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OCTOBER/NOVEMBER 2015

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ON THE COVER



RIS Safety is a market leader in the provision of height safety, fall protection and height access systems on any structure.

The company is a manufacturer, distributor and installer of Australian Standards-compliant harnesses, PPE, stainless steel anchor points, lifeline and rail systems, ladder and stair access systems and both aluminium and fibreglass walkways and handrails. As such, RIS is able to provide users with a complete height safety service which also includes site audits, design service, manufacturing of customised solutions, installation, nationally certified training in working at heights, confined space and rope access. It also offers a comprehensive inspection and recertification service nationally.

RIS also has an engineering facility and is able to design solutions and construct complex structures to address height safety access issues. It provides clients with a product and service portfolio that will satisfy the industry's stringent hierarchy of control. Its internal management capabilities and national infrastructure have allowed RIS to complete works on many of the prominent buildings, sporting and entertainment stadiums, many modern scientific facilities and hospitals, industrial sites and other large structures throughout Australia.

RIS provides users with peace of mind that whatever it designs, manufactures or installs will not only exceed the standards required by legislation, it will also be the most cost-effective, best-practice solution for them.

Employing in excess of 80 people and with branches in Sydney, Melbourne, Adelaide, Darwin, Brisbane, Perth, Canberra, Hobart and Mackay, RIS prides itself on providing practical, cost-effective and compliant height safety and fall protection systems throughout Australia.

RIS Safety Pty Ltd
www.rissafety.com



An aerial photograph of a city street scene, viewed from a high angle. A yellow banner is overlaid on the top half of the image, containing the title and author information. The banner is semi-transparent, allowing the city scene to be visible through it. The city scene below shows a multi-lane road with cars, a parking lot with many vehicles, and various buildings. The perspective is looking down from a high vantage point, possibly from a building's edge.

LEADING EDGES AN UNDER-RECOGNISED HAZARD

*Rick Millar, Technical Manager, Capital Safety Australia & New Zealand**



The level of awareness about the need for personal protective equipment (PPE) has been greatly improved in the past 10 years, leading to much higher compliance. The supply of much more comfortable equipment and improvements in technology brought about by various manufacturers has only served to improve that compliance.

As in most cases, however, it is not only the actual PPE that needs to be considered when working on a site; it is the environmental factors at play that can affect the actual performance of the PPE when called on to keep people safe.

Construction workers who recently worked on a US football stadium grew to know about the real importance of this — specifically fall protection — when they were working at height. They also had to be sure to be using the appropriate equipment and use it properly to stay safe.

Two of the construction workers came to know the value of quality fall protection equipment and proper training firsthand: the first fell from a steel beam, six stories above ground. Less than two months later, another worker slipped from a beam and fell. Both escaped injury and possible death because of their fall protection equipment. Fortunately, these workers not only walked away after these accidents — remarkably, they were able to go back to work the same day.¹

But what if they had been using the wrong products, or the wrong anchorage points, or had failed to take into account swing fall hazards or sharp-edge hazards?

Those workers may never have returned to work!

Many personal fall arrest systems rely on lifeline materials to perform when exposed to less-than-ideal conditions. But there are some applications where use of the wrong product — for example, where a lifeline contacts with a sharp edge — could have catastrophic results.

Product testing and certification organisations in the US and around the world, including the American National Standards Institute (ANSI), the Canadian Standards Association (CSA) and European Standards (CE), have been re-examining how lifelines in fall protection systems perform when subjected to these ‘sharp edge’ circumstances. They’ve also placed a new focus on ‘leading edge’ applications. Through this analysis, they have concluded that these two environments are unique in fall protection and involve increased risks due to the lifeline cutting, fraying or becoming otherwise compromised.

Understanding leading and sharp edges

Sharp edge

A sharp edge is one that, for practical purposes, is not rounded and has the potential to cut most types of lifelines. The ANSI standard for sharp edges involves testing the fall arrest device’s lifeline over a piece of steel bar with a radius of no more than 0.127 mm. If the lifeline is cut or severely damaged, the device fails the test and does not comply with ANSI. European Standards are similar, though their sharp-edge test is slightly less rigorous. In both cases, however, the performance requirements that these lifelines are required to meet are well in excess of those for a regular lifeline.

Leading edge

To visualise a leading edge, imagine a worker installing steel decking on a new building. Now imagine the worker’s fall protection system is anchored at foot level behind him, in the absence of any alternative anchorage location above them. As the worker moves out and away from the anchor point while installing the decking, the worker is exposed to a potential fall over the edge of the building or the edge of an elevated platform.

Risks of leading- and sharp-edge applications

In sharp-edge applications, the primary risk is the lifeline can be frayed or severed. Examples of other related risks with falls over leading edges include:

- **Increased fall distance:** When workers are attached at foot level, as they often are in leading edge applications, they will fall further than they would if they were anchored at shoulder height or above. Image 1 demonstrates the sequence of events that happen when a worker falls off a leading edge, and why a worker needs additional clearance. The required clearance when anchored at foot level varies by product, so make sure to reference the product instructions.
- **Lock-up speed:** Self-retracting lifelines react to a fall when the lifeline accelerates out of the housing at a certain

velocity, generally about 1.3 m/s. When self-retracting lifelines are anchored at foot level, the lifeline does not achieve the required acceleration during a fall until after the user's D-ring passes over the leading edge and below the level of the anchor. This means the user has already fallen about 1.6 m before the self-retracting lifeline device will engage to arrest the fall.

- **Increased fall arrest forces:** Falling further means the impact on the body through the fall protection system will potentially be higher when the fall is arrested. This is why many leading-edge and sharp-edged products contain additional energy-absorbing devices.
- **Increased potential for swing hazards:** If a worker falls and is off to one side, they may swing like a pendulum. While this is in itself dangerous, the danger is compounded if the worker is on a sharp edge and the lifeline swings back and forth across that edge.

New standards call for different equipment

Previously, the industry made attempts to prevent hazards in sharp- and leading-edge applications. These solutions included attaching an energy absorber to standard self-retracting lifelines; protecting edges with antiwear/friction solutions; and elevating anchor points. While these efforts have been helpful, many organisations have now incorporated leading-edge/sharp-edge criteria into their standards or are working towards doing so. While these requirements are yet to appear in Australian and New Zealand Standards, they have been updated in ANSI, CSA and European Standards defined by the CE testing standards for self-retracting lifelines (SRLs).

In August 2012, ANSI released a new standard — ANSI Z359.14 on self-retracting devices (SRDs)² — to address leading-edge or sharp-edge applications for SRLs. The US OSHA Standard Z359.14 includes significant



changes to the design and testing of leading-edge (LE) SRLs. It provides a baseline for manufacturers to test their products against, in order to ensure they are safe and compliant.³ It also requires manufacturers to provide new information in product user instructions and on product markings.

Although these requirements are yet to appear in the Australian and New Zealand Standards, the risks to the lifeline remain the same. A sharp edge in Australia is the same as a sharp edge in the USA!

Products to deal with leading- and sharp-edge applications

Following the North American and European standards changes, manufacturers have responded by designing products for these applications. Lanyards with cut-resistant rope can be used, along with additional protections such as wear sleeves or the use of edge protection products to reduce the risk of fraying and scissoring.


Additionally, some manufacturers now make self-retracting lifelines with high-strength webbing and wire cable materials to overcome the excessive forces being applied to the lifeline in a leading-edge application.

Both compliant equipment and training needed to keep workers safe

While equipment specifically designed for leading edge applications is needed to keep workers safe, it's only effective if crews understand how to use it and why they need it. Proper training is essential to ensure workers fully engage and understand the hazards related to sharp- and leading-edges. Your training provider should be able to address the risk management process around leading-edge applications.

Greater awareness also leads to greater safety

Fall protection experts agree that in addition to complying with the applicable standards, keeping workers safe at height also involves a much greater awareness of the fall protection risks that exist in particular applications, such as sharp- and leading-edge applications. This is particularly true for workers who have worked in sharp- and leading-edge environments for many years and have developed habits over time that may not be the safest practices in today's environments.

All workers and their employers need to be up to date on the latest technology — including products, applications and training — so that the appropriate equipment is used properly for the right application. In sharp- and leading-edge work, using a traditional product anchored at foot level may increase the risk of injury and create a false sense of security. Always consider these environmental factors when making a product selection to ensure safety intentions are carried through to effective implementation. 

**Rick Millar is the Technical Manager for Capital Safety Australia & New Zealand and can be contacted at rmillar@capitalsafety.com. Capital Safety is a leading designer and manufacturer of height-safety and fall protection equipment. It also offers training courses, with 20 operating sites worldwide. For more information, call 1800-245-002 or visit www.capitalsafety.com.au.*

Capital Safety Group (Australia)
www.capitalsafety.com

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- [1] "Fatalities Prevented, Injuries Minor, Workers' Comp Costs Slashed," United States Department of Labor, Occupational Safety & Health Administration (OSHA), <https://www.osha.gov/Publications/OSHA3252/3252.html>. Accessed 12/9/14.
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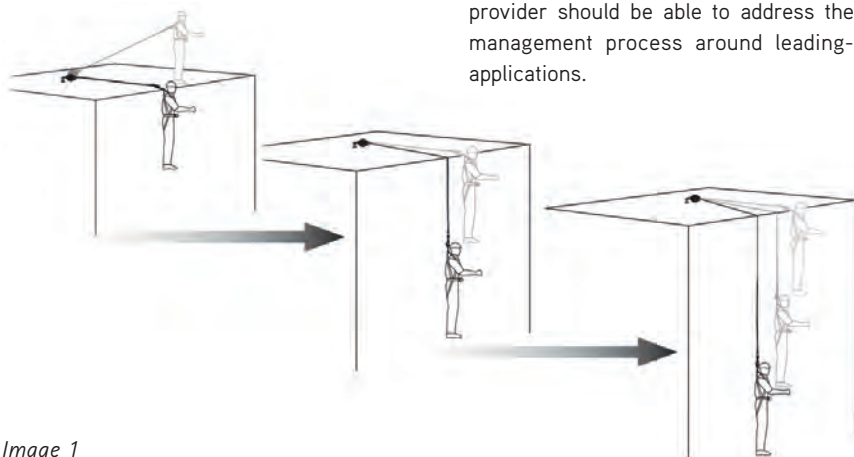


Image 1

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of workplace injuries worldwide are attributable to drug & alcohol use

Around 60%

of individuals who consume drugs & alcohol at harmful levels are in full time employment

Estimated \$6 billion

per year in lost productivity through alcohol & other drugs in Australian workplaces

13% use cannabis

4% use amphetamines

1/2 of Australian workers drink at harmful levels.



In addition to our extensive Industry Experience, Pathtech also supply the Securetec DrugWipe to every Australian Police Jurisdiction for random, roadside drug screening.





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The latest hipster trend that is sweeping across the country is popularising facial hair of any kind. And while this may be positive news for beard barbers, it also presents a safety risk that must be remembered by those who require respiratory equipment in the workplace.

In Australia and around the world, wearers of tight-fitting respiratory protective equipment (RPE) facepieces that depend on a face seal are advised to be clean-shaven in the area of the face seal. Beards, moustaches, sideburns and stubble growth can all present problems that may interfere with the fit and the peripheral seal of the respirator.

According to a recent United Kingdom Health Safety Executive's research report, HSE inspectors routinely come across workers with various degrees of stubble growth using respiratory protective masks, despite guidance to the contrary.

While tests have previously been carried out which demonstrate that facial hair is detrimental to the protection given by re-usable facepieces, there is little or no information on the impact of facial hair growth on the level of fit, and hence the degree of protection, given by disposable filtering facepieces. This triggered the Health Safety Executive to conduct a research project on 'The effect of wearer stubble on the protection given by Filtering Facepieces Class 3 (FFP3) and Half Masks'.


The RR1052 research report released in March this year studied the effect of 0–7 day's stubble growth on the protection given by FFP3 filtering facepieces and half masks.

Fifteen male volunteers took part, each testing four masks. For most, three different design FFP3 and one half mask were tested, selected from seven models of FFP3 and two half masks. Fit tests were carried out immediately after shaving and repeated six times during the following week, without further shaving.

Results showed that the effect on protection was quite specific to the mask/wearer combination. Protection could be significantly reduced where stubble was present, beginning within 24 hours from shaving, and generally worsening as facial hair grew. Statistical analysis predicted this could reach an unacceptable level for all of the masks tested.

While some individual wearers did grow some stubble without significantly reducing protection with some masks, this was unpredictable and it would not be practical to conduct the necessary testing to confirm this for every individual wearer.

The results of this work support the statement given in the European Standard EN 529 (annex D.4.2), which advises that tight-fitting facepieces should not be selected where there is unshaven hair in the area of the face seal. The definition of unshaven given is: "In this context unshaven means hair which has not been shaved within the previous 8-hour period prior to the work shift". The research also reinforces the guidance which supports UK Health and Safety legislation that workers should be clean-shaven in the area of the face seal when wearing tight-fitting respirator.

The research confirmed that the current guidance advising being clean-shaven in the area of the mask seal is justified. 

The full 2015 UK HSE research report is available at: www.hse.gov.uk/research/rrpdf/rr1052.pdf.

Further information: Standards Australia. AS/NZS 1715:2009 - Selection, use and maintenance of respiratory protective devices and Standards Australia. AS/NZS 1716:2003 - Respiratory protective device.



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MINIMISING RISKS WHEN WORKING AT HEIGHT

BASIC PRINCIPLES OF ANCHORAGE SYSTEM DESIGN

Working at Height Association (WAHA)

Working at height — whether on maintenance and cleaning operations on high-rise buildings or on new construction work — has been, and always will be, a risk activity.

How many times have you looked up in the city and seen workers hanging from ropes down the side of a high-rise building?

How many times have you looked down from a high-rise building to see people working along the edge of roofs on warehouse-style buildings or lower-rise apartments?

How many times have you passed a construction or worksite and seen workers perched up in the structure carrying out construction work?

A closer look at those workers would reveal that they are wearing specialist fall arrest equipment and are 'anchored' to the structure in a way that allows them to both move about the work area but would arrest any accidental fall in a safe distance.

However, recent accidents from working-at-height activities reported from both Queensland and New South Wales highlight the need to re-enforce the basic principles that must be observed to ensure that the risks from falls are to be minimised through the correct design, installation, testing and recertification of working-at-height anchorage systems. A summary of these principles is detailed below.

1. Safety system design

The overall safety system must be designed to suit the specific tasks that will be required to be undertaken. This will include consideration of all aspects of the system — from safe access, personal protective equipment to be worn, the anchorage system to be used, the work methods to be used to move around the task area, safe egress on completion of the work and a rescue plan in the event that something unforeseen happens. The system should be designed by a person deemed to be competent in such work.

This will include engineering skills to ensure that the parts of the building structure used for the fitting of anchorages are capable of bearing the loads resulting from arresting a fall.

2. Clearances under work areas

The system design must take into consideration what is below the work movement area, including access and egress. This is to ensure that there are adequate clearances so that, if a worker falls, they will not hit any object or protrusion before the fall is arrested. Clearances need to take into consideration the lanyard length, shock absorber extension, possible harness stretch and anchorage extension (particularly on lifeline systems). AS/NZS1891.4 – Section 7 gives good guidance on this subject. Consideration should also be given to protecting the area below from possible falling material and ensuring tools are tied off to prevent them falling.

3. System access and egress

Without safe access, a worker can be exposed to a fall before he or she reaches the designated work area. With this in mind, safe access to and from the anchorage system must be considered as an integral part of the overall work method and the overall safety system. Fall hazards getting to the work area can be minimised by the use of stairways and ladders for getting to height, and the use of walkways and guardrails for horizontal access. Vertical anchorage systems may be required on ladders — with particular care taken in the transfer of personnel anchorage from vertical to horizontal activity.

4. System attachment equipment and personal protective equipment

The correct equipment to be used for the task needs full consideration. The correct harnesses, attachment hardware, lanyards



© Therna Greenwald/Dollar Photo Club

be designed by persons certified by the anchor manufacturer as competent to do so. The anchors themselves should be certified to comply with AS/NZS5532.

6. Installation and testing

As with the design of the anchor systems, their installation must be undertaken by persons certified as competent to do so. It is normal practice for the installation company to carry certification confirming the training and subsequent accreditation provided by the anchor system/point manufacturer. The installer is required to undertake testing required by the manufacturer on the system, ensure all appropriate labelling is in place and provide all necessary system documentation for both user instruction and use recording, as well as for future inspection and recertification purposes. It is essential that this system documentation is retained and that ongoing system usage records are maintained by the system owner/manager to assist with the ongoing system recertification requirements.


7. User training

Before allowing any access to the system, the system owner/manager must ensure that workers have been suitably trained for the type of work at height to be undertaken. This training should include appropriate emergency rescue training and first aid training. Training currency and operator experience should be checked to ensure that refresher training to maintain competency is not required. It may be necessary to check the credentials of the training provider if competency doubts exist.

8. Inspection and testing

Competent operators understand the need for proper pre- and post-use inspection of all equipment. However, there is an additional requirement for formal inspection and recertification of anchor systems. The frequency of inspection and testing requirements varies by state and is between 6 and 12 months as a minimum for anchorage systems. Load testing and compliance inspections should be carried out on time and to the manufacturer's product installation testing specification. This requires the engagement of suitably trained and qualified inspectors.

9. Documentation

The designed work method statement — including access and egress — for the work to be undertaken, anchorage layouts (single points or lifelines), installation certificates and testing records, usage records and emergency rescue plans are essential parts of a harness-based safety system. All this information must be readily available on-site. This enables workers to be induced to use the system as intended at the design stage. 

The Working at Height Association (WAHA) advocates compliance with Australian Standards, regulator-issued Codes of Practice and Workplace Health and Safety Regulations. Meeting these requirements reduces the risk of a fall from height. WAHA is currently developing an Industry Code for anchorage system design, installation, testing and certification.

Working at Height Association (WAHA)
www.waha.org.au



Image courtesy of RIS Safety

and shock absorbers need to be specified with particular reference to the design of the connection of that equipment to the anchorage. This is to ensure proper connection compatibility such that the possibility of dynamic rollout at the attachment connection is eliminated. All harnesses and lanyards should be certified in compliance with AS/NZS1891.1 and should be well within their lifecycle dating.

5. Anchorages

There are a variety of anchorage possibilities. Where movement across a work area is required, lifeline and rail systems can offer continuous connection for the operator whereas single-point anchor systems generally require connection and disconnection using twin tail lanyards to move over the work area. All types of anchors must be rated and tested to sustain the loads from arresting a fall. Lifeline and rail systems and single-point anchorages can be rated for single-person or two-person use. It is therefore critically important that appropriate labelling and signage is clearly visible. Lifeline and rail systems require specialist design, and that design should only be undertaken by persons certified by the lifeline manufacturer as competent to do so. Those systems should be certified to comply with AS/NZS1891.2. Similarly, single-point anchors systems should only

POLICIES KEY TO CUTTING \$8BN WORKPLACE DRUG AND ALCOHOL BILL

New research findings from Flinders University National Centre for Education and Training on Addiction (NCETA) show that comprehensive policies, and not just mandatory testing alone, are the key to reducing Australia's estimated \$8bn workplace drug and alcohol bill.

The NCETA research looked into how well Australian workplaces are dealing with drug and alcohol misuse and found that while policies were effective, almost a third of businesses had none in place.

The education centre claimed it's been estimated that employee alcohol and other illicit drug use costs Australian businesses more than \$8.9bn a year in lost productivity (Collins and Lapsey 2008).

The paper's lead author, Dr Ken Pidd, examined information on 13,590 employed Australians from the National Drug Strategy Household Survey and said that even simple policies were associated with significantly decreased odds of high-risk drinking.

"There is growing interest in workplace policies as a strategy to prevent or manage alcohol and other drug (AOD) problems, and this research demonstrates, for the first time, that workplace policies are associated with lower levels of risky alcohol and drug use among employed Australians," said Pidd.

"We conducted a secondary analysis of the 2010 National Drug Strategy Household Survey and explored the prevalence of AOD policies and their relationship with health behaviours.

"In terms of specific policy types, policies on 'use' and 'use plus assistance' were associated with significantly decreased odds of high-risk drinking, while 'comprehensive' policies were associated with significantly decreased odds of drug use."

Pidd said that participants were asked to indicate from 10 multiple response options which drug and alcohol policies their employers had in place and to indicate frequency of use of various substances in the last 12 months.

"After controlling for demographic characteristics, having any AOD policy in place was associated with significantly decreased odds of high-risk compared to low-risk drinking, but did not significantly predict drinking at risky levels or drug use," said Pidd.

He said that one of the specific findings about which policies actually worked was particularly relevant for small businesses.

"Only two types of policy were found to be significantly associated with reduced alcohol consumption: 'use' and 'use plus assistance'. That is, policies addressing AOD use at work and the provision of information, education and/or assistance regarding AOD may effectively prevent/reduce high-risk alcohol consumption," said Pidd.


"This is an important finding for smaller organisations which may not have the resources to implement comprehensive policies, but may be able to readily introduce simple but effective AOD use policies."

Because 'use' and 'use plus assistance' were the most common types of policy reported by participants, Pidd said many Australian organisations are already taking promising steps towards minimising high-risk alcohol consumption among employees.

The study found inconsistent relationships between the existence of AOD policies and prevalence of risky alcohol or drug use by workers within industry groups.

Mining was in the top 10% of risky and high-risk drinking, and also in the top 10% of policy prevalence. In contrast, construction, accommodation and food services, agriculture, forestry and fishing demonstrated high rates of substance use but only moderate-low levels of policy implementation.

The utilities industry was found to have very high policy implementation but lower rates of substance use.

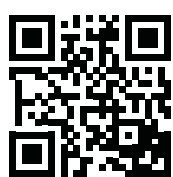
The research paper will be published in the *International Journal of Drug Policy*. 

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The ingestion of ice has been reported to provide a better method of lowering core body temperature than fluids served at 4°C, thus providing improved endurance performance in the heat. (Siegel et al, 2011)

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The vest uses evaporative technology to cool down the wearer. 400–600 mL of water can be filled into the internal layers of the vest, locked in with a leak-proof cap located at the back of the garment. The water is used instead of sweat to mimic the body's natural cooling process and help the wearer maintain a comfortable body temperature.

This cooling layer is sandwiched between external layers that stay completely dry, providing the wearer with up to three days of cooling relief without wetness.

Pryme Australia Pty Ltd

www.pryme.net.au



Stand-up desk solution

The Australian-designed Raidho DeskTopper is a stable and ergonomic stand-up-at-work solution. Due to its compact size, the DeskTopper converts an existing desk into a stand-up workstation, enabling both standing and sitting modes of work.

Models are available in various working heights, catering for notebook and tablet as well as PC/Mac users. The desk solution only weighs about 6 kg, making it easy to move around. Despite its low weight, it is stable and can take a static weight of up to 100 kg.

Worktops can be easily detached from the support frame for storage. No tools are required.

The solution is suitable for use in various settings for a variety of tasks; it can even serve as a coffee table.

Raidho Solutions

www.raidho.com.au

Black disposable nitrile gloves

Commercially available in Australia and NZ, the TGC Nitrile Gloves Black are tough, thin, black disposable gloves designed for the automotive and industrial user.

The gloves are claimed to be the first disposable in Australia and NZ to feature low-sweat technology. They are also claimed to be the only black disposable approved for NSN codification for use by the defence forces.

Features include: 100% nitrile, good strength, high puncture resistance, good chemical resistance, comfort for extended wear, latex-free, vinyl-free, 140+ ratings on chemicals and low-sweat technology.

The Glove Company Pty Ltd

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Don't be complacent —

height safety standards still need to be maintained

Going back 12 to 18 months ago, the height safety industry was abuzz with information, publications and news items about the changes to Australian Standard AS/NZS 5532. It seemed every magazine and website had an article or advice on anchor point compliance and revisions to the standard. Questions were asked of the manufacturer, installer and end user, and there was a certain sense of urgency which triggered a reaction to 'get things done'.

But now that the dust has settled, have we all become a little too complacent? Given that anchor points are manufactured and used on a daily basis and form an integral part of fall protection systems, one would hope not. Unfortunately, sometimes once the hype has died down, momentum wanes and other, more urgent issues take priority.

which it is connected will perform as required in the event of an incident.

The issue of whether previously installed anchors need to meet AS/NZS 5532 is still a hot subject of debate. Sayfa Group can confirm that previously installed 3Sixty anchors do meet the requirements of AS/NZS 5532. However, it would seem some systems installed require testing — but this would need to be evaluated on a case-by-case basis.

Factors that need to be considered are:

- the type and current rating of the anchor;
- the type of roofing material that the anchor is connected to and the roof structure suitability;
- the location of the anchor and the overall system design; and
- the anchor point's compliance to AS/NZS 5532.

Where to from here?

As manufacturers of roof access and fall protection equipment, Sayfa Group is vitally aware that its products must meet the requirements of Australian Standards. The company's customers need to remain confident and secure that its systems are performing reliably and are able to offer protection when it is needed most. Following testing at a NATA testing lab, Sayfa's 3Sixty anchor point met all the requirements and was found to be fully compliant with Australian Standard AS/NZS 5532:2013 rated to 15 kN.

But it is not just manufacturers who must be aware of the need to comply.

Installers need to follow all of a manufacturer's instructions and recommendations to ensure a compliant install. Confirming that the systems they are installing meet current standards is also necessary to guarantee that the customer is getting a system in line with all the required regulations.

PCBUs (persons conducting a business or undertaking) also have a responsibility under the Work Health and Safety Act to give their workers the 'highest level of health and safety protection from hazards arising from work, so far as is reasonably practicable'. Conducting a site audit can be a good place to start. This will highlight any non-compliant systems and can give some guidance of what needs to be carried out to get the workplace up to an acceptable standard.

Compliant, reliable systems do save lives. Nothing proves this more than facts. Sayfa Group says: "We can state proudly that we have actual reports that our anchor systems have saved six lives!"

Contact Sayfa Group on 1300 301 755 or email sales@sayfa.com.au for further advice or to organise a safety audit.



It is crucial that we do not lose sight of the fact that non-compliant anchor points and incorrect installation can have serious, even deadly, consequences.

Australian Standard AS/NZS 5532 requires a single anchor point to be tested both statically and dynamically. Additionally, to enable the anchor to be passed as compliant for a particular roof type, it must be tested in situ, ie, while mounted on that particular roof material. This new testing procedure ensures that the anchor and the structure to

Sayfa Group
www.sayfa.com.au

Wall-mountable emergency lighting station

The Pelican 3310ELS Emergency Lighting Station from Pelican Products is a clear polymer protective enclosure that mounts to the wall in a home, office or factory environment. The product acts as a safety beacon and is designed to ensure that light is available during a power outage, a natural disaster or an emergency situation.

The product comes with the mounting hardware and houses the Pelican 3310PL Photoluminescent LED flashlight, which glows in the dark, ensuring a portable light option is easy to locate in blackout situations.

The product offers up to 234 lm of light output and 190 h of run time. It also features a signalling mode for search and rescue scenarios and has an IPX7 rating which ensures the product remains waterproof submerged to 1 m for 30 min.

Pelican Products Australia Pty Ltd
www.pelicanaustralia.com



Cooling vest and neck tie

The THORZT Sub Zero Chilly Vest and Neck Tie contain cooling crystals that, when activated by submerging in cold water for several minutes, expand and transform into a gel-like substance that can maintain the temperature of the water in which it is submerged for prolonged periods of time, drawing heat energy from blood vessels in the skin. Cooled blood then circulates back through the body, which can result in lowering the core temperature and reduce the risk of heat stress.

Thorzt
www.thorzt.com



Flashing sounder

The Pfannenberger PYRA-MA is a flashing sounder with a pyramid shape designed to fit closely against any surface. There are up to eight different sounder tones available, depending on the type of installation, making it suitable for machine start-up alarms through to fire and gas alert alarms in buildings.

The sounder carries a sound level range from 80-100 dB and light intensity from 5-10 J. The Xenon flashing light can be seen up to 17 m away. It is designed for simultaneous or separated visual or audible alerting.

The product is built to withstand harsh environmental conditions and has an operational temperature range of -40 to +55°C. It features IP66 protection from water and dust ingress as well as an IK08 impact rating for weather conditions such as hailstorms.

Control Logic Pty Ltd
www.control-logic.com.au



Forestry processing plant upgrade for control and safety

Nelson Pine Industries' plant in New Zealand operates 24/7 and has the capacity to process one million cubic metres of forest product per annum. As the ageing plant was in need of an upgrade, Nelson Pine called on Rockwell Automation to develop a solution that integrated control and safety while minimising production downtime.

The chip mill is a large part of the site where logs are unloaded from trucks for processing. Two pivot cranes and a drum debarker handle 300 tonnes of logs per hour. According to Ian Craw, automation engineer at Nelson Pine Industries, "To upgrade the chip mill we decided to start at the whole backbone of control to take advantage of advancing technologies and meet current safety standards."

Control and safety are critically important in the chip mill so the first stage of the upgrade involved replacing the existing PLC-5 hardware platform with a GuardLogix Integrated Safety System.

According to Sean Doherty, account manager at Rockwell Automation, "The GuardLogix provides the benefits of the standard ControlLogix systems but also includes safety features that support Category 4/PL safety applications. The GuardLogix also offers integrated safety, discrete motion, drive and process control."

To allow for zone control, the chip mill building was split into two geographical safety zones, using some of the latest safety guard locking switches with RFID technology for controlling and monitoring zones.

The first safety zone incorporates a large drum debarker, which rotates the logs, removing bark before entering the chipper. Outdated variable speed drives were replaced with eight, 90 kW PowerFlex 753 drives in a master/slave configuration. They receive their speed/torque reference via the DLR and achieve a Stop Category 0 (via safe torque off) to Cat3/PLd.

"The integrated safety provided by zone control allows the plant to shut down one zone while the other is still operating as usual, delivering improved production rates. The goal is zero harm but we also wanted to minimise impact to production schedules so we suggested a solution that helps achieve this," said Doherty.

The second safety zone incorporates safe speed monitoring of the main, 1.8 MW chipper motor and safe position monitoring of the 11 kV motor breaker, to confirm lockout/tagout (LOTO) has been performed, before access is granted into the hazard zone.

"When upgrading equipment it was a priority to meet current safety standards. We are well on the way to complying with the Machine



6000 tonnes of chip ready for processing into fibre.

Safety Standard, EN ISO 13849, with the goal to achieve PLd across most of the site in the coming years," said Craw.

As there are many hundreds of metres between different parts of the site, an EtherNet/IP network was used to reduce both the amount of cabling required and the installation times, with fibre running the longest legs.

Using Device Level Rings (DLRs) achieved complete integration of the control and safety system; the ring topology provides high availability of the safety network with high resiliency. Various DLRs were run to different parts of the site connecting with field safety devices, bringing the information back to one centralised safety processor that monitors the various processes.

"One of the huge benefits of the solution is being able to have visibility remotely. We use PanelView Plus as the operator interface for fault finding and monitoring equipment out in the field. In our previous system we had to use multiple software systems to try to diagnose an issue, but now both the control and safety code are easily accessed and visible through ControlLogix," said Craw.

In addition to the PowerFlex 753 drives, which are used on site, Nelson Pine is using the PowerFlex 525 drives with safe torque off and ethernet capabilities, reducing commissioning time and fault-finding time.

Nelson Pine Industries has adopted production processes that are both safe and environmentally sound. As a result of the success of the new control and safety solution in the chip mill, Nelson Pine is planning to roll out the solution across the entire plant.

Rockwell Automation Australia
www.rockwellautomation.com.au



PowerFlex 753 and 525 drives with safe torque off and device level ring ethernet connectivity to aid commissioning and fault finding.



Large drum debarker, which rotates the logs, removing bark before entering the chipper.

'Liquid blanket' for solar panels designed to eliminate the 'DC danger zone'

Solar panels cannot be turned off when exposed to light. In the event of a short circuit or an emergency such as a fire or flood, the solar panels continue to produce a potentially lethal amount of DC voltage. This creates an area known in professional terms as the 'DC Danger Zone', which until now has been a threat and a safety risk.

An Australian innovation called PVStop has now entered the market to provide a solution to this globally recognised problem. The technology is designed to safely deactivate photovoltaic panels in all weather conditions in seconds, mitigating the risk of DC electrocution to emergency services personnel, electrical contractors and all owners of solar panel systems.

Luke Williams is a CEC (Clean Energy Council) accredited renewable energy system designer at LJW Solar and also the inventor and patent holder of PVStop. He has worked in the solar industry since the early eighties, designing and installing solar photovoltaic and wind energy systems for a variety of domestic and commercial clients.

"Over the years, LJW Solar has become increasingly concerned about solar panel risks and associated solar PV hazards," said Williams. "With over 1 billion solar panels installed globally and 1.5 million solar panel installations in Australia alone, the need for a solution to combat the risk of DC electrocution in the face of an emergency situation has become paramount; this is the driving reason behind why we developed PVStop."



PVStop is a polymer film technology that literally acts as a 'liquid blanket', switching off the solar panels in seconds and reducing the risks faced by emergency services personnel, electrical contractors and all owners of solar panel systems. Once the threat has been eliminated, the film can be simply peeled off the solar panel within up to 12 months after application.

The non-flammable, fire-retardant polymer film technology is designed to protect people and the environment without damage to the solar panel system. Features include: shuts down PV panels in seconds; non-flammable and fire retardant; does not cause damage and simply peels off; and claimed to be safe, biodegradable and easy to dispose.

Solar Developments Pty Ltd
www.pvstop.com.au

NEW PRODUCTS

Oil and gas multivariable transmitter

The Emerson Rosemount 4088 MultiVariable Transmitter is a platform for upstream and midstream oil and gas applications, providing differential pressure, static pressure and temperature measurement from a single transmitter. The product's extended range capability captures flow rate spikes above the upper range limit of the transmitter to account for flow that would have traditionally been missed.

The transmitter's extended range capability delivers good measurement performance for plunger lift measurement applications over the life of oil and gas wells. Its sensor technology measures flow rate spikes while still achieving good performance over the typical operating range. By accurately measuring flow that is commonly missed, the extended range capability is said to ensure the accurate accounting of oil and gas production.

As wells mature and process conditions change, maintaining accurate measurement instrumentation is critical to well stakeholders and leaseholders. The transmitter offers stable performance over the life of the well, ensuring consistent production and minimising service and equipment costs.

The product provides a stable signal transmitted through Modbus, BSAP or MVS, resulting in good data accuracy and effective management of changing well conditions. The unit is typically integrated into a larger oil and gas production network by transmitting data to flow computers and RTUs. The device is designed to easily integrate with Emerson's flow computer products, such as the ROC, FloBoss and ControlWave, but it can be used with any new or existing flow computer or RTU network that accepts Modbus input.

Emerson Process Management
www.emersonprocess.com.au





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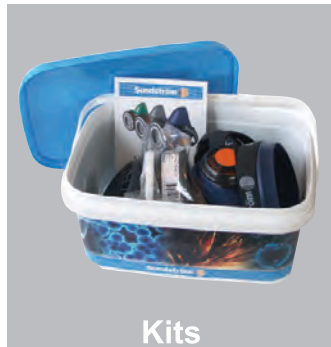
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Safety first at UON

The University of Newcastle says it has the goal of becoming the safest and healthiest university in Australia and has underpinned this ambition with the release of the first UON Health and Safety Charter.

The safety of staff and students has been placed at the forefront of the university's priorities with the recent co-signing of the charter by Chancellor Paul Jeans and Vice-Chancellor Professor Caroline McMillen.

"Creating a culture of safety requires shared values and, most importantly, sustained collective effort," the Chancellor said.

"Every single person who sets foot on one of our campuses has a right to safety, and with that comes responsibility.

"The UON Health and Safety Charter should eliminate any ambiguity around expectations for our staff, students and visitors."



© Freemages.com/Holger Dieterich

The charter has been labelled "a commitment to continuous improvement in health and safety".

McMillen said placing health and safety in the university's strategic plan ensures that it becomes the responsibility of everyone.

"Our goal over the next 10 years is to be the safest and healthiest university in Australia for staff and students," McMillen said.

"Safety comes down to many things — the way we lead, the

resources we commit and the systems and processes we have in place.

"Above all, it is about each and every one of us being smart, alert and prepared to act."

University of Newcastle
www.newcastle.edu.au

NEW PRODUCTS



Portable lead stand

Adept Direct has updated its Portable Telescopic Lead Stand, designed to minimise trips, slips and falls on building construction sites and other workplaces that use hoses, leads, pneumatic air lines or power tool cables.

The product, which is extendable from 1.5 to 2.6 m high using a simple thumb screw adjustment, ensures electrical leads and air hoses are kept up off the ground in work areas and passageways. The robust product features a high-visible safety yellow design and incorporates an injection-moulded insulating cable hanger, which secures up to eight cords and hoses.

The removable telescopic lead stand attachment also makes the stand easy to store and transport.

Adept Direct - Cable Rollers & Lead Stands

www.adeptdirect.com.au

Rope access harness



The RIS ULRA01 Ultimate Rope Access Harness is a purpose-built harness for industry. It is a technical harness manufactured for rope-access and rescue-specific requirements used primarily in the utilities, electrical power, wind generation and telecommunications markets.

The rope access harness is also used for the abseiling, window cleaning and facade/building maintenance industry.

It has been designed complete with retrieval loops on both the shoulders. Other features include: fall arrest rated Frontal 'D' Rings x 2, fall arrest rear Dorsal 'D', side 'D' rings for pole strap restraint and positioning, quick-release buckles, comfort padding and UV-resistant webbing and stitching.

The RIS Ultimate Rope Access Harness is versatile with good 'all-round' capability for working at heights, confined space, rescue and retrieval and structural work positioning and free air activities.

The harness is certified to Australian Standards AS/NZS1891.1:2007 with the 'five tick' accreditation and weighs in at a comfortable 2150 g, providing multiple options for a variety of environments.

RIS Safety

www.rissafety.com



THE TREND TOWARDS NITRILE DISPOSABLE GLOVES

The disposable glove market has started to see a shift towards the use of nitrile gloves for hand protection instead of alternative options such as latex or vinyl. According to The Glove Company, there has been a steady 10% increase year-on-year towards nitrile gloves. So what is driving the trend?

Globally, there has been an increased demand in rubber gloves — mainly due to improvements in health care, in particular in developing regions of Asia-Pacific — as well as an increased awareness of hygiene and occupational health and safety. But to understand the current shift towards nitrile gloves, it is important to understand the differences between the main glove types used for hand protection in medical, food processing, automotive or other industrial environments.

Latex disposable gloves

Latex has long been the dominant product type in the disposable gloves market due to its elasticity and low cost.^[1] They are made mostly from natural rubber, although since rubber is a raw commodity it is often subject to global price movements. Latex is largely the glove choice for the medical industry due to its low chemical and puncture resistance, as well as being highly biodegradable and easily disposed of by incineration.

However, the Australasian Society of Clinical Immunology and Allergy (ASCI) says latex allergy in recent years has become

an important health concern for workers, especially in healthcare environments.^[2] Symptoms can range from mild to severe, such as swelling, irritation, congestion, shortness of breath or even anaphylaxis, where fatalities have been reported. In the US, as many as 17% of healthcare workers are reportedly sensitised to latex.^[3]

According to The Glove Company, worldwide sales of latex gloves have been on a steady decline over the last six years. They believe one of the biggest disadvantages with latex is the high allergy rates, which can often mean that industries that use latex gloves may have to run two types of gloves for the same task. This rising awareness in latex allergies has led to increased innovation and technology breakthroughs in synthetic variants.

Vinyl disposable gloves

Vinyl is one type of disposable glove that is a synthetic alternative to latex. Vinyl gloves are largely cheap to manufacture and purchase, ensuring they are also a popular market choice. While vinyl does not appear to give off the same allergy sensitivities as latex, The Glove Company stated it has several other drawbacks, which can be a cause for concern.



Vinyl disposable gloves are essentially PVC gloves — the same PVC that is known to create large volumes of toxic chemicals when manufactured, like dioxin and vinyl chlorides. A PVC glove contains around 50–60% PVC, while the other percentage is made up of plasticisers that ensure the PVC is soft enough to wear. The most common plasticiser used is phthalates DEHP, a substance currently under much scrutiny for its harmful effects. The use of bisphenol and benzisothiazolinone in the manufacture of PVC gloves is also known to cause allergic reactions and dermatitis with prolonged use. And unlike nitrile and latex gloves, the PVC glove molecules are not cross-linked, meaning there are more holes in the glove film, which can lead to high levels of bacteria and virus permeation.

Another issue with vinyl gloves is their low biodegradability. The PVC can take decades to break down, or if incinerated, toxic emissions are released. Therefore, while vinyl disposable gloves are a suitable and low-cost alternative for latex allergy sufferers, they have other health and environmental concerns of which to be wary.

Nitrile disposable gloves

According to the 'Global Rubber Gloves Market: 2014 Edition' research report, the trend towards synthetic rubber is gaining momentum with nitrile gloves now holding half of the global market.^[4] The report reveals that the number of healthcare facilities going latex-free is on the rise, as glove manufacturers create synthetic products that match the low cost and tactile sensitivity characteristic of latex.

The Glove Company stated that nitrile disposable gloves carry a very low allergy rate of less than 1% of users, and while they have traditionally been more expensive and have not had the level

of 'stretch' associated with latex gloves, recent improvements like 'Soft Touch Nitrile' have helped reduce the gap. Nitrile gloves also have a high chemical and puncture resistance, as well as the same level of biohazard protection as latex gloves. An added benefit is that their biodegradability is almost as good as latex.

It is expected that latex will continue to be a strong choice in the medical field for some time yet and the use of nitrile disposable gloves across all market sectors worldwide will grow strongly in the coming years due to the positive features and minimal drawbacks of nitrile material. The Glove Company believes using vinyl gloves is a short-sighted decision for both the user and the environment, especially with good alternatives available in nitrile and latex at minimal to no additional costs. [5]

- [1] Research and Markets, April 2014, 'Disposable Gloves Market - Global Industry Analysis, Size, Share, Growth, Trends and Forecast 2013 – 2019', viewed on 28 August 2015, <http://www.researchandmarkets.com/research/kgngkh/disposable_gloves>.
- [2] Allergy.org.au, 18 August 2015, ASCIA the Australasian Society of Clinical Immunology and Allergy, viewed on 28 August 2015, <<http://www.allergy.org.au/health-professionals/hp-information/asthma-and-allergy/latex-allergy>>.
- [3] Latexallergyresources.org, 2015, ALAA American Latex Allergy Association, viewed on 28 August 2015, <www.latexallergyresources.org>.
- [4] Market Reports Online, August 2014, 'Global Rubber Gloves Market: 2014 Edition', viewed on 28 August 2015, <<http://www.prnewswire.com/news-releases/global-rubber-gloves-market-to-see-demand-shift-says-a-2014-research-report-272680211.html>>.

The Glove Company Pty Ltd
www.theglovecompany.com.au

NEW PRODUCTS

Low-voltage switchboard rescue kit

The Low Voltage Switchboard Rescue Kit (LVSRKIT) from Electrical Factory Outlet is designed to be used by a safety observer for the safe rescue of victims of electrical shock and other injuries when working on low-voltage (LV) switchboards and substations. The weatherproof bag is made from synthetic non-tear material in a high-visibility orange colour and features an emergency strip that glows in the dark.

The kit contains LV rescue crook fibreglass that is 25 mm in diameter and has a double-insulated overmould handle, as well as 1000 V insulated gloves in size 11, a multitrauma dressing (EO sterilised) and a CPR face mask (CE approved). It also features an 1800 x 1200 mm fire blanket compliant to AS/NZS 3504 standards, a thermal accident shock blanket and two D-size batteries.

The kit comes with an emergency isolation sign, a list of contents and a conformity card. It complies with Australian Standard AS4836 Safe working on low-voltage electrical installations.

Electrical Factory Outlet

www.electricalfactory.com.au





NEW PRODUCTS

Air-conditioning vest

Vortec has added the Dual Action PAC to its line of personal air-conditioning vests, designed for workers in extreme temperatures to help minimise fatigue, heat and cold stress, as well as improve comfort and productivity.

With its belt bracket, the product enables cold or warm air to circulate through a diffuse air vest to distribute cooling or heating to the wearer's torso and neck. It contains a perforated interior that allows for continuous cooled or heated flow throughout the vest.

The air supplied to the vest achieves a temperature differential of 7–15°C from the inlet compressed air temperature. Users can pull out the quick-release pin in the swivel bracket and rotate in 90° increments as needed.

The vest can be worn under other protective clothing and is made of abrasion-resistant, flame-retardant material with a 150°C melting point.

Knight Pneumatics Pty Ltd
www.knightpneumatics.com.au



Asbestos respirator kit

The Sundström asbestos kit from Safety Equipment Australia comprises a silicone respirator, particle filter, pre-filters and accessories, all housed in a handy kit box with a sturdy carry handle.

The SR100 respirator included in the kit is suitable for many applications ranging from handwork to hazardous industrial environments. Together with the P3 high-efficiency particle filter and body protection, the respirator kit is suitable for jobs involving wet and dry hazardous

dust, such as demolition work and asbestos removal.

The separation efficiency of the filter is 99.997%, meaning that not only asbestos fibres are stopped, but smoke, oil mist, aerosol sprays, mould, bacteria and viruses. The filter does not degrade in moisture or spray, and as asbestos removal is often done by wetting dust to prevent it from becoming airborne, the filter has a snap-on filter holder specially designed to deflect liquid spray before it hits the filter.

The kit also includes a cleaning tissue, ID-tag and several pre-filters that catch coarser particles and prolong the life of the main filter. Optional accessories include protective hoods and SmallTalk, a device that enables loud and clear voice communication while wearing the mask.

Safety Equipment Australia Pty Ltd
www.sea.com.au



IDEM Emergency Stop



Model:
IDEM ES-SS

\$149
+gst*

- Part No. IDE 231001
- Lid safety trip mechanism
- IP69K stainless steel
- EN 60947-5-1, EN 60947-5-5, EN 954-1, EN 62061, UL 508, ISO 13850, ISO 13849-1

IDEM Pull Rope Switch



Model:
IDEM GLS-SS

\$319
+gst*

- Part No. IDE 144015
- Up to 80m can be covered using only a single switch and safety spring (100m with 2 switches)
- Rugged integral sealing bellows mean they can be high pressure hosed
- IP69K stainless steel
- Easy to wire with 3 x M20 conduit entries
- IEC 60947-5-1, IEC 60947-5-5, EN 954-1, EN 62061, UL 508, ISO 13850, ISO 13849-1.

* Offer Ends 31/08/2015 Available to ABN holders only

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Reducing manual handling in a WA crushing plant



© iStockphoto.com/Darryl Peroni

A Pilbara-based crushing plant in Western Australia has reduced its manual handling risks after implementing a wear liner system by Kinder & Co.

The company produces lightweight bulk materials handling componentry, engineered utilising composite polymer technology as a substitute to heavier steel or rubber constructed equivalents. The plant switched to the K-Superline Polyurethane Lining System, which has had multiple benefits, including reduced OHS hazards to workers.

The problem

The crushing plant provides contracting crushing and screening services to the mining industry and to control the feed to the screen, the conveyed material is put through a Schenk Vibratory Feeder. Due to the level of product build-up occurring on the existing plate chute lining (20 mm hardox 450), they needed to stop the plant and deploy resources 3-4 times per shift to jackhammer

the iron ore manually. Additionally, given the impact from the 2.5 m drop height and the sliding abrasion, the existing conventional chute lining had to be replaced every 12 weeks.

The resolution

The K-Superline Polyurethane Lining System, specifying a B93 durometer hardness rating and 1" thickness to suit the high levels of impact and sliding abrasion, was implemented at the plant.

The product has a low-friction surface that eliminated the problem of build-up and congestion through to the screen. This has stopped the need for any jackhammering on-site thereby reducing repetitive and physical labour for the workers.

The polyurethane also absorbs all of the impact of the crushed materials, which reduced the noise levels of the material being handled. Additionally, since the material is lighter than steel, the polyurethane was easier to carry and manoeuvre for workers when installing than the metal sheets previously used by the plant.

"Regretfully, one of the key reasons for the slow uptake of some of these OHS-friendly equipment solutions is that management overlooks the cost of OHS compliance," said Neil Kinder from Kinder & Co.

"Instead they can be too driven by daily production targets at the expense of injuries to their human resources. What isn't being considered is that short-term back pain can lead to more enduring and serious physically debilitating conditions.

"The situation then needs further financial investment to cover the salary costs of replacement contract workers," he added.

The plant also reported around 50% more wear life after switching to the K-Superline Polyurethane Lining System.

Kinder Australia Pty Ltd
www.kinder.com.au

NEW PRODUCTS



Extractive gas analyser

In contrast to on-site measurement, extractive gas analysers remove part of the gas to be measured from the gas channel, prepare it and guide it to the analyser module. The GMS800 extractive gas analysers can measure more than 60 different gas compounds. The device's modular design includes up to six analysing modules, one gas module, I/O modules and an operating unit.

Standardised 19" housing as well as system enclosures optimised for installation in cabinets can be used for economic system integration. Wall-mounting enclosures with ATEX approval for Ex zones can be used in harsh industrial environments.

Equipped with modern software, the analyser provides all the required interfaces needed for remote monitoring via networks through to the connection to a process control system.

The company also has available the MERC300Z mercury monitoring system for continuous mercury analysis of waste gases from incineration plants and cement works. Atomic absorption spectroscopy using the Zeeman effect enables precise measurement of mercury. In addition, the analyser does not require any chemicals and has low maintenance requirements.

SICK Pty Ltd
www.sick.com.au

FAST FACTS

THE HEALTH IMPACTS OF POOR SITTING POSTURE

Incorrect sitting behaviours and poor posture are major factors contributing to the rise of musculoskeletal disorders (MSD), which are damaging to people's health and a significant and rising cost for Australian business.

With an increasing awareness of the risks and costs of incorrect posture in the workplace, many organisations in Australia are now embracing staff seating as a strategic business investment at an office project stage.

What happens to the spine when going into the sitting position?


1. The sitting position causes the spine to lose its equilibrium.
2. As a result, spinal muscles are forced to work harder in order to maintain balance.
3. This significantly increases static muscle work.
4. Over time, muscle fatigue may cause muscular discomfort and potential spasms.
5. At the same time, the healthy curve in the lower back flattens, which causes the lumbar discs to compress.
6. Also, as only the outer rings of the disc have pain-sensitive nerve endings, it is possible to be unaware of damage until it is well underway.

SCAN HERE TO VIEW WHAT HAPPENS TO YOUR SPINE WHEN GOING INTO THE SITTING POSITION



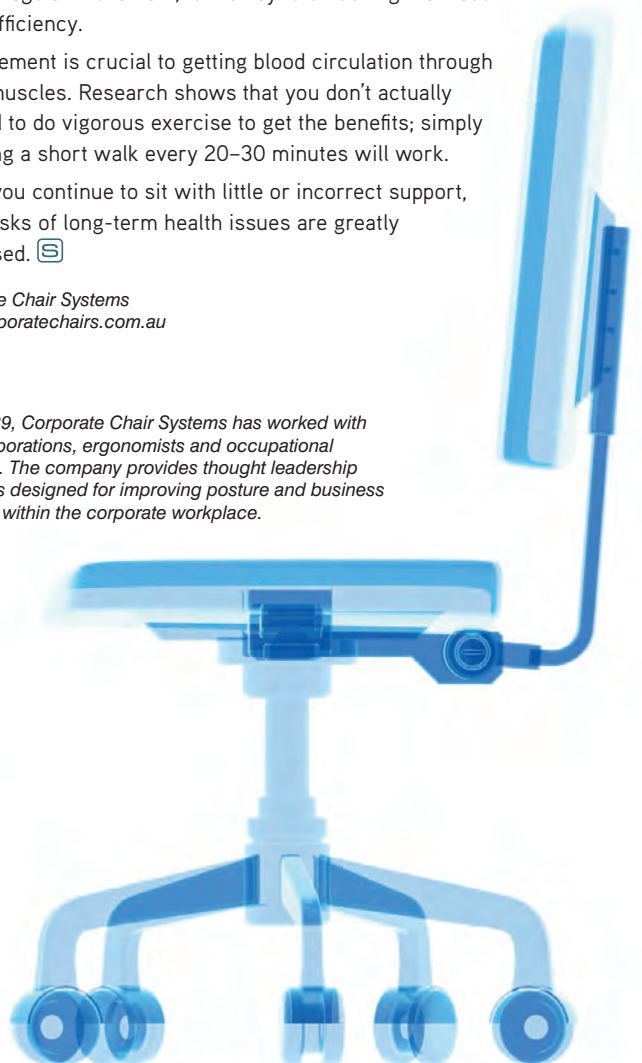
Many Australians spend 60 hours or more a week sitting down at work, during their daily commute or during recreational activities.

Sitting facts

- It is known that sitting for over an hour induces changes in lipoprotein lipase activity and in the metabolism of glucose that results in deposits of fat in adipose tissue, instead of being metabolised by muscle.
- Sitting for much longer periods is linked to heart disease risks, which is one reason why some people suggest standing at work, as standing uses 20% more muscle activity and burns 20% more calories. However, as sitting uses a lot less energy than standing, it is more suitable for performing fine motor tasks such as computer work.
- Adopting the correct sitting behaviour and maintaining a good posture, combined with regular micro-breaks, is proven to improve levels of comfort and productivity, as well as to reduce the risks of MSDs.
- Sitting correctly in the right type of chair, combined with regular movement, is the key to unlocking wellness and efficiency.
- Movement is crucial to getting blood circulation through the muscles. Research shows that you don't actually need to do vigorous exercise to get the benefits; simply taking a short walk every 20–30 minutes will work.
- If you continue to sit with little or incorrect support, the risks of long-term health issues are greatly increased. 

Corporate Chair Systems
www.corporatechairs.com.au

Since 1989, Corporate Chair Systems has worked with many corporations, ergonomists and occupational therapists. The company provides thought leadership and chairs designed for improving posture and business efficiency within the corporate workplace.



THE WORLD'S FIRST ANTI-PERSPIRANT GLOVES



KEEPING HOT HANDS COOL MAKING SWEATY HANDS DRY

ATG®'s technology is being continuously developed by a core team that matches market research and marketing analysis with the latest technological developments. This forms the foundation upon which we continually improve the customer experience through constant innovation.

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 **sweaty hands**. Why?

The skin, the largest organ of our body, is used to regulate its temperature through perspiration (thermoregulation). On average, our skin contains 155 sweat glands per square centimeter; however, **our hands have 83% more sweat glands per cm² than the rest of our body**. The back of our hands contains 200 sweat glands per cm² whilst on the palms of our hands there are 370 per cm². Combine this with a gloved hand and it explains why sweaty hands remains an age-old problem.

Time for change? We at ATG® think so.

INSPIRED TECHNOLOGY

Inspired to find a solution, led us to develop **AD-APT®**, the world's first **All Day Anti-Perspirant Technology** that we've **integrated into the iconic MaxiFlex®**. The patented AIRtech® technology platform that provides 360° breathability works in partnership with the **AD-APT®** technology platform to keep your hand cool, dry and productive even in tough conditions.

3 INTELLIGENT STEPS



1

REGULATE FOR A COOLER GLOVE EXPERIENCE

Microcapsules integrated into the glove liner are activated when the skin temperature rises, releasing a natural anti-perspirant that regulates perspiration to keep hands dry and make them cooler.



2

VENTILATE FOR A FRESHER GLOVE EXPERIENCE

The AIRtech® technology used in the construction of the MaxiFlex® coating has a network of structured tunnels guaranteeing optimal air quality and temperature within the glove.



3

CIRCULATE FOR A PRODUCTIVE GLOVE EXPERIENCE

As your hands work they move forcing air out of the close fitting MaxiFlex® glove through the patented structured tunnels within the AIRtech® coating. This enables what we call 360° breathability to evacuate moisture to guarantee optimal air quality and temperature within which is now further enhanced through the inclusion of our new **All Day Anti-Perspirant Technology, AD-APT®**.

HOW IT WORKS?

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For further information, please contact Safety Mate at 1300 267 336 or info@safetymate.com.au or visit www.safetymate.com.au



THE RISING COST OF DRUG USE

As drug use becomes more prevalent, the impact it has on business and the economy overall is becoming harder to ignore. Many industry sectors may now be at risk of failing to meet their WHS obligations — and it is no longer just transport, construction and other trades in the firing line. Employers need to give priority to providing a safe workplace, which includes identifying whether individuals are fit for duty.

It has been estimated that the Australian economy loses around \$6 billion per annum due to illicit drug use. Within individual workplaces, adverse effects can include an increased probability of injury, decreased productivity and compromised customer service. Can we afford to turn a blind eye to a clearly escalating problem?

For many business owners and managers, there is a distinct delineation when it comes to employee drug use. While it's hard to imagine any employer tolerating an on-the-job habit, when it comes to out-of-hours use, an individual's time is usually considered their own. But what if off-duty social drug taking had the potential to render employees unfit for work?

How far does it reach?

The National Drug Strategy Household Survey (NDSHS) is conducted every two or three years and gathers information on tobacco, alcohol and illicit drug use among Australians. The latest published data was collected from 24,000 households between June and December 2013 and the report was released by the Australian Institute of Health and Welfare in early 2014.

Results are not only presented as a snapshot of the current situation, but also measured against previous studies in order to gauge changes and to identify trends.

According to the 2014 release, in 2013 just over 40% of Australians either smoked daily, drank alcohol in ways that put them at risk of harm or had used an illicit drug in the previous 12 months; and 3.1% identified as engaging in all three.

When delving into specific habits, the report found that illicit drug use had remained largely unchanged between 2010 and 2013. Within the drugs subcategories, usage of some types of substances (heroin, GBH and ecstasy) had actually fallen slightly.

While methamphetamines showed no overall increase, the breakdown by form of the drug used highlighted a significant difference; the use of powdered methamphetamine (such as speed) is dropping, with crystal methamphetamine (ice) escalating sharply in contrast. The study discovered that users of cannabis and methamphetamine are more likely to consume regularly, with most users indicating use at least every few months — 64% for cannabis and 52% methamphetamine.

By contrast, ecstasy and cocaine use is less frequent, with users typically only indulging once or twice a year (54% and 71% respectively). Among illicit drug takers, 60% of recent users also drank

alcohol in quantities deemed risky by health authorities. Cannabis is the drug most often used in addition to other illicit drugs, and users of other psychoactive substances also show a higher propensity to use additional illicit drugs.

People aged between 20 and 29 are the most likely to use (27%) and males are more likely to partake overall. The picture that this paints suggests a prevalent 'one-in, all-in' mentality; if users have a predilection for one type of substance, they are more prone to take others, often simultaneously.

The lines that divide

In 2009, the Federal Government Department of Health conducted exploratory research into usage patterns and harms associated with methamphetamine use in particular population groups in Australia. The research discovered that behaviour and motivation were a better predictor of methamphetamine use than pure demographics. It determined three distinct behavioural contexts:

- 1. Social users** are primarily motivated by the reduced inhibition resulting from drug use. These users claim to experience enhanced confidence, ability and motivation to socialise, greater levels of energy, alertness and physical sensation. Methamphetamines for this group are always used with others, in social setting such as parties, clubs and other events. Drug use is considered a shared experience, not a solo activity. Maintaining this social aspect is how this group differentiates their own drug use from those who develop a dependence. The study found that social use also occurred during work times for those in the construction, labouring and hospitality industry sectors.
- 2. Functional users** associate the drug with achieving a specific task, often in relation to their employment. The motivation here is the enabling effect of drugs including increased concentration, alertness and stamina. This group is less inclined to acknowledge the illicit nature of drug use (unlike social users) and commonly justify the behaviour as a 'means to an end', according to the report. These users were found to be widespread across many industries including unskilled and semi-skilled roles. Trades, construction, labouring, driving, hospitality, IT, management, finance and health all exhibited users from this group.
- 3. Dependent users** are typically seeking to escape existing problems (lifestyle, psychiatric or other). They are demonstrably uncontrol-



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lable, compulsive cravers of the drug and more frequent users than either of the other groups. These users are employed across a range of industry sectors in varied occupations.

All of these groups recognised symptoms of a post-drug use comedown including: depression, feeling 'scattered', increased anxiety and short-temperedness, nervousness, paranoia, lack of motivation and difficulty in sleeping.

None of the identified groups see these symptoms as harmful, but merely a part of the process.

Social users regard the effects as something to be managed until they pass (sometimes with the assistance of cannabis and alcohol, or sleeping it off) whereas, for functional and dependent users, these symptoms generally act as a trigger for more amphetamine use.

The concern here for employers is whether or not staff are fit for duty after a weekend binge, as it's not uncommon for the side effects to present themselves well into the working week.

If employees regard these effects as non-harmful, they are liable to exhibit poor judgment when assessing their own suitability for work. A short-tempered, anxious or scattered employee is, at best, likely to be less productive than the job demands and, at worst, capable of putting themselves and their co-workers at risk of harm.

What does it mean for employers?

According to Odyssey House, one of Australia's largest alcohol and other drug rehabilitation services, employers need to give priority to promoting a safe workplace culture and to understanding addiction-related behaviours. It suggests that many factors may have an impact on drug usage and consumption patterns of workers, including:

- workforce culture;
- workplace stressors including shift work;
- work environment;
- poorly designed equipment;
- fear of losing one's job;
- conflict with a supervisor;
- peer pressure;
- discrimination and/or prejudice; and
- personal stressors including marital or personal relationship problems and financial problems.

Among the adverse effects on the workplace are: an increased probability of injury, decreased productivity and compromised cus-

tomers service. Staff members presenting any of the common post-use symptoms can effectively diminish the safety of the workplace for everyone. And it's no longer just the usual suspects either, with white collar workers now on the radar as well.

While ongoing media reports that highlight our society's ice use 'epidemic' deserve some of the credit for creating increased interest in drug testing, it is suggested that the prevalence of roadside drug testing, and the number of positive results it has drawn, has also become the impetus for companies keen to avoid problems before they surface.

The Australian Industry Group (AIG) has recently voiced its concerns in its submission to a parliamentary enquiry. It says that the construction, manufacturing and transport industries are at significant risk of increased work health and safety (WHS) issues due to the jump in ice use. And the AIG says that entrenched union opposition to drug and alcohol testing means that many employers are failing in their duty of care.

In a complete about-face, the Construction, Forestry, Mining and Energy Union declared support for blanket drug and alcohol testing in March of this year, on the basis that ice is a 'game changer', but drew the line at urine testing, opting instead for saliva.


It's relatively difficult to detect (or prove) ice use without drug testing, so employers are aiming to identify issues before they become an outright danger, with many companies now reportedly including drug testing in the pre-employment phase.

Counting the cost

While absenteeism, injury and productivity loss can be counted, it is difficult to formally draw a direct link between these effects and the out-of-work activities undertaken by employees. This is unlikely to change, as there is little incentive for workers to volunteer information to employers on any illegal behaviours carried out in their private lives.

It is no longer only the domain of large companies in industries traditionally recognised as having high incidences of drug use, such as long-haul transport and mining. Businesses of any size are now equally susceptible, given the shift in drug consumption habits. It's easy to dismiss drug testing as an attempt to police the private lives of employees, but the fact is that employers have an obligation to provide a safe environment for staff and determining whether individuals are fit for duty is part of that obligation.

If we look to the United States as a guide, in the 1980s around 10% of the domestic workforce undertook regular drug testing. Today it stands at 70%, due to legislative changes and a shifting business mindset that recognised the financial and health costs associated with doing nothing.

On home soil, our numbers are much lower, but a combination of factors is increasingly seeing employers rewriting company policy and implementing programs that aim to mitigate the effects of out-of-hours employee behaviours... before they become a cost to business. 

Pathtech Pty Ltd
www.pathtech.com.au

Article developed by the Pathtech Drug Detection Team. For further information on the Pathtech Workplace Drug and Alcohol Detection Range, visit www.pathtech.com.au/eliminate/ or call 1800 069 161.

RULES UPDATE

SAFE WORK AT HEIGHT

Carl Sachs*, Managing Director, Workplace Access & Safety

The extra risks associated with roof anchors on single-storey buildings has again been highlighted in the revised workplace falls model code of practice.

Safe Work Australia published a revision of the model code of practice 'Managing the Risk of Falls at Workplaces' ("code") in March. Chief among the changes to the code are fall distances for harness use.

Fall distance for harness use explained

A worker wearing a harness attaches it to a shock absorber and lanyard system. During a fall, the shock absorber deploys and extends.

This extended distance is added to the person's height, lanyard length and a safety factor, which allows for harness stretch.

Under the revised code, a person who falls can be expected to travel 6.5 metres before their fall is arrested. Effectively, that eliminates single-storey buildings and typical warehouses. Those around 6 to 8 metres high do not provide enough fall clearance if there are obstacles below like trucks or canopies.

Using a technique of restraint, it is possible to use a harness-based system on a roof that is less than 6.5 metres from the ground safely but equally as easy to get it horribly wrong. Simply use the incorrect length lanyard on an anchor close to gutters, for example, and a system design intended to prevent any risk of fall can unravel in an instant — with fatal consequences.

Practical and commercial considerations and solutions

In fact, the code points out that harness-based systems should only be used if it is not practicable to provide a barrier such as a guardrail.

In many cases, a guardrail is the most practicable and commercial solution. Consider the lifetime costing of equipment and all of the administrative, inspection, maintenance and training requirements for anchor and static line based systems.

The code makes 34 references to rescuing people in harnesses and dedicates an entire section to suspension intolerance, highlighting the importance of having a second person on-site and trained to implement a site-specific rescue plan, equipped with the right equipment.


Also known as toxic shock and suspension trauma, the risk of death is real, explain Dr Bill Wheems and Dr Phillip Bishop of the University of Alabama in *Will Your Safety Harness Kill You?* "Harnesses can become deadly whenever a worker is suspended for durations over five minutes in an upright posture, with the legs relaxed straight beneath," the paper said.

Using higher-order controls like platforms, catwalks and guardrailing satisfies the legally powerful hierarchy of controls. Importantly, such passive height safety equipment reaps cost savings with lower lifetime costs, reduced administration and ready access for maintenance without the need for specialised height safety skills.

How the code and standards fit together

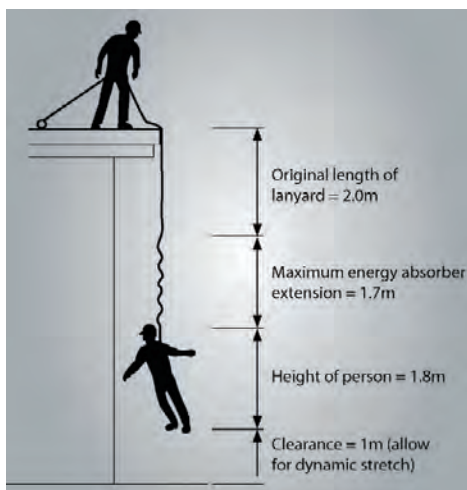
The code offers practical guidance to reduce or eliminate the risk of falls. Workplaces that adopt the code methodology are deemed to have met their requirements under the regulations.

Australian Standards AS/NZS1891 (anchors and static lines) and AS1657 (Ladders, platforms, walkways, guardrailing) are referenced in the code. Deviating from them would need to be justified if an incident was examined in court. Document reasons for any deviation in a risk assessment, reviewing the likelihood and consequence of a fall, comparing the cost of safe and compliant control measures versus the cost of injury.

Standards are undated in codes of practice, ensuring that revisions to standards are always referenced. This is particularly relevant to AS1657, which was revised in 2013 and AS/NZS5532 (Anchors), which was published as an addition to AS/NZS1891 dealing with testing of anchorage points. 

Workplace Access & Safety Pty Ltd
www.workplaceaccess.com.au

**Carl Sachs is managing director of Workplace Access & Safety and the Technical Chair of the Working at Height Association (WAHA). A member of the Standards Australia committee for AS/NZS1891 (Fall arrests systems and devices), AS/NZS5532 (Anchor points) and AS1657, Sachs was involved in the drafting of the recently released standards. Sachs' business is independently accredited by NATA for the testing of AS1657 equipment and AS/NZS 5532 safety anchors.*



Under the revised code, a person who falls can travel 6.5 metres before their fall is arrested.



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Drug and alcohol testing policies now required on construction sites

In September, the Australian Government introduced amendments to the Building Code to ensure higher standards of workplace safety for construction sites. The code now requires drug and alcohol testing on construction sites.

The building and construction industry has come under focus due to the high levels of risk associated with the use of heavy or mobile machinery or working from heights, which is accentuated by the effects of alcohol and drug use.

Fair Work Building and Construction will be responsible for auditing contractors to ensure those subject to the code have in place a fitness for work policy that is compliant with the Building Code.

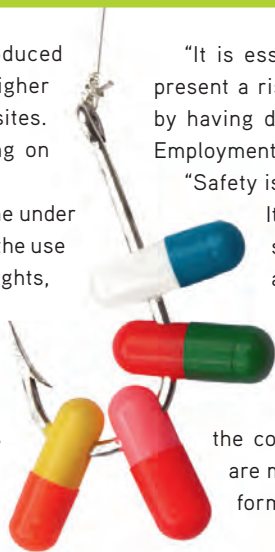
"It is essential that workers on construction sites do not present a risk to themselves, their co-workers and the public by having drugs and alcohol in their systems," Minister for Employment Senator Eric Abetz said.

"Safety is a paramount consideration on construction sites.

It is simply an unacceptable risk to the health and safety of employees and the public to have workers affected by drugs or alcohol on construction sites."

Contractors who are subject to the code will have 28 days to ensure they have a compliant policy in place.

Senator Abetz said the requirements under the code to test for the presence of alcohol and drugs are modelled on those that previously applied under the former Victorian Construction Code.



NEW PRODUCTS



Web-based QHSE management system

IMS Stratus is an integrated web-based quality, health, safety and environment (QHSE) management system designed to replace a paper-based system. It operates in the cloud and therefore can be accessed anywhere using any digital device.

The system instantly provides data on how an organisation is performing with its quality, safety and environmental compliance requirements. Users can customise the product to their needs by building their own forms, checklists and registers.

The system allows businesses to induct staff and visitors online, simplify contractor compliance requirements and automatically notify users of important dates. QR codes can be used to track products, equipment, work processes or staff, while users can immediately record on-site NCRs, incidents and track close-out actions.

The system allows users to record stakeholder issues and environmental monitoring data and automatically generate heat maps to show hotspots.

IMS STRATUS

www.imsstratus.com.au



Welding helmet

The 3M Speedglas Welding Helmet 9100 QR features an auto-darkening welding lens which can be attached or detached, allowing welders to have continuous head protection for overhead hazards when they remove their welding helmet.

Once secured on the safety helmet, the 3M Speedglas Quick Release Rail allows the welder to attach or remove the welding shield with the squeeze of a gloved finger and thumb. The ability to detach the welding shield independent of the safety helmet means it may be removed for non-welding tasks.

Workers can also keep the welding helmet attached by parking it in a raised position. This parked position creates a low centre of gravity, maintains a low profile and reduces the load on the wearer's neck.

The Speedglas 9100XXi auto-darkening welding lens, when combined with the Speedglas SideWindows, gives welders a large viewing area. The product also features a fog-reduction vent.

AWS Pty Ltd

www.awsulplies.com.au



Mechanical prusik

Capital Safety has added the DBI-SALA Rollgliss Rope-Mate Mechanical Prusik to their Rollgliss Technical Rescue range.

The product provides a tamper-proof mechanical prusik that eliminates the use of knots or hitches that could be tied incorrectly. Manufactured from a single self-contained unit, its compact and lightweight design ensures good handling and performance with no protruding bolts or pins that get in the way.

The prusik is constructed from anodised aluminium with a stainless steel axle and is load rated for up to 250 kg on a variety of kernmantle ropes. The non-invasive cam locks down onto the rope when required and ensures no rope damage while maintaining maximum hold. If overloaded, however, it is engineered to slip to avoid damage.

The product can also be safely removed or installed at any point on the rope without the need to remove the device from the karabiner connected to its attachment point, thereby reducing the risk of an accidental drop.

Capital Safety Group (Australia)

www.capitalsafety.com



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Handheld LED lantern

Pelican Products has introduced the rugged 9415i LED Lantern to its range of hand-held lighting tools.

The product is certified with IECEx UL 14.0077X Ex ia IIC T4 Ga and is safety approved for volatile and harsh environments. Engineered with an array of four high-intensity LEDs, the lantern shines 392 lm/38,520 candela peak beam intensity.

The device also offers three illumination modes (high, low and flashing) with a water-resistant electronic switch that toggles between modes at the push of a button. The switch features an integrated battery level indicator that illuminates when the light is on: green (more than 75%), amber (between 75 and 25%) and red (25% and lower). Powered by nickel-metal hydride rechargeable battery technology, the lantern can illuminate a distance of 392 m, has up to 4.5 h run time in high mode and 11 h in low mode.

Designed to stand on its end, the lantern array can be rotated 120°. It features a sure-grip handle with a large opening to accommodate gloved hands and weighs 1.65 kg (with batteries). The lantern also has a tough polymer construction and comes with a quick-release nylon safety strap that prevents entanglement. In order to ensure a secure attachment, the lantern and charger base are rated NFPA 1901 for use on fire apparatuses.

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Fit note to support injured workers

A new 'fit note' to help get sick and injured employees back to work has been developed for use by all GPs in the ACT and surrounding region before a potential national expansion.

The certificate of capacity is designed to help more than 400 GPs in the region focus on their patients' capacity for work, rather than their incapacity.

The initiative was announced by Minister for Employment Senator Eric Abetz and is part of Comcare's Health Benefits of Work Program, which promotes timely and supported return to work for people with injury and illness to reduce disability.

While the old certificate prioritised claim-related information and a patient's limitations, the new certificate focuses on capacity for work and encourages doctors to consider options including a graduated return to work, modified duties and reduced hours.

The new fit note is also meant to remove confusion and duplication by standardising the information required by multiple workers compensation and accident injury schemes operating in the ACT.

The certificate is supported by all workers compensation and motor accident personal injury insurers in the territory, including Comcare, Compulsory Third Party and the Department of Veterans' Affairs.

Comcare will evaluate the ACT implementation of the certificate of capacity before working towards national implementation in the Comcare workers compensation scheme.

Comcare

www.comcare.gov.au

New insights for spinal injuries

A research partnership between Flinders University and the US University of Delaware is currently looking at how function is lost in people's spinal discs while bearing weight in order to develop better artificial discs and tissue engineering repair treatments.

The strategic research alliance is part of a global push for better treatments for debilitating spinal conditions to help improve musculoskeletal function.

In Australia, 90% of all workers compensation claims during 2012–13 were for injury and musculoskeletal disorders with the back being the body part most often injured.^[1]

According to international biomechanics expert Professor Dawn Elliott, from the University of Delaware, ageing, growth and injury are common causes for loss of spinal function, putting a heavy burden on health services and human suffering that costs tens of billions of dollars each year.

She has been part of a collaboration with Flinders University and is currently working with Medical Device Research Institute (MDRI) Biomechanics and Implants Laboratory at Tonsley. Her research applies magnetic resonance imaging and mechanical loading and mathematical modelling to study the spine and how it breaks down with ageing.

"I am certain that the strong research collaborations my laboratory is building with Flinders will develop into new



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breakthroughs in developing and testing therapies for the spine," Professor Elliott said.

She recently outlined her research at a public seminar at Flinders and was a keynote speaker at an Adelaide Centre for Spine Research.

Flinders University
www.flinders.edu.au

[1] [Safeworkaustralia.gov.au](http://safeworkaustralia.gov.au), 'Australian Workers' Compensation Statistics, 2012–13', viewed on 10 August 2015, p.5, <<http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/897/australian-workers-compensation-statistics-2012-13.pdf>>.



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The SLC/SLG 445 series of safety light curtains and safety light grids are multifunctional devices. The functional diversity allows the individual application requirements to be more flexible, with the aim of achieving high productivity and safety.

The Multi-Scan function offers multiple evaluations of the protection zone. This increases the availability of the safety light curtain by suppressing temporary disturbances like flying burrs, steam clouds and flying insects, thus preventing false triggering.

The Mute function allows safe time-limited bridging of the safety light curtain for objects to be transported into or out of the danger zone. Up to four muting sensors can be connected easily via a field distributor with integrated cable, reducing effort and increasing the availability of the system.

Other features include fixed blanking, floating blanking, fixed blanking with movable edge region, double reset, contactor control (EDM), automatic mode, restart mode and beam coding. Set-up is simplified as selection and configuration of functions is made via a single push-button and the seven-segment display, so there is no need for software and a PC.

The compact construction in a rugged and weight-saving 28 x 23 mm profile allows the series to be used in tight installation situations. They are suitable for use in safety circuits up to Type 4 to EN 61496-1, PLe (EN 13849-1) or SIL3 (EN 62061).

Control Logic Pty Ltd

www.control-logic.com.au

SMART DRIVER SEAT THAT RESPONDS TO GESTURES

It's now often said that sitting is the new 'smoking' — a bad habit harmful to our health. Many professions require people to sit for long periods throughout the day, such as office workers or truck drivers. Professional drivers in particular can spend an average of nine hours a day sitting in their vehicle cabin with little movement and, as a result, can be prone to back problems.

According to the Fraunhofer Institute for Silicate Research (ISC), studies conducted by a statutory health insurance company demonstrated that a driver's seat adjusted properly to the person at the wheel, in terms of shape and position, can be an effective countermeasure to back pain. While many manufacturers provide a selection of seat position options, drivers tend to only use them occasionally as they can be complicated to operate.

Researchers at the Fraunhofer ISC, however, in collaboration with Isringhausen GmbH & Co. KG., have engineered a driver's seat that can be calibrated intuitively by simple hand gestures through sensors, which it is hoped will counter these drawbacks.

"With the aid of simple hand gestures, the driver can move the seat forward and back, as well as up and down. In addition, he or she can also custom-set the incline of the thigh support and back-


rest in the same manner," said Johannes Ehrlich from the Center for Smart Materials (CeSMA) at Fraunhofer ISC.

The scientists working on the project have integrated sensors including piezosensors, which respond to pressure, into the synthetic side cover so that the seat reacts to the driver's hand motions. To ensure the motion-controlled system is activated, the driver lightly presses a certain point on the side cover, which prevents the motion control from being accidentally triggered, said Ehrlich. Seat positions can also be stored, a feature designed for when multiple drivers need to use the same vehicle.

Proximity sensors built into the side cover are also used to detect gestures and can track the smallest changes in electrical fields, such as those triggered through hand motions. A software program engineered at ISC reads these sensors and determines the hand's direction of motion from this. An intelligent algorithm in the software guarantees that multiple electrodes can be evaluated simultaneously, thereby reducing incorrect operation.

"We have attached electrodes to the relatively limited space so that the necessary control gestures are easy and ergonomically favourable," said Ehrlich.

In order to set the seat position, the driver performs brief hand motions along the entire side cover — similar to the 'brushing' motion on a touchscreen. Depending on the directional motion of the gesture (up/down, forward/back or diagonal), the individual seat elements are adjusted accordingly. Once the driver has performed the settings, the gesture control automatically shuts off when the hand moves away from the sensor area. The driver then receives confirmation that the gestures were stored successfully through an LED instrument.

A fully functional prototype of the sensor seat is now available and is anticipated will soon be available to the automotive market. 

Fraunhofer in Germany
www.fraunhofer.de/en.html



Image credit: © Isringhausen GmbH

Robot takes away the grunt work and operates safely beside humans

The Universal Robots UR10 robot has helped Swedish food company Orkla Foods streamline production and reduce repetitive and manual lifting for workers without the need for extensive safety installations.

Among other products, the company prepares vanilla cream; however, before they invested in the UR10, the vanilla cream bags were packed manually into cartons. The company sought to find an automation solution that could be easy to manoeuvre in factory settings, safely work with people and operate well with other production machines.

"An important requirement was that the robot had to work flawlessly so that we would not need supervision or extra support for it to work," said Johan Linné, plant manager, Orkla Foods Sweden.

"It would also be a major advantage if it did not require safety guarding around it and could work safely alongside our employees."

The UR10 robot helps the automated process by placing sealed bags in cartons. Weighing less than 30 kg, it has a payload of 10 kg and six rotating joints. It also has a reach of 1.3 m, designed to operate more effectively across a larger area. The robot works independently but is part of a network with a carton erector and a carton sealer, and is fed by a filling machine.

"It is flexible, easy to implement, simple to program and can perform various tasks in a network with other machines," said Linné.



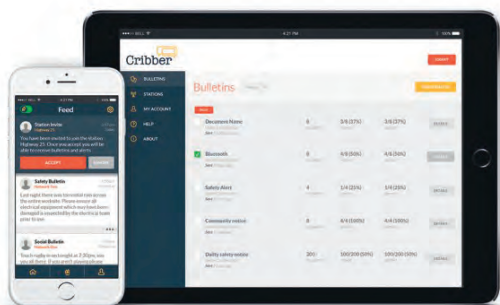
"An important advantage is that the robot stops if you bump into it, meaning that it is safe and does not require any safety guarding around it, which makes it more integrated with the employees.

"We have got a more economic and stable operation and we are now looking into whether there are other applications where we can use this type of robot."

Linné said the payback time of the investment in the UR10 is about six months.

Sensorplex Pty Ltd
www.sensorplex.com

NEW PRODUCTS



Workforce communication software

The Cribber communication system is a private mobile noticeboard developed to connect worksite management with frontline workers to improve productivity and safety while decreasing workforce turnover.

The system is a cloud-based application which includes a web app administration interface for management as well as a mobile app for workers. Worksite EHS, employee relations and community bulletins are sent via the app directly to a worker's digital device in real time.

The product replaces lunchroom noticeboards and document distributions, enabling worksites to go paperless and thus reducing costs as well as environmental impact. It can be used for daily safety notices, site layouts, key contacts, social events, emergency alerts, progress updates, toolbox topics, monthly newsletters, rewards and recognition. The system features easy-to-manage user lists requiring only a user's mobile number, which is suitable for transient workforces with short-term workers, visitors or stakeholders. Bulletins can also contain rich media and external links to other apps and media.

Company management can view bulletin analytics, which show read and open percentages for every bulletin, as well as assign multiple administrators to manage the system on their worksites.

Cribber
www.cribber.com





LED headlights

The Pelican Products LED headlight models 2745, 2755 and 2765 are safety approved and designed for use in volatile or hazardous environments.

The compact and lightweight headlights come with an IPX4 rating and are also IECEx approved.

Equipped with three LEDs, the 2745 headlight produces up to 33 lm and 40 h of run time, offering three lighting modes (high/low/flashing). In comparison, the 2755 headlight is fuelled by a single high-powered LED with a light output of up to 72 lm. It also has multiple lighting modes and runs for up to 15 h. The third LED model available is the 2765, which has three uniquely positioned LEDs that offer multiple lighting modes including downcast and flashing. It shines the brightest, producing up to 105 lm with a run time of 9.5 h.

The devices are suitable for a variety of head or helmet applications. Additional features include a battery level indicator, a cloth and a rubber strap.

Pelican Products Australia Pty Ltd

www.pelicanaustralia.com



Cleaning broom

The Detectaclean Total MDX Brushware cleaning broom from Hill Brush features metal detectable and X-ray materials and is suitable for a variety of applications.

It can be used in both wet and dry conditions as the metal-detectable and X-ray components have been independently tested to be effective when metal detection machines are correctly calibrated. The brush back and filaments are held in place by detectable Resin-Set DRS (Dual Retention System) technology, which inhibits bacterial growth and accumulation of contaminants via its antimicrobial properties, while still providing a strong retention system.

Autoclavable at 134°C, the product helps to avoid contamination for hygiene and workplace safety.

Detectaclean Pty Ltd

www.detectaclean.com.au



Radar-based reverse braking technology

VicRoads announced it will install radar-based reverse braking technology on its road maintenance fleet, which could become standard across industry.

VicRoads said the automated system is the first of its kind to be trialed in Australia and it is the first heavy fleet operator to install the technology.

According to WorkSafe Australia, between 2003 and 2012, 18 workers were killed in the workplace by incidents involving reversing trucks. Fatalities included six workers killed while undertaking loading activities, five while undertaking traffic control activities and three other workers who were hit by a truck while moving about on construction sites.

VicRoads recently completed a six-month trial of the radar-based technology, installed on a patrol truck and a tip truck.

When the system detects an object at the rear of the truck as it reverses, the airbrakes are automatically applied.

VicRoads will now progressively install the technology on its fleet.

The technology works alongside other safe systems already in operation and complements VicRoads's suite of workplace procedures.

Autonomous emergency braking systems are standard on new cars in Europe, Japan and the United States; however, the VicRoads trial is considered to be pioneering due to the retrofitted radar system applied to road maintenance vehicles that is activated when reversing.

VicRoads will share the trial data with transport groups and fleet managers and anticipates the technology will be widely used within the construction industry.

VicRoads

www.vicroads.vic.gov.au





HYDRATION IN HEAT: HOW DOES YOUR WORKPLACE MEASURE UP?

Laura Valic

Summer is fast approaching, and while many of us can escape Australia's rising temperatures in air-conditioned vehicles and offices, there is a susceptible portion of the workforce whose health is at risk from dehydration in hot environments.

Working in heat is a reality for many industries that operate under direct sunlight like construction or farming, or for workers who are exposed to radiant heat from hot machinery, often indoors, like boiler makers or factory workers. According to the State of the Climate 2014 report, Australian temperatures are projected to continue to increase with more extremely hot days and fewer extremely cool days.^[1] 2014 saw the warmest year on record for NSW and Victoria with particularly high temperatures in January (some places reaching close to 50°C).^[2] With increasingly warm days ahead, it is essential businesses have heat management strategies and appropriate equipment and supplies available to ensure the health and safety of their workers.

The importance of hydration

When the body is exposed to more heat than it can cope with, it can lead to heat stress and dehydration. Air temperature, humidity, clothing, the intensity of physical activity and the duration are all contributing factors. Working in intense heat can raise normal body temperature and in a worst-case scenario lead to heat stroke and possible death. Heat stress and dehydration may also impair thinking and reaction times, which can put workers at risk of injury by being susceptible to making errors, dropping tools or stumbling.

Signs a person is affected can range from muscle cramps, light-headedness to speech confusion or fainting. Those at greater risk include people who are overweight or physically unfit, not acclimatised to working in heat and are over 65. Workers who

suffer from heart disease, take certain medications or have alcohol in their system, are also at a higher risk.

Maintaining adequate hydration is one of the most important strategies to counteract the effects of heat stress.^[3] Speaking on the topic of hydration at a safety seminar at the Safety in Action conference in Melbourne last month, Sharon Groombridge, national training manager for Care Pharmaceuticals, said workers will experience increased sweating as the body attempts to cool itself and can lose as much as 1 L of sweat per hour. Since fluid and electrolytes (which help retain fluid) are lost in sweat, this can lead to dehydration.

"Oral hydration is hailed as the most important medical advance of the twentieth century," said Groombridge. "The fastest way to clinically rehydrate is through an oral hydration solution such as Hydralyte, which has one quarter of the glucose levels and four times the electrolytes of sports drinks."

Hydralyte, which is also safe for diabetics, can be consumed in ice blocks, ready-made drinks, and effervescent electrolyte tablets or powder sachets that dissolve in water. Groombridge said there has been a lot of negative noise around sugary drinks, and if workers are getting their energy requirements through their food, they don't need it in their drinks as well. Since sugary drinks like juice or soft drink do not restore lost electrolytes, they are less effective at rehydration and provide unnecessary kilojoules.

Dehydration not just a risk in hot climates

A 2013 study of underground miners* in temperate regions has shown that it's not just workers in typically hot and tropical re-



© Fotolia RAW/Dollar Photo Club

gions who are at risk of dehydration while at work.^[4] The study looked at two mines in south-eastern NSW with an average mean temperature of 23.1°C and found that dehydration in miners and being overweight were linked issues.


Hydration was measured by testing urine and results showed that 58% of miners arrived to work already dehydrated, with several workers showing signs of clinical dehydration both pre- and post-shift. The study stated that the consumption of water during a shift was unlikely to rehydrate an already dehydrated worker due to the influence of metabolic work load and sweat rates while working. It was also found that the miners with urine results indicating dehydration were more likely to be obese (42.9%) than workers who were adequately hydrated for their shift.

The risk of medical conditions like exercise asthma, fatal coronary heart disease, stroke or chronic renal disease have been shown to be reduced with good hydration. While workers in the study had access to water both above and below ground, it was also suggested that improved access to palatable drinking water and the removal of energy-dense, nutrient-poor drinks in vending machines (since shift workers can consume up to three servings of soft drink in a single shift) could assist in promoting water consumption and maintaining hydration — as well as aiding in improved food and drink choices. Neither mine had guidelines for hydration; however, for companies concerned about the long-term health and wellbeing of their employees, the issue of dehydration may need to be considered in their health and safety policies, along with the provision of low-sugar products to combat it.

Top tips for staying hydrated

According to WorkCover Queensland, workers won't feel thirsty until they have lost 1–2% of their body weight in fluid and should drink to keep pace with sweat losses (recommendations are to drink regularly between 600 mL and 1 L of water per hour). This is particularly important for ageing workers as the sensation of thirst decreases as you get older, increasing the risk of dehydration.

^[5] Care Pharmaceuticals says the aim is not to wait until you are dehydrated and treat it, but to minimise the chance of becoming dehydrated in the first place. Their top tips to avoid workplace dehydration include:

- 1. Starting the day hydrated:** Workers should aim to have their urine clear to straw colour before starting work, and for particularly hot days or jobs that require excessive exercise, this may mean hydrating the night before.
- 2. Recognising the signs of dehydration:** Dry mouth, headaches, thirst, fatigue, dizziness, lack of concentration or decreased or dark urine.
- 3. Allowing access to water and electrolytes:** Where possible, ensure workers have access to cool drinking water and an oral rehydration solution such as Hydralyte, when necessary.
- 4. Avoiding work in direct sunlight:** Where possible, arrange outdoor work early in the morning or late in the afternoon.
- 5. Being sun smart:** Wear light-coloured, loose clothing to permit good airflow, broad-brimmed hats, sunglasses with UV and glare protection ratings etc as sunburn stops your body from cooling itself down properly. 

**88 participants were voluntarily recruited; all participants were male, aged 18 years and older. Participants conducted diverse tasks in the mine with the majority requiring strenuous physical exertion.*

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Digital security solution helps mitigate business risks



Honeywell has added enhancements to its Digital Video Manager (DVM) with the release of DVM R600, designed to help organisations more efficiently manage their security system and mitigate business risks. The smart surveillance software has been taken up by top Australian and New Zealand facilities management firm Brookfield Global Integrated Solutions.

“Our surveillance system has always been robust, utilising hundreds of cameras throughout both our facilities to promote visitor safety and security,” said Tom Owen, operations manager for Brookfield Global Integrated Solutions, which manages the Melbourne Convention and Exhibition Centre.

“However, the IT infrastructure required large storage capacity and as many as 15 standalone PC servers. We have cut our costs significantly with DVM R600 by using the system’s single-server

virtual machine environment, and intelligent redundancy of storage, processing and memory.

“The new architecture has also helped lower life-cycle and maintenance costs.”

Honeywell claims dynamic recording enables the system to capture critical video under higher frame rates, while collecting less important footage at lower frame rates, trimming storage requirements and costs up to 40%.

The upgraded system also comes with improved mobile capabilities and voice command, as well as system access and usability to improve operator efficiency and reaction time. Security personnel now can access HD, full-frame-rate video on a mobile device, enabling continuous monitoring remotely. Operators can also control DVM using voice commands to manage multiple video feeds and request near-real-time system updates.

“Every second is important to an organisation when an incident occurs and security staff must take immediate action if there is a threat,” said John Rajchert, president of Honeywell Building Solutions.

“The latest update to DVM helps operators quickly identify and react to an issue to help mitigate the impact to safety and business continuity — no matter if they are in front of a central workstation or on the opposite side of a campus, connected with a smartphone.”

Other DVM upgrades focus on speeding data collection, enabling security operators to export footage from multiple camera feeds in unison to streamline incident response and workflow. This allows quick access to collect and archive forensic data in the event of an incident.

Honeywell Building Solutions
www.honeywell.com

NEW PRODUCTS

Fire detectors

Tyco Fire Protection Products has released the VIGILANT Generation 6 MX Addressable Fire Detectors. The range comprises the Heat Detector (850H), Photo Smoke Detector (850P) and Multi-sensor Smoke and Heat Detector (850PH).

With safety and reliability integral to their design, the detectors are equipped with a continuous receptive self-monitoring system, a short circuit line isolator and multifunction LED indicators that let the user know if one of the detectors is out of commission. Discrimination provided by Fastlogic algorithms minimises false alarms from common sources while multisensor algorithms seek to maximise detector performance in challenging environments.

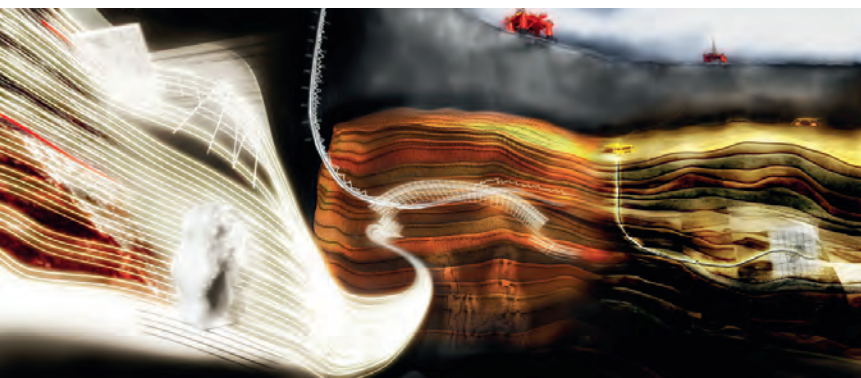
The built-in circuit line isolator works to improve fault tolerance enabling all detectors to continue to operate in the event of a short circuit fault on the addressable loop. This also eliminates the need for an external isolator.

The detector’s unit is also fitted with an advanced optical chamber that aims to deliver long service life while maintaining the correct level of sensitivity, and it is insect protected with an incorporated flyscreen.

To withstand challenging environmental conditions, the circuit boards resist moisture and include a fully coated thermistor to resist contamination, dust and dirt to reduce maintenance and service costs.

Tyco Fire Protection Products
www.tycosafetyproducts-anz.com





Reservoir modelling software

Emerson Process Management has launched the latest version of its reservoir modelling software, Roxar RMS 2013.1.

With enhanced structural modelling tools, the software acknowledges realistic uncertainties in the data and improves volumetric sensitivities helping modellers to build geological scenarios, investigate the full effects of structural uncertainty and maximise the value of their reservoir assets. The software is designed to give users the ability

to quantify uncertainty more effectively and increase confidence when making crucial decisions on where to drill, what production strategies to adopt and how to maximise recovery.

The product comes with tools such as structural modelling and 3D gridding, enabling users to build fault uncertainty models in full and investigate scenarios corresponding to the uncertainty in the input data. The software also features enhanced horizon uncertainty modelling, allowing users to create horizons and zones based on uncertainty data and information derived from well picks, velocities, seismic travel times and isochores. Uncertainty modelling has also been extended with parameters added such as the modelling of fault sealing effects and fractures.

The product also comes with a tool for adjusting the 3D grid to well picks and improved isochore modelling tools that give full quality control over isochore input data, as well as a predictive analytics tool for identifying sweet spots within unconventional fields.

RMS operates on Red Hat Enterprise Linux 64-bit versions 5 and 6 and on Windows 64-bit 7.

Emerson Process Management
www.emersonprocess.com.au

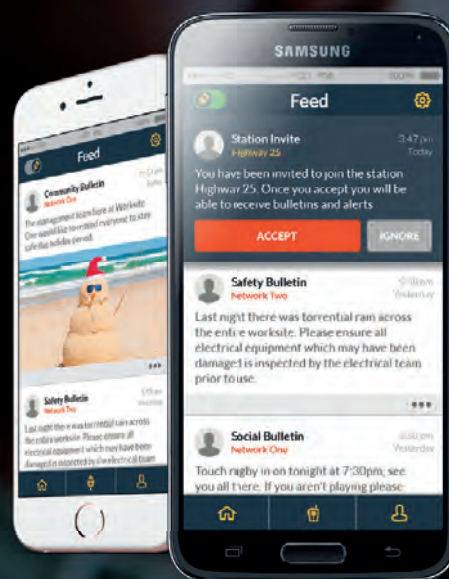
Cribber

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- > Multiple administrators per Company



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Safe lifting in WA



Images courtesy of Kennards Hire Lift & Shift

A 110 t transfer station was safely installed at a site in the north of Western Australia using a 300-tonne modular spreader beam.

The transfer station forms part of a conveyor system along the rail transit line where iron ore cars tip out for mineral inspection before being transported and loaded onto ships. The module was installed from a radius of 67 m using a Terex Demag CC8800 (1600 t) crawler crane.

The Lifting Company worked in conjunction with Kennards Hire Lift & Shift on the project.

With an overall length of 26 m, the modular spreader beam was assembled to 15 m, which allowed the module to be raised level in a single lift and installed in approximately two hours. Kennards said the flexibility of the modular spreader beam was a big advantage for the crane operator and installation crew due to the simplicity of configuring it to the optimum length.

According to the company, its versatility makes the beam suited to a range of lifting solutions and industries, including mining, oil and gas, as well as major civil construction and infrastructure developments and shipping ports. It comprises sections that vary from 500 mm up to 6 m, providing flexibility in configurations and variety of lengths compared to end caps with fixed beams.

The beam can span from 2–13 m (300 T), 13.5–22 m (250 T), 22.5–24 m (200 T) and 24.5 m up to 26 m (150 T) WLL with a sling angle of 60°.

Gary Ahern from The Lifting Company said they have established a long-term working relationship with Kennards Hire Lift & Shift.

"The Kennards Hire Lift & Shift team are extremely professional and helpful," said Ahern.

"Working cooperatively on projects allows us to draw on each other's expertise and offer customers the best in both service and equipment."

For more information on lifting and material handling solutions, visit www.liftandshift.com.au.

NEW PRODUCTS

RFID safety sensor

Utilising wear-free RFID technology, the RSS16 safety sensor by Schmersal is designed to overcome the limitations of electromechanical devices.

The product shares its dimensions with the AZ16 electromechanical safety switch. With the addition of Schmersal's RFID technology, it gives users the option of three levels of protection against defeat.

The basic version will accept any actuator of the RSS family. Users can teach an actuator to work with the one device, and teaching can be repeated any number of times with a delay time between teaching cycles. The third and highest level of tamper resistance will only accept the actuator presented at the very first power-up of the device.

Additional benefits include the possibility to approach the device from three sides, providing a high level of flexibility when integrating into the surrounding construction. The safety sensor can be used as a magnetic door stop and latch up to 60 N, allowing the designer to forego the use of a separate stop and latching device. Users can connect up to 31 devices in series monitored by a single safety module all while maintaining CAT4 or PLe.

The product can be used in existing AZ16 applications with the ability to offer increased tamper protection but still keep to a 1:1 replacement.

Control Logic Pty Ltd

www.control-logic.com.au



WHY 'FELT' LEADERSHIP IS INTEGRAL TO SAFETY IN A BUSINESS

Les Mapstone of DuPont

The Australian Centre for Workplace Leadership has identified that approximately 75% of employees believed Australian workplaces needed an increase in better leaders and management^[1].

Additionally, according to Ernst & Young, productivity across Australia's industries has dropped to 7.6 out of 10 (previously 7.7 earlier in 2014)^[2]. Workers have attributed the slump to poor management and lack of motivation/incentives.

Businesses that lack true leadership often fail to instil a safety culture, which usually impacts on the businesses' sustainability potential. If a company with a poor safety record is not "shut down" by the authorities, then they will either struggle to attract and retain staff, or customers will not buy from the company; safety being the cornerstone of sustainability.

The greatest challenge in creating a sustainable business is instilling what DuPont calls 'Felt Leadership', a unique way of being with employees and a model for leading them.

Such leaders focus on influencing their people to commit to thinking and behaving in ways that are consistent with what is important for the business and their personal safety. These leaders lead by example because they feel and believe in what they do.

Felt leadership is a critical element in achieving a zero incident workplace. Felt leadership engages workers so they come to work with the mindset of proactively preventing incidents rather than a mindset of just being safe.

In order to take the first step towards a workplace with zero incidents, leaders must believe in safety leadership as a privilege rather than just another responsibility. The goal is to create a level of intrinsic motivation and operational discipline where people choose to follow the rules because they want to rather than because they have to.

Felt leadership is the building block in constructing trust and real-world relationships among employees, customers, shareholders and communities. Felt leadership involves leadership that is:

- easily observable,
- makes a positive impression on those who see it,
- demonstrates personal commitment,
- pervades the organisation, and
- affects and involves all levels of employees and contractors.

While this may sound effective in theory, how do you actually change an organisation's ingrained attitudes and behaviours in practice?

Felt leadership depends on senior leaders regularly interacting and engaging with employees by means of observations, wide-ranging


conversations about processes and safety, and addressing everyday challenges of the business. It is important for leaders to regularly participate in leading safety activities that are easily observable to promote injury prevention.

Felt leaders successfully engage their people by being purposely visible in the workplace and being relentless with their time with employees. Good felt leaders make a positive impression on those they contact and maintain a strong self-safety focus at all times and demonstrate their personal commitment to incident-free workplaces.

It is important that leaders ensure their employees and contractors of all levels are engaged around the safety values of the organisation. An example could be an organisation that has recently had an incident and, in response, has decided to change one of its processes. An organisation lacking a strong safety culture might think it is adequate to take employees through the new process at a meeting and have them sign off on the new process.

An organisation that has robust safety values would inform employees and contractors that they are changing a procedure as a result of a safety incident and would take their employees through the new procedure face to face, either in small groups or one on one, rather than written communication alone. They would then measure employees' understanding of the change and buy in for the change.

Leadership which demonstrates, through actions, that safety, health and wellbeing of all employees are core values makes a cultural transformation possible. Resulting from this, the transformation will pervade the organisation and will be sustainable as it becomes part of the DNA of the company.

It's important for organisations to recognise that change resulting from felt leadership is a journey rather than a short-term transformation, often taking three to five years to take effect. In the long term, felt leadership will deliver a workforce that is engaged, empowered and committed to the organisation's values. 

DuPont Sustainable Solutions
www.sustainablesolutions.dupont.com

DuPont
www.dupont.com

[1] <http://newsroom.melbourne.edu/cwl-survey-results>

[2] <http://www.ey.com/AU/en/Services/Advisory/EY-productivity-pulse-wave-6-productivity-decreases>

Ebola crisis prompts innovative safety suit

A new protective suit with innovative features to help protect Ebola workers on the frontline is due to be released to the market in the first half of 2016 following the recently signed licence and collaboration agreements between John Hopkins University and DuPont.

The collaboration between the major research university and the international science and engineering company began in response to the humanitarian need identified by the US Agency for International Development (USAID) during the Ebola outbreak in West Africa last year.

So far the Ebola virus has infected more than 28,000 patients and killed over 11,000.

In December 2014, USAID selected the new Johns Hopkins prototype protective garment, made of a DuPont advanced material, as one of the first five projects to receive funding to address the crisis.

The prototype was developed by the Johns Hopkins Center for Bioengineering Innovation and Design (CBID), with input from global health partner Jhpiego. To reduce the risks associated with doffing, the design features a rear zipper and a 'cocoon-style' removal process. The DuPont garment may also include an integrated hood with a large clear visor.



"This unique collaboration brings together the biomedical ingenuity of Johns Hopkins, the global healthcare experience of Jhpiego and the strategic industrial innovations of DuPont to help save lives worldwide," said Youseph Yazdi, executive director of CBID.

"Although this project was triggered by the recent Ebola outbreak, we believe the improved protective suit's design will be impactful in future infectious disease outbreaks as well."

Jhpiego will field-test the prototype garment in Liberia, one of the three African countries hit hardest by the outbreak.

Leslie Mancuso, president and CEO of Jhpiego, said the garment will help ensure that frontline health workers can respond safely and with confidence to any new infectious disease outbreak.

"Hundreds of nurses, midwives and physicians selflessly responded to the Ebola outbreak and lost their lives trying to save others," said Mancuso.

"The response of Johns Hopkins, Jhpiego and DuPont to the humanitarian challenge offers a model of the ingenuity and dedication of the public and private sector to improve global health."

DuPont (Australia) Ltd
www.dupont.com.au

NEW PRODUCTS



Charity-supporting materials handling range

The Pacific Hoists Challenger charity-supporting range of materials handling products now includes the Drum Lifter, Manual Lifter Trolley and Electric Lifter Trolley.

The range is built to suit a variety of industrial, warehousing and manufacturing environments including work in smaller workshops, assembly lines, unloading skids and lifting heavy loads.

The manual and electric lifter trolleys are available in three different heights with a rated capacity of 400 kg. Both models are supplied with a removable work platform, adjustable fork tynes and protective guards to ensure user safety. The electric model comes with an onboard charger and electric control system for added efficiency.

The lightweight drum lifter is suited to international drum sizes with a push/pull motion handle for easy manoeuvring. It provides a solution for minimising injuries from the manual handling of drums.

The three new products join the current range of Challenger chain blocks, lever blocks and pallet trucks.

A donation from every purchase will be made to Pacific Hoists' charity partners as part of its long-term commitment to supporting those with cancer.

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www.pacifichoists.com.au

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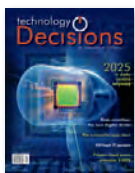


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Wall mount cable hanging bracket

The AdeptDirect Wall Mount Cable Hanging Bracket is designed for elevating cables, power leads and hoses out of the way at building sites, mines and construction areas.

The product minimises trip hazards by securing cables along walls and site sheds. The heavy-duty backing plate has two key holes for screws, allowing for rapid installation wherever a cable hanger bracket is required, and fast removal when the job is complete.

The large steel backing plate combines with the 90° frame to position the insulated skyhook to safely support up to eight power leads, cables and hoses. The 'prongs' or fingers of the skyhook prevent leads or cable from flicking out of the hanger bracket.

The Australian-made product has been welded to withstand years of hard use on building sites and workshops. The steel section of the bracket has a bright yellow powder-coat finish and the insulated skyhook is moulded from high-density polyethylene.

Adept Direct - Cable Rollers & Lead Stands
www.adeptdirect.com.au



Safety data sheets library

The SDS Network is a free online library of safety data sheets (SDS, previously known as MSDS) recently developed to assist business in compliance relating to the use, storage and transport of certain goods. SDS Network aims to meet the needs of industry by only having Australian complaint and up-to-date documents. The service offers users the ability to search, download, upload and request SDS.

SDS Network is designed to facilitate an online community where users are encouraged to participate in growing and developing a comprehensive database of SDS, which is free for all to use.

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RESOURCES

Safety in Design conference

The IDC Technologies Safety in Design conference is being held at the Mercure Hotel in Perth, Australia, from 18 to 19 November 2015. The conference has been created to discuss the issues involved in safety in design (SiD) and aims to help reduce the number of safety incidents through pre-emptive design. It will also cover hazard identification and risk assessment methods early in the design process to eliminate or minimise safety risks.



Eliminating hazards at the design stage is the smart way to operate and better than making changes later when the hazards become real risks in the workplace. Experienced speakers will focus on the principles of SiD to help designers think of ways to keep employees safer through well-thought-out design and will examine the critical issues involved in the management and planning of safety in design.

The keynote speaker is Frank Schrever, chairman SF 041 Standards Committee for Safety of Machinery AS 4024 Series, Machine Safety by Design.

Benefits of attending the event include:

- understand broad approaches to mapping risk to reliability requirements;
- review previous accidents relating to safety in design and their impact on the current industry;
- understand the value of 3D modelling in safety in design;
- learn how to eliminate hazardous areas through pre-emptive design;
- gain a full understanding of legal requirements and legislation regarding correct safe design practices;
- explore the role of human factor integration in design projects;
- learn the most common hazards to consider in the design phase;
- address the essential steps required to perform an effective risk assessment;
- learn how bowtie analyses can benefit and simplify the design phase;
- hear discussions on methods adopted to mitigate vibration-induced damage to structures;
- learn how to increase safety in the design phase of offshore oil and gas projects; and
- illustrate challenges and opportunities experienced by industry professionals through their involvement with HAZOPs.

For further information regarding the conference, please contact conference coordinator Joseph Madeley on joseph.madeley@idc-online.com.

Handbook for good work design

A new handbook to help businesses meet their obligations under the work health and safety laws, reduce worker injury rates, and improve their productivity and bottom line has been launched by Safe Work Australia (SWA).

The handbook 'Principles of Good Work Design' contains information about the 10 principles of good work design and how they can be applied to any workplace, business or industry.

SWA Chief Executive Officer Michelle Baxter said that well-designed, healthy and safe work allows workers to have more productive lives, which in turn drives business efficiency.

"Principles of Good Work Design shows businesses how to go about designing out hazards before a worker gets injured, which delivers tangible savings by avoiding the costs associated with incidents that result from poor work design practices," Baxter said.

"It is often easier and more cost-effective to address hazards and risks during the planning and design stage. This applies to the places we work in, the things we use at work, as well as to how we design organisational structures, roles and tasks."

The handbook is a 'living' electronic document that will be updated regularly with links to case studies and practical examples from businesses that have successfully applied the good work design principles.

"The handbook complements a range of existing resources available to businesses and work health and safety professionals," said Baxter.

"Failure to consider how work is designed can result in poor risk management and lost opportunities to innovate and improve the effectiveness and efficiency of work. Good work design can radically transform the workplace in ways that benefit the business, workers and clients."

The resource is available on the Safe Work Australia at www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/good-work-design.



The problem with unisex safety equipment



Imagine you're an electrician on a multimillion-dollar project. You've got 5 years' experience and you're highly competent. Despite this, you cringe every time you're tasked with a working-at-heights job. This fear isn't related to working in challenging environments but rather being forced to do so using potentially unsafe and uncomfortable unisex equipment.

According to retail giant American Apparel, unisex wear is: "... equally flattering and functional on men and women and that all unisex products are sized for men; women may prefer to order one size smaller". This definition won't come as a surprise to many — it's basically common sense. Keeping this in mind, is it safe to assume that women are disadvantaged with personal protective equipment (PPE) mostly designed and available in men's or unisex styles?

PPE and clothing are necessities, especially when working in high-risk environments such as in the construction, mining and transportation industries.

Correct education and PPE is essential to ensure workers feel safe and competent in order to complete tasks in a safe and timely manner. Women, it appears, seem to be at a disadvantage when it comes to organisations providing adequate-fitting PPE solutions.

Women face challenges finding their size in a variety of items, including fall-arrest harnesses, gloves and hard hats. We won't even begin to mention the issues faced finding basic items such as boots, cargo pants and overalls.

According to anthropometric studies, women typically have more flexibility in their hips, significantly slender hands and feet, and differentiating face shapes. Taking the above into consideration, employers must be sure to accommodate different body types and compositions. For instance, women look for three key features in falls arrest harnesses:

- Shoulder straps that are kept to the side.
- Front positioning loop and back/leg pads for better hip support.
- Stretchable webbing so there is no bunching, binding or kicking.

The unisex and one-size-fits-all model for PPE is not acceptable in many circumstances.

Unfortunately, women are still required to make do with men's or unisex products. Some women are hesitant to draw attention to themselves by speaking up and are putting their safety at risk.

With women's participation rates in non-traditional roles on the rise, now is the time for businesses to stand up for women's safety. It's imperative that an adequate selection of gender-appropriate equipment is available to accommodate different body compositions, which will ultimately result in best safety practices.

Kym Clark is the founder of She's Empowered. The company has consulted with inspiring women at the coalface in industry to design products that suit their needs. It stocks a range of high-vis maternity solutions and will soon be releasing its Alice cargo pant, which features a cut-to-fit leg lengthening system that prevents tripping hazards caused by incorrect hem lengths.



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