectations in diminishing individual ability to mentally detach from work, through both the anticipatory stress and the actual time spent.

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