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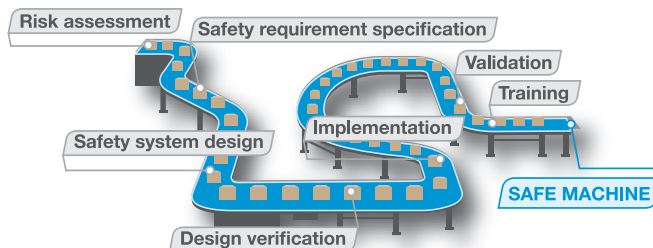
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CONTENTS

- 4 Flame-resistant fabrics: the 'inherent' vs 'treated' debate
- 12 How safe is your car park?
- 22 Trained to keep FIFO mine workers safe
- 25 Lifting safety awareness to new heights
- 31 Shining a light on safer emergency lighting
- 38 Worker safety a priority at warehouse facility
- 45 Who's responsible for contractors' safety?
- 49 Resources
- 50 Reducing the reality gap with mindful safety leadership



ON THE COVER



Airborne contaminants contribute to respiratory disease and exacerbate pre-existing conditions (such as asthma and chronic obstructive pulmonary disease), resulting in lower productivity and absenteeism. Therefore, an effective respiratory protection program is critical for the health of staff working in hazardous environments.

Developed by Australian company PAFtec, the CleanSpace Powered Respirator range has been a game changer for personal respiratory protection. The equipment provides all the convenience and ease of use of a negative pressure respirator with the assured protection of a PAPR. With no hoses or cables and weighing just 500, these P3 respirators are suitable for hazardous tasks requiring mobility and portability over long periods. CleanSpace Ultra is PAFtec's latest innovation in personal respiratory protection for hazardous environments requiring full face masks. It dramatically improves staff protection, comfort and cost management, and doesn't incorporate belt-mounted battery packs, hoses and the high maintenance associated with traditional PAPRs.

The asbestos-removal industry is leading the way in respiratory protection by making a paradigm shift away from the use of negative pressure masks to rapidly adopting high levels of protection in powered respirators. Using CleanSpace Ultra and Full Face Mask, asbestos contractors are reporting improved staff comfort and agility when working in tight spaces and performing high-exertion tasks.



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FLAME-RESISTANT FABRICS: THE 'INHERENT' VS 'TREATED' DEBATE

Scott Margolin, International Technical Director, Westex

In the protective clothing industry, there has been debate about the merits of two types of flame-resistant (FR) fabrics - 'inherent' and 'treated'. These two terms are commonly used to describe different approaches to producing the FR properties of a fibre. Unfortunately, much of what has been written about the distinctions between inherent and treated fabrics has been inaccurate, incomplete or misleading.

This article seeks to set the record straight by exploring:

- the unscientific origin of the terms 'inherent' and 'treated';
- the evolving meaning of these terms over time; and
- why 'proven' versus 'unproven' is a more useful basis for comparison.

Because it's the FR fabric that largely determines the level of protection offered by a protective garment (arc ratings and flash fire performance test results are based on fabric brand and weight), it is critical for safety managers to not only understand the real differences among fabrics, but also how these distinctions impact performance.

Marketing terminology

Safety decisions should be made based on facts - not stories and marketing terms.

First and foremost, it is important to understand that inherent and treated are marketing terms with no origin in textile science and with little or no consistency of application fibre to fibre, fabric to fabric or year to year. Sales literature frequently implies that one method is better than the other, and the marketing spin has been that the FR properties of treated fabrics wash or wear out, while those of inherent fabrics do not. Like virtually everything else in life, neither method is perfect and each has its pros and cons, but repetition over time has created impressions in the marketplace that are simply not borne out by the facts. The inherent fibres tend to be synthetics and most begin as naturally occurring flammable substances (petrochemicals), not fibres. Humans must intervene, using chemistry, to engineer the fibre and embed the flame-resistant properties within it.

Similarly, most treated products begin as naturally occurring flammable substances (usually cotton or other cellulose), so nature has already taken care of the fibre portion and humans get involved to engineer the FR. The word inherent

was not originally a textile or FR term. Its definition varies slightly from source to source, but the common thrust is 'by its very nature, built-in, implicit'. On the other hand, treated is usually defined as chemical engineering to impart properties not previously present. Nature provides very few FR fibres, the most well-known of which is asbestos, which is obviously not in common use in protective apparel today. Conversely, all flame-resistant fibres in common use today for industrial protective apparel are engineered by humans - using chemistry - to be flame resistant. What is important is not how the engineering was accomplished, but that it was accomplished correctly and consistently, so that a garment maintains its flame resistance regardless of how many times it is laundered. What should be critically important to the ultimate end user is that the garments are flame resistant for the life of the garment.

The FR protection shouldn't wash out, wear out or fall off, and it should be there every time the garment is used.

So what does inherent mean as applied to the FR fabric market?

Regardless of actual definition, the value cited by virtually everyone is that inherent FR garments won't wash out; that they are FR for life. However, inherency is not the only path to engineering life-of-the-garment flame resistance.

What does treated mean as applied to the FR clothing market?

To many, it means a fabric with topical and/or temporary FR properties. This may be true with some generic, unbranded, 88% cotton/12% nylon fabrics (sometimes referred to as 88/12 FR) and generic 100% cotton FR fabrics that have hit the market in the past five years.

However, Westex UltraSoft and Indura engineering technology results in a fabric that is guaranteed to be flame resistant for the life of the garment. This guarantee

has been proven in many independent labs and through tens of millions of garments, in service worldwide for more than 25 years. The FR portion of the fabric is a long-chain polymer engineered in situ and locked in the core of the cotton fibre, and the FR mechanism is solid-phase. These fabrics char instead of burning, just like most well-known inherent fabrics.

Fabric blends complicate naming

Most popular FR fabrics today are blends of different fibres, and this has created another whole level of misuse and misunderstanding.

Independent of the issues discussed above around definitions and individual fibre technologies, what other fibre classes should be allowed, and what blend levels should be necessary to call a fabric inherent? One or more major manufacturers are currently marketing each of the following examples as inherent:

- Should we call a blend of inherent and treated fibres inherent? If so, at what ratio of inherent to treated? Is 1% inherent enough, and, if not, what level is sufficient?
- What about a fabric that is about 15-20% inherent (by the original definition), about 40-50% of a fibre that used to be called treated but which has recently been re-labelled inherent, and about 30-40% non-FR natural fibres?
- What should we call a fabric in which half the blend is an FR fibre that was called treated for 20 years, but recently was re-labelled as inherent (keeping in mind that the other half of the fabric isn't inherent, isn't treated and isn't even flame resistant)? If it is half non-FR, how can it possibly be characterised as inherent?

The real distinction: proven vs unproven

At the end of the day, the only real measure of a flame-resistant fabric is whether its performance and protection are proven. This requires safety managers to look beyond marketing claims; some are made with little or no substantiation, while others are based on tests or standards that fall far short of real-world service life and laundering conditions. Proven, however, means different things to different people and, at present, there is no specific definition of how it applies to FR garments.

Here is what proven should mean:

It starts with repeated independent laboratory evaluation. However, it is critically important to understand that this is a



starting point, not an end point. Performance in the real world, over time, is absolutely essential to vetting the full range of FR fabric/garment performance.

There are a number of reasons for this:

- Standards are generally written to be inclusive, not exclusive, and, as such, provide de minimis parameters which most fabrics easily pass.
- Test samples are self-submitted and, once certified, never checked again, much less by random, third-party acquisition from commercially available stock. So, what is later manufactured in full commercial scale too often bears little or no resemblance to what was originally submitted for certification. As a result, testing done on market-sourced fabrics frequently records failure (usually FR or shrinkage, sometimes both) at far fewer laundering cycles than standards predict.
- The laundering tests in particular are minimal - they involve lower (often much lower) laundering cycles than service life, and are conducted under perfect conditions: water temperature, chemistry, detergent types and loads, garment loads, wash and dry times and temps, etc. But how representative is this of real-life laundering conditions? It's not, and, as a result, some fabrics that perform acceptably when new suffer major degradation of properties (especially shrinkage and FR) far more rapidly than standards predict. This holds true whether the test garments are pulled from actual use, or sourced new, but laundered under conditions more representative of the real world.


Given these facts, it's easy to see why proven performance, over time, in actual use is a vitally important factor when evaluating and specifying FR fabrics. So what should constitute proven performance? People ultimately vote with their wallets; that is, things that do not perform or are poor value will not often be repurchased. On the other hand, when many different large users across

different industries have purchased, worn and washed the garment for 2-4 years until replacement becomes necessary, and then repurchased the same product, a pattern of reliability begins to be established. Two full replacement cycles (requires selection of the same item for the third cycle) is the threshold, and the larger and more global the customer base that makes these decisions, the more reliable the market proof. Unlike the stock market, past performance of FR fabrics is an excellent predictor of future results.

Ensuring FR protection, comfort and value

The fabric properties most important to wearers of flame-resistant apparel are protection, comfort and overall value. Durability of these properties is critical; what ultimately matters most is that the apparel is flame resistant for the life of the garment and market proven. The inherent vs treated worldview is simply inaccurate and/or actively misleading - both on the fibre level and as applied to fabric blends. This has been reaffirmed recently as the market has been flooded by new, unproven FR fabrics being marketed as inherent and treated (many of which are actually inherent-treated blends). These fabrics may look good in the lab or a tradeshow booth, but simply do not perform in the real world.

The truth is that there are large differences among otherwise compliant FR fabrics, including those that - at first glance - appear quite similar. Because the fabric brand is the largest factor in determining these core values, effective protective clothing programs begin with the same first step: specifying FR fabric by name.

There have been too many failures, including FR durability, excessive shrinkage, poor comfort and more. The critical differentiator should be proven vs unproven, because lives are on the line. 

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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?

Microencapsulation is the process of surrounding or enveloping one substance within another substance on a very small scale, yielding capsules ranging from less than one micron to several hundred microns in size. Magnified many times the microcapsule used to transport the **AD-APT®** technology looks like a golf ball with every dimple on the ball being a heat-sensitive membrane. As the hand warms up, these membranes within the dimples are triggered allowing active cooling agents (essential oils) used within the **AD-APT®** technology to be released on your hands.

The active ingredients within our **AD-APT®** technology dissolve in the sweat or moisture on the hand surface. The dissolved substance forms a gel, which creates a small temporary 'plug' near the top of the sweat gland, significantly reducing the amount of sweat secreted to the skin surface of the hand. Whilst the **AD-APT®** technology cools the hand and reduces sweating it does not impact on the natural ability of the body to control its temperature i.e. thermoregulation.

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



Electrical insulated gloves

The Ansell Marigold Industrial Rubber Insulating Gloves (RIGS) are designed to protect the hands of people who work with exposed energised, de-energised or re-energised electrical circuits.

The live working gloves are shaped to reflect the hand at a natural rest position with non-splayed fingers and have a flared cuff to allow room for clothing and ventilation.

Addressing the need for workplace safety compliance, the product provides the wearer with

flexibility and dexterity of movement across all electrical applications.

The product is available in low voltage (Class 00 and 0) and high voltage (Class 2) in yellow, red and black at various lengths. The low voltage gloves allow for a maximum AC/DC of 500/750 V (Class 00) and 1000/1500 V (Class 0). The high voltage gloves allow for a maximum AC/DC of 17,000/25,500 V (Class 2).

The product meets US ASTM standards for tensile strength and stress, ultimate elongation, tension set, and tear and puncture resistance. The product also meets EN and US standards/regulations ASTM, NFPA, OSHA and CSA.

Ansell Healthcare
www.ansell.com.au



Handheld controllers

Jay Electronique has added the Beta 2 button and Beta 6 button control units to its IECEx range. They are approved for use in potentially explosive gas atmospheres classified zone 0, 1 and 2 or dust classified zones 20, 21 and 22.

The handheld controllers feature a backlit, anti-reflection LCD display able to indicate the battery charge level, the behaviour of the radio link, the name of the equipment being controlled remotely and feedback from the equipment such as weight of load, overload, limit switches, alarms or fault diagnostics. Navigation menus also allow users to configure the application, integrate a large number of functions or monitor a specific part of the equipment. Further customisation of logos and pictograms which appear on the screen is also available utilising the iDialog software supplied with each unit.

Safety is a key consideration of this range with the emergency stop function certified SIL 3 per EN 61508 or PLe per EN 13849, while the standard function buttons are certified to SIL 2 according to EN61508 or PLd according to EN13849. Other options are available to enhance the safety of those applications that require it, such as infrared start-up, action zone limitation or validation buttons. Access to the radio remote control and other functions can be limited to authorised operators by password.

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

Firmware for wireless gateway

The Emerson Process Management firmware version 4.5 streamlines the wireless network interface to help users improve operations and enhance safety.

Available for Emerson's Smart Wireless Gateways, the firmware will enable users to see and understand process information quickly, helping to make sound decisions and take needed action.

The version 4.5 software streamlines the wireless network interface, security set-up and field device configuration. It has a consistent look and feel and simplifies information presentation. Visual feedback and information filtering are built into the software to support fast navigation. NAMUR symbols and organised table views provide at-a-glance actionable information.

Firmware version 4.5 will also give users quick access to field instrument diagnostic data for continuous monitoring of device health and the wireless network.

Emerson Process Management
www.emersonprocess.com.au

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www.Trace.ME

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HOW SAFE IS YOUR CAR PARK?

Michael Reid, General Manager, Carpark Compliance Solutions

Car parks are often unassuming facilities, but they can be hazardous environments due to their high level of vehicle and pedestrian activity and must be managed with extreme care.

Owners of car park facilities are responsible for the safety of those who use their parking facilities and this issue was highlighted recently in a legal case involving the death of a man who accidentally reversed through a safety barrier in a hotel car park in Sydney. This incident highlighted the urgent need for car parks to undertake a safety audit to ensure their facility complies with current standards.

In this case, the hotel and council were both found to be negligent as the car park's perimeter railings used for edge protection failed to comply with Australian Standard AS1170.1. The court found that the concrete wheel stops had not been installed properly and the

metal perimeter railing failed to comply with Australian Standards, contributing to the man's death.

Engineers should keep such issues in mind as these types of incidents are not uncommon. A similar incident occurred two years ago at John Hunter Hospital in Newcastle and while the driver in this instance escaped serious injury, the accident has prompted the hospital to replace its perimeter edging with a load-bearing barrier that exceeds current Australian Standards to protect it from a repeat accident.

When designing car parks, or any car park infrastructure, engineers should consider the live load bearing of its perimeter



edging and ask the question, could the railing withstand a vehicle impact? The current Australian Standard dictates that a vehicle barrier should withstand a 30 kilonewton (kN) measure of force, which is equivalent to a 1500 kg vehicle (a mid-size sedan) travelling at eight kilometres (km) per hour.

Carpark Compliance Solutions believes this current Australian Standard is too light for today's modern family vehicles such as SUVs and doesn't reflect the actual car park traffic scenario where cars of all sizes are often travelling at a much greater speed within car park facilities. If one was to consider the consequences of a driver who accidentally hits the accelerator instead of the brake

and ploughs through a car park barrier at high speed, a barrier that only just complies with the current Australian Standards is unlikely to contain the vehicle.


In Britain, the standards for car park safety barriers are more stringent to reflect a more accurate representation of a car park vehicle speed, which is set at 150 kN, and designed to accommodate the impact of the average size sedan travelling at 20 km per hour. By using the common equation of "force equals mass times acceleration", there is reasonable cause to consider a review of the current standards.

The current Australian Standard is prescribed to meet a variety of different scenarios but at the rate of minimum impact force, and for any vehicle travelling at the usual speed, up to 20 km per hour, this may not be adequate to avert a similar car park disaster to the one that happened recently.

When building car parks, the overall cost and solutions that meet the current standards is a consideration, but more education around actual car park activity must be considered to protect public safety. As traffic flows are higher, the perimeter standards should also increase to reflect actual traffic flow.

Car parks can be unassuming structures, but nearly every hotel facility has an area set aside for parking. Undertaking a car park safety and compliance audit will help to identify whether safety upgrades are required and ensure the structure is aligned with current Australian Standards. Upgrades that may need addressing include replacing balustrades, new signage, line markings and concrete structural repairs.

Carpark Compliance Solutions offers the following advice for those responsible for managing a car park facility:

- Review your current inspection and maintenance procedures, and ensure those responsible are aware of the current Australian Standards and compliance requirements.
- Assess the entire facility, including the exterior perimeter, observing and noting areas of risk. For example, check that perimeter balustrades and vehicle barriers are in good condition with no signs of wear or rust.
- Review pedestrian safety guardrails along staircases and walkways between levels, and review the need for anti-climbing barriers. This is particularly important to ensure the safety of children.
- Identify any potential blind spots when entering and exiting, and when driving around the facility. Consider whether high-impact end ramp barriers and safety guardrails may need upgrading.
- Check the overall facility has adequate signage, lighting and ventilation, and that the vehicle driveways line marks are clearly visible. 

Carpark Compliance Solutions manufactures and distributes a range of fully engineered and tested vehicle, pedestrian and industrial safety barrier systems that meet or exceed Australian Standard AS1170.1.

Carpark Compliance Solutions
www.carparkcs.com.au

Improved fire detection with ultraviolet light sensor

Researchers at the University of Surrey's Advanced Technology Institute manipulated zinc oxide, producing nanowires from this readily available material to create an ultraviolet light detector that is claimed to be 10,000 times more sensitive to UV light than a traditional zinc oxide detector.

Currently, photoelectric smoke sensors detect larger smoke particles found in dense smoke, but are not as sensitive to small particles of smoke from rapidly burning fires.

Researchers believe that this new material could increase sensitivity and allow the sensor to detect distinct particles emitted at the early stages of fires, paving the way for specialist sensors that can be deployed in a number of applications.

"UV light detectors made from zinc oxide have been used widely for some time, but we have taken the material a step further to massively increase its performance. Essentially, we transformed zinc oxide from a flat film to a structure with bristle-like nanowires,

increasing surface area and therefore increasing sensitivity and reaction speed," said Professor Ravi Silva, co-author of the study and head of the Advanced Technology Institute.



The team predict that the applications for this material could be far reaching. From fire and gas detection to air pollution monitoring, they believe the sensor could also be incorporated into personal electronic devices, such as phones and tablets, to increase speed, with a response time 1000 times faster than traditional zinc oxide detectors.

"This is a great example of a bespoke, designer nanomaterial that is adaptable to personal needs, yet still

affordable. Due to the way in which this material is manufactured, it is ideally suited for use in future flexible electronics - a hugely exciting area," added Professor Silva.

University of Surrey's Advanced Technology Institute
www.surrey.ac.uk/ati

NEW PRODUCTS



Peelable anti-slip flooring

3M has launched its Safety-Walk Anti-slip Peelable Coating 3500, which is claimed to be the first peelable floor coating to meet wet slip resistance standards with minimal reduction to floor gloss and clarity.

Developed by 3M Australia's Commercial Solutions Division and patented globally, the water-based coating for vinyl, ceramic, terrazzo and other hard floor surfaces will allow contract cleaners and facility managers to improve floor safety in high-risk wet slip spaces such as entranceways, service corridors and bathroom wash basin areas.

The coating's anti-slip properties are achieved using bead technology based on micronised organic polymer spheres, which create a non-abrasive

micro-textured surface with good abrasion resistance, gloss control and aesthetics.

The peelable coating is easy to apply. When it needs to be replaced, it simply peels off and the floor is instantly available to re-coat. The coating has no harmful odour and conforms to grout lines with minimal change to floor gloss and clarity. It is also easy to clean, patch repairable and does not require water in application or removal.

3M Australia Pty Ltd
3M.com/au/facilities

Infrared cameras

The Fluke TiX560 and TiX520 infrared cameras feature a 180° articulating lens and a large 14.5 cm responsive LCD touchscreen.

The devices allow thermographers to navigate over, under and around objects to preview and capture images while in-field, with the option to also edit images directly on the camera, useful for predictive maintenance, R&D, oil and gas and utility applications where flexibility and higher resolution are essential.

The cameras feature a SuperResolution mode to boost the resolution of images by four times as well as LaserSharp Auto Focus, which uses a built-in laser distance meter to pinpoint the target and then calculate and display the distance for sharper focus.

Onboard advanced analytics also lets users adjust or enhance images on the camera without additional software.

Fluke Australia Pty Ltd
www.fluke.com.au



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Self-retracting lifeline range

The Capital Safety DBI-Sala Sealed-Blok range of self-retracting lifelines (SRLs) is designed to be suitable for harsh environments. The range includes Fast-Line field replaceable lifelines on most models, an integral carry handle that doubles as a secondary fall arrest rated anchorage point, an RSQ dual-mode rescue operation model and retrieval winch models.

The field replaceable lifeline provides end users with the option of replacing the lifeline in the field rather than sending it to an authorised service centre, reducing equipment downtime and lowering the cost of ownership. The design does not allow the SRL to operate if the cable is installed incorrectly, providing users with simple verification of proper assembly.

The SRL is available in retrieval winch models for raising and lowering personnel or materials. The SRL can be quickly converted to and from retrieval mode for fast and efficient operation. The input crank handle has a primary brake that will prevent movement of the load on release of the handle. An optional bracket makes attachment of the SRL to tripods and davits quick and easy.

The RSQ model allows the user to choose between automatic rescue and fall arrest modes prior to use. If a fall occurs while the device is in automatic rescue mode, the SRL will arrest the fall and then automatically lower the worker safely to the ground or next level. In fall arrest mode, the SRL will arrest the fall and allow for an assisted rescue to take place. This two-in-one operation provides worksite versatility and optimisation for each fall hazard.

Capital Safety Group (Australia)
www.capitalsafety.com

Powered air-purifying respirator

The Sundström PAPR (powered air-purifying respirator) has had a number of significant improvements made to its exterior design and performance.

The fan unit now delivers 240 L of air/min in its high-power mode, which means users can choose air flows of 175 or 240 L/min. The higher setting can be used to satisfy breathing requirements during heavier work and can also be applied for effective demisting of the visor, which is available in one of nine head-top models.

Another design feature is a new-look panel that is clear, easy to read and displays information such as flow rate, battery charge, spent particle filters, drop in air flow and other alerts that may require the attention of the user.

The product recently received an Ingress Protection rating of IP67 that certifies the assembled unit is completely dust-tight and also resistant to immersion in water to a depth of 1 m for 30 min.

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



Remote industrial control system

Sixnet rugged RTUs provide a simple, yet powerful means to reliably monitor and control remote sites around the clock in harsh environments.

The RTUs are configured by using Sixnet's windows-based tool kit and offer the programming flexibility of either C or ISaGRAF Open programming software, which encompasses the following IEC61131-3 languages: sequential function chart, ladder diagram, structured text, instruction list, function block diagram and flow chart.

With a Linux operating platform and open protocols such as Modbus, DNP3 and SNMP, the RTU provides the user with the flexibility to interface to a range of devices, and with an operating temperature range of -40 to 70°C, ensures reliability in harsh environments. The RTUs can also be supplied from a 10 to 30 VDC supply, making them suitable for use in battery-powered systems.

The I/O capacity of the RTU can be expanded by adding Sixnet EtherTRAK-2 or third-party I/O modules, which can be interfaced to the RTU either serially or via ethernet.

The RTU can also be interfaced to a radio system or to other technologies, such as Sixnet's Industrial Cellular routers, making them suitable for installation on either existing or new networks.

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

HyFlex®

REDEFINING
CUT PROTECTION
INNOVATION



Next-generation Ansell INTERCEPT Technology™ integrates proprietary, cut-resistant engineered fibers in soft blended yarns that provide the ultimate in comfort, performance and protection. The technology is featured in a range of new HyFlex® cut resistant gloves including innovative ultra light-weight styles..



Learn more/request a sample:
ppe.ansell.com.au/intercept

Ansell

Bega Cheese prioritises safety with assisted handling equipment



Picture 1.



Picture 2.



Picture 3.



Picture 4.



Picture 5.

Located on the South Coast of NSW amongst idyllic holiday locations, Bega Cheese has grown to be a \$1 billion turnover company, manufacturing a range of cheeses to suit a variety of palates: from cream cheese, which is highly sought after in Asia, through to its gold medal-winning 'Strong and Bity Vintage Cheddar'.

Darryl Flaherty, production manager - process improvement at Bega Cheese, says that safety is paramount in their manufacturing plant, and is considered as 'caring for mates'.

"Bega Cheese also realise that accident downtime is to be avoided and have always been prepared to outlay investment to prevent potential accident situations, which has an immediate return on investment," said Flaherty.

Such an investment has been the utilisation of Tawi vacuum-assisted lifting systems and Protéma hoists from Kockums Bulk Systems.

Three specific handling applications of this equipment are detailed below:

1. Use of the Protéma trolley to enable pick or place of a roll of labels: see picture 1.

This trolley system means there is no need for rollout racking to be installed. With the Protéma trolley rolled under the bottom shelf, the core gripper is able to reach the rear rolls. It is then inserted and grips instantly by touching the control lever. The roll is then lifted by the mast attachment, using the hand control, and the trolley enables moving it to a packaging machine.

2. A Kockums core gripper attached to a hoist is used to reposition another sized roll: see See picture 2.

The core gripper is introduced into the core, and at the touch of the lever an attachment is made, and the roll is then lifted and relocated: see picture 3.

At the stage of release, the core gripper is rotated through 90°, which allows the roll to be placed on the shelf, and the core gripper extracted: see picture 4.

3. Tawi vacuum operated Vacu-easylifts are used to pick a pair of boxes simultaneously for de-palletising, and then positioning them onto a conveyor: see picture 5.

Kockums Bulk Systems
www.kockumsbulk.com.au

NEW PRODUCTS

Single-use gloves

Ansell has introduced the Microflex single-use gloves to the Australian market and will progressively unfold six distinct styles from its range of disposable hand protection products.

Designed to enhance safety and comfort for workers from the life sciences, automotive and manufacturing industries, the gloves are built to meet specific user needs based upon task, application and work environment.

The range includes: Microflex 93-853 High Risk Disposable Nitrile Gloves; 93-856 High Visibility Nitrile Gloves; 93-843 Durable, Heavy-Duty Coverage Nitrile Disposable Gloves; 93-852 Distinct Black Disposable Nitrile Gloves; 73-847 Wet Grip & Ergonomic Certified Disposable Neoprene Gloves; and 93-833 Certified Ergonomic Nitrile Disposable Gloves - claimed to be the first disposable glove of its kind to be certified ergonomic by the United States Ergonomic Association.

Ansell Healthcare
www.ansell.com.au





Plastic cribbing system

The Dura Crib and Dura Stat recycled plastic cribbing system is engineered to provide good performance, optimum safety and durability when stabilising heavy loads.

The lightweight, splinter-free, non-absorbent and environmentally sustainable ranges were developed to replace older, weaker, unreliable wooden cribbing.

The systems have been proven under some of the toughest safety regimes in the US. Applications include industries such

as construction and building, rescue and recovery, mining and resources, food processing and materials handling, industrial maintenance and safety, road and rail transport, ports and shipping.

Benefits of the Dura Crib plastic cribbing and blocking systems include: 100% recycled plastic construction for optimum durability; a typical strength of 30.6 to 60.8 kg/cm² (3.0 to 6.0 MPa) at 25°C; resistant to gas, oil, chemicals and organic substances such as blood; and laboratory tested.

Available in black and high-vis yellow, the system is suitable for both active cribbing, where a person is working nearby, and for passive cribbing, where cribbing is used to keep material off the ground for storage or to allow a forklift to operate.

Unlike wood alternatives, these systems are guaranteed against splitting, rot, fluid absorption, termites and mould.

Cribbing and Matting Co Pty Ltd


www.cribbandmatco.com.au




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Logistics software

Emerson Process Management's Syncade Suite manufacturing execution system now provides terminal managers with increased security tools and improved control of material movements and inventory. Version 4.9 of the Syncade Logistics module allows operators to effectively manage the storage and distribution of materials transported by railcars, trucks, ships, barges and pipelines.

To safeguard material and operate efficiently, terminal managers need visibility to the status and stock ownership of their tanks. The module enables operators to see both source and destination tank values to verify that moved quantity is accurately and safely

stored and delivered. It also facilitates tighter control of inline blending, tank swing changeovers and accounting at the line segment level for precise stock allocation.

The module's material tracking and automatic generation of bill of lading and other required documents makes it easier to provide customers and regulatory agencies with clear documentation of the materials during transit and storage.

The module helps ensure the security of a terminal by controlling access to the physical facility and materials and by capturing verification of railcars and trucks via security cards, biometric controls or RFID tags. This transactional information is archived and can be quickly retrieved for review or analysis.

Emerson Process Management

www.emersonprocess.com.au

Accurate drug testing where you need it most

We know that both speed and accuracy in drug and alcohol testing is vital to your business.

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LaneWorkSafe
Worksafe - Workwell

Heavy-duty dry vacuum

The Exair Heavy Duty Dry Vac is a rugged, industrial vacuum cleaner engineered to vacuum high volumes of dry materials.

Designed for the clean-up of abrasive materials such as steel shot, garnet, metal chips and sand, the vacuum can also be used for general-purpose applications.

The device is powered by compressed air and attaches to a 205 L open-top drum. It operates at 82 dBA ensuring it is quiet to use, while surrounding air is kept clean by the filter bag that traps particles when vacuuming dusty materials.

Longevity in the product and low maintenance are assured with no motors or impellers to clog or wear out. The product features a lever lock drum lid, shutoff valve and pressure gauge.

Other features include: a re-usable filter bag; 3 m polyethylene static-resistant hose (38 mm ID); hose hanger; 6.1 m compressed air hose with swivel fittings; and a heavy-duty aluminium chip wand.

The product is covered by a five-year warranty and is CE certified, meeting EU safety, health and environmental standards.

Compressed Air Australia Pty Ltd

www.caasafety.com.au



Barrel light tower

The Nepean NightOwl Barrel Light is a low-glare diffused light tower designed to illuminate a worksite while diminishing glare to help improve productivity and safety.

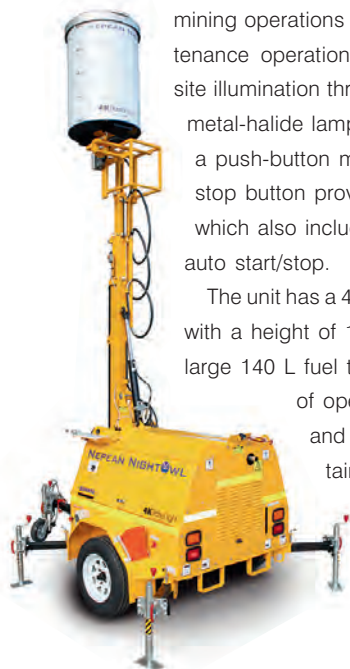
Useful for work environments such as roadworks, mining operations and general industrial and maintenance operations, the light tower offers a 360° site illumination through 4000 W of power from four metal-halide lamps. The product is operated with a push-button mast and features an emergency stop button providing additional operator safety, which also includes an optional 7-day timer with auto start/stop.

The unit has a 4-stage, telescopic hydraulic mast with a height of 10 m when fully extended and a large 140 L fuel tank, which provides about 80 h of operation. For lifting, safe handling and transportation, the unit also contains four lifting eyes, four tie-down points and two forklift pockets with a retractable drawbar for sideways loading onto flatbed trucks. Manual outriggers are also fitted as standard to provide additional set-up stability.

With a hard polycarbonate light diffuser to subdue glare, the unit allows workers to complete tasks without the brightness of lights hampering their sight or job at hand, ensuring it is also a safe option for use in high traffic environments.

Nepean Transport

www.nepean.com



Industrial breathalyser

The Andatech AlcoSense Precision+ industrial breathalyser is designed to provide an efficient and reliable method for on-site alcohol breath testing. It is certified to Australian Standard AS3547 and uses an electrochemical fuel cell to measure the concentration of alcohol in the exhaled human breath. If alcohol is present, a corresponding voltage

is generated from the fuel cell, proportionate to the alcohol content of the sample provided.

A choice of two modes for different testing is available: direct and passive modes. In passive mode (fast testing) no mouthpiece is required: workers can simply speak or breathe into the mouthpiece slot to get an 'Alcohol Detected' or 'No Alcohol' reading. In direct mode, users attach a mouthpiece to the breathalyser and can obtain a highly accurate three-decimal-place readout.

With a large 2.4" TFT colour screen and clear on-screen instructions, the industrial breathalyser is suitable for alcohol breath testing in applications such as law enforcement, OHS, and mining, rail and transport industries that may blanket test all employees.

Andatech also offers a calibration management service and breathalyser training to suit both small and large workplaces.

Andatech Breathalysers Pty Ltd

www.andatech.com.au

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EMONA



TRAINED TO KEEP FIFO MINE WORKERS SAFE

From drug and alcohol problems to fatigue-related injuries, from mental health concerns to STIs, the issues reported as affecting fly-in, fly-out (FIFO) and drive-in, drive-out (DIDO) workers in the resources industries are numerous and complex.

While the perks of a high-paying job have lured in workers from the cities, the realities of life on the ground in remote areas have proven to be extremely challenging for some employees.

The House of Representatives' Standing Committee on Regional Australia released a report in 2013 after looking into the use of FIFO and DIDO workforce practices in regional Australia. Throughout the inquiry, the committee heard frequent claims about the health impacts of FIFO work, many found to be directly linked to the social isolation of the FIFO experience.

The committee found that a common concern for FIFO workers was an excessive consumption of alcohol and other substances. This has prompted many mine sites to implement drug and alcohol testing programs to ensure the safety of the site is maintained.

Case study: Training for in-house drug and alcohol testing procedures

Located at a remote site in the Northern Territory, OM (Manganese) Ltd has recently made improvements to its in-house drug

and alcohol testing regime for FIFO workers returning from their leave breaks. In order to ensure all its staff were adequately and consistently trained in the correct drug and alcohol testing in-house procedures and that an unimpeachable chain of custody process was maintained, OM (Manganese) Health, Safety, Environment and Community Manager Paul McHugh called on the expertise of Adept Training.

McHugh points out that while it is a concern that personnel might return to site under the influence, this was an unusual occurrence. He said the rationale for completing the course was to ensure that proper procedures were employed with respect to collecting and sending samples away for confirmatory testing, so that any disciplinary action for non-negative results would be fair.

Adept Training Business Manager Ros Christopoulos has worked in the area of drug and alcohol testing over many years, both as a healthcare worker and an on-site tester. She was able to travel to the site to provide the training requirements requested by McHugh. This not only provided a clear cost saving in terms



© Adept Training



Ros Christopoulos, Business Manager at Adept Training.

The course provided by Adept Training has been developed in consultation with industry and meets the criteria of the Australian Standards for urinary drug screening and oral drug screening. A nationally accredited unit of competency has been customised to ensure the participant meets the standards for an 'accredited collector'. This course is contextualised for the collection of non-blood specimens including saliva, urine and breathalyser to the Australian Standards.

It was important to provide the whole team with the competencies to carry out the testing within the Australian standards, as this is a requirement for conducting on-site testing, said Christopoulos.

"By having in-house testing, the site can ensure employees are tested when they fly back in to start their next roster," she said.


Christopoulos conducted a half-day course for the team at the site, which was designed to train them to the Australian Standard AS/NZS4308:2008 for the collection of urine or AS/NZS4760:2006 for the collection of oral fluids or alcohol breathalyser.

"The training also provided the correct methodology for collecting a breath specimen for BAC testing, which was also useful to correct some aspects of our procedure," said McHugh.

McHugh said the procedure in place prior to the training required the donor of any non-negative results, determined using one of the sample collection cups, being removed from site. The donor was then required to provide a sample in person at an off-site location where follow-up confirmatory testing could be conducted.

"Ensuring that we were able to collect samples in accordance with Australian Standards and maintain chain-of-custody paperwork has meant that we are able to review our procedure to include provision for an employee or contractor to remain on-site while the sample is dispatched for confirmatory testing," said McHugh.

"This has resulted in significant cost savings - not only in terms of the cost of sample collection by a third party, but also in the cost of transporting that person off-site, potential accommodation costs and loss of time on the job.

"The workforce is very receptive to the testing in general and the changes in procedure have meant less downtime for any personnel providing a non-negative sample as a result of declared medication or sample-cup error," concluded McHugh. 

Adept Training
www.adepttraining.com.au

of travel expenses for the mine site, it also allowed the training to be customised and conducted in a real environment.

During the training, Christopoulos was able to address all the issues associated with implementing an in-house drug and alcohol testing procedure for FIFO workers. "The mine staff are working in a roster situation where they fly in for a number of weeks at a time and then travel back home for a week or two, depending on the roster they are working," said Christopoulos.

"The mine site needed to be able to test all workers returning to site before they entered the site in order to meet its duty of care for safety on the site. We were able to set up a solution for the mine site and train the staff to ensure the breath testing being conducted as employees arrive back on site was being carried out in a confidential and private environment."

McHugh said: "We undertook the training to ensure we had a good understanding of the correct sample collection methodology with respect to maintaining privacy, relevant Australian Standards and correct chain of custody of samples dispatched for laboratory analysis."

Harness for heavy cylinders at coal terminal

Port Kembla Coal Terminal has a strict fire safety protocol in place, which requires up to nine heavy cylinders, each weighing 121 kg, to be regularly lifted from ground level to a height of 20 m for ongoing maintenance.

These gas cylinders are critical components of the fire safety system installed at Port Kembla, which includes 28 fire panels and more than 100 Inergen cylinders located in switch rooms throughout the terminal.

Drawing on the expertise of Tyco Integrated Fire & Security, a specialised 'Inergen Cylinder Lifting Harness' was designed for the safe lifting of the heavy cylinders with the use of a crane.

"Developing the new safety system was not a straightforward process," said Tyco Fire Alarm Leading Hand Trent Green.

"It took three months of brainstorming, sketching, consulting and locating a suitable manufacturer before a prototype could be produced.

"It then took extensive testing and trials, with a number of improvements and modifications, before the harness could be manufactured and put into use."

The finished product proved a success with the harness improving workplace safety at the coal site. The Tyco team was formally recognised by Port Kembla Coal for its creative safety solution.



The harness has since taken the interest of other industries that are interested in having the product adapted to suit their heavy lifting requirements. There are now three harnesses designed to lift CO₂ cylinders, and two different-sized harnesses to lift cylinders onto ships with low ceilings.

Tyco Fire & Security
www.tycofireandsecurity.com.au

NEW PRODUCTS



GPS/GPRS track-and-trace module

KCS BV has extended its successful TraceME product line with a module targeted for worldwide mobility in the Internet of Things era.

The latest development of the TraceME GPS/GPRS track-and-trace module will combine the RF location-based positioning solution with the LoRa technology, enabling long-range, battery-friendly communication in a wide variety of M2M applications. Supporting GPRS/SMS and optional 3G, Wi-Fi, Bluetooth LE, ANT/ANT+ and iBeacon provides easy integration with existing wireless networks and mobile apps.

KCS Trade PTY Limited
www.trace.me

High-visibility polo

The JB's wear Hi Vis Traditional non-cuff polo is available in a wide range of hi-vis colours, including the latest colour combinations of lime/aqua, lime/black, lime/navy, orange/black, orange/charcoal and many more.

Designed for durability, the shirt is made from 100% polyester in a 160 gsm micro mesh fabric. It is easy to maintain as the Dri moisture-wicking fabric is quick drying. The fabric is also designed to keep the wearer cool and dry.

Other features include a reinforced chest pocket with pen insert and straight hem with side splits.

The shirt complies with Standard AS/NZS 4399:1996 for UPF protection (UPF 50+) and standards AS/NZS 1906.4:2010 and AS/NZS 4602.1:2011 day only.

JB's wear
www.jbsewear.com.au





LIFTING SAFETY AWARENESS TO NEW HEIGHTS

With diverse work environments comes a multitude of different issues that can affect workers and their safety on the job. Recognising this, and with the aim of decreasing workplace incidents, Crown Equipment has focused on developing courses and initiatives that make its safety messages personal and relevant.

Over the last four years, Crown Equipment has developed safety courses and initiatives that have dramatically reduced the incidents of injury in all areas of its operations. One main measurement of this is that Crown's Medical Treatment Injury (MTI) rate has been reduced by 60% in the last four years. Another measurement of safety success is that Crown's current lost time injury frequency rate (LTIFR) figure stands at just 0.6 injuries per million hours worked.

Achieving these results has involved programs and initiatives that work across all staff situations, coupled with other activities that focus on issues relating to specific sections of the workforce. Overseeing these Crown programs is Anthony Keating, national manager safety, risk, environment and quality.

"Engaging with staff on safety issues is not a one-size-fits-all equation. It requires making the message personal and making it relevant, so our approach over the last four years has been multifaceted," said Keating.

In 2014, the Crown team undertook a government-structured online health check with specialists from NSW Health. This program was run across all of the company's facilities throughout Australia and gained a massive response with hundreds of employees completing the program.

"National initiatives such as the online health check run by NSW Health are great for companies such as Crown, which have

people not just in the major capital cities but regional centres right around the country. These programs extend the individual's engagement by focusing on general health and wellbeing rather than just workplace safety. For us, a healthy workforce is a more productive and more satisfied workforce," said Keating.

Crown promoted the online health check by emailing all employees with a fact sheet about the program and the log-in details to the government website. For Sydney employees without access to a computer, Crown arranged for medical practitioners from NSW Health to come to Crown's head office and explain the health check, as well as assist employees to complete the health check on paper.

Most recently, Crown ran its annual Safety Week program. Each year the company looks at a particular segment of the workforce and engages with them to think more closely about safety in their specific work environment. To broaden the appeal of the Safety Week program, Crown also runs a Safety Week drawing competition, where children of employees are invited to submit drawings about safety at work, with the best 12 used as artwork for the next year's Crown Safety Calendar.

"When we introduced Crown Safety Week for the first time in 2011, we focused on one area of improvement, which was reporting all safety hazards. Since then we have kept the same strategy, by focusing on one area of improvement, and in 2012



ENGAGING WITH STAFF ON SAFETY ISSUES IS NOT A ONE-SIZE-FITS-ALL EQUATION. IT REQUIRES MAKING THE MESSAGE PERSONAL AND MAKING IT RELEVANT.

we introduced the Cardinal Safety Rules and last year we focused on hand safety,” said Keating.

As part of its latest Safety Week, the focus was on manual handling with safety messages conveyed via daily emails to over 500 staff. This was supported by the release of e-learning training programs on manual handling to help Crown employees understand the risks and hazards associated with the tasks they perform.

Each day’s email included a safety quiz with daily prizes awarded for the best answers to the questions.

“We received more than 200 quiz responses over the week, which indicated that we were engaging very strongly and meaningfully with our employees on such an important issue,” said Keating.

Crown is convinced that safety messages are getting through to employees and that the employees are putting a focus on safety, because for the fourth year in a row there have been no MTI or LTI incidents during Safety Week.

According to Greg Simmonds, managing director, Australia, safety is a key driver of productivity.

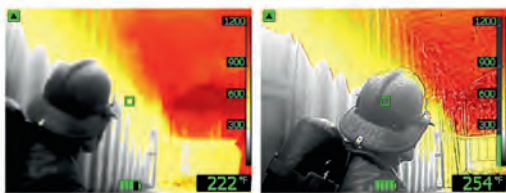


“Companies invest thousands of dollars in making sure their equipment is well maintained, well utilised and operated appropriately. They do this to optimise equipment uptime, maximise equipment life and increase overall productivity. Yet too few companies apply this same principle, to the same extent, to their employees. At Crown, we know that looking after employees and assisting them in looking after themselves and each other is a winning approach,” said Simmonds.

Crown Equipment Pty Ltd
www.crown.com

NEW PRODUCTS

Thermal imaging firefighting camera



The FLIR K55 has been added to the FLIR K-Series suite of thermal imaging firefighting cameras.

The camera is designed to operate in tough operating conditions, built

to withstand a 2 m drop onto a concrete surface, water resistant (IP67) and fully operational up to +260°C.

The product incorporates FLIR’s Flexible Scene Enhancement (FSX) technology, designed to produce sharp thermal imagery and allow firefighters to see clearly in smoke-filled environments. The camera also displays 320 x 240 pixel thermal images on a 10 cm LCD screen, enabling users to navigate safely and make accurate decisions when attacking fires and searching for victims.

The product features onboard video recording with storage for up to 200 thermal JPEGs, which can be reviewed from the camera’s archive or exported via USB. The product can also be operated while wearing heavy gloves with its three-button user interface.

FLIR Systems Australia Pty Ltd
www.flir.com.au

Mine-site light bar

With an IP66 rating, the ACOT500 Assassin mine site light bar has been specifically developed to handle the harsh terrain and conditions found on mine sites, including dust, rain, fog, night and hot days.

Vehicles working in the mining and emergency industry need to be extremely visible yet manoeuvrable, so the light bar has a low-profile design. It is aerodynamically designed to reduce airflow resistance and drag on the vehicle when travelling at high speeds. Its 180° vertical and 360° horizontal light output provides good visibility.

Compared to strobe and rotating lights, the LED bar has a low-current draw to preserve the life of the vehicle’s battery. It uses high-quality LEDs and the polycarbonate lens prevents fading of the LEDs and the lens colour.

Available in a variety of lengths, it is waterproof and vibration-resistant. Its modular design allows for customisation to user requirements and easy maintenance.

Other features built into the light bar are warning lights, brake/tail lights, reverse and indicator lights and a reversing alarm.

Vision Safe (PPE)
www.visionsafe.com.au



Valve operation tool

Smith Flow Control's EasiDrive portable valve actuator is designed for use with valves requiring a large number of turns or which are otherwise difficult to operate because of high torque or harsh climate conditions.

The device provides the operator with control when opening and closing different sized valves with varying torque requirements. One person can efficiently drive multiple valves with a single tool, reducing fatigue and risk of injury. It can be used in virtually any industry, from oil refineries and petrochemical plants to power stations and paper mills.

Key features include: low-cost alternative to permanent actuators; no permanent power supply required; suitable for minimum facilities installations and all climatic conditions; wideband torque capability with variable torque adjustment as standard; suitable for moving tight or partially seized valves; adaptable to any size/type of valve; eliminates operator fatigue and greatly reduces the risk of injury; no 'kickback' often associated with other torque devices; variable output torque - so no damage to valves by 'over-torquing'; reduces work crew tasks to one-man operation; and fully portable - can manage banks of valves with a single drive tool.

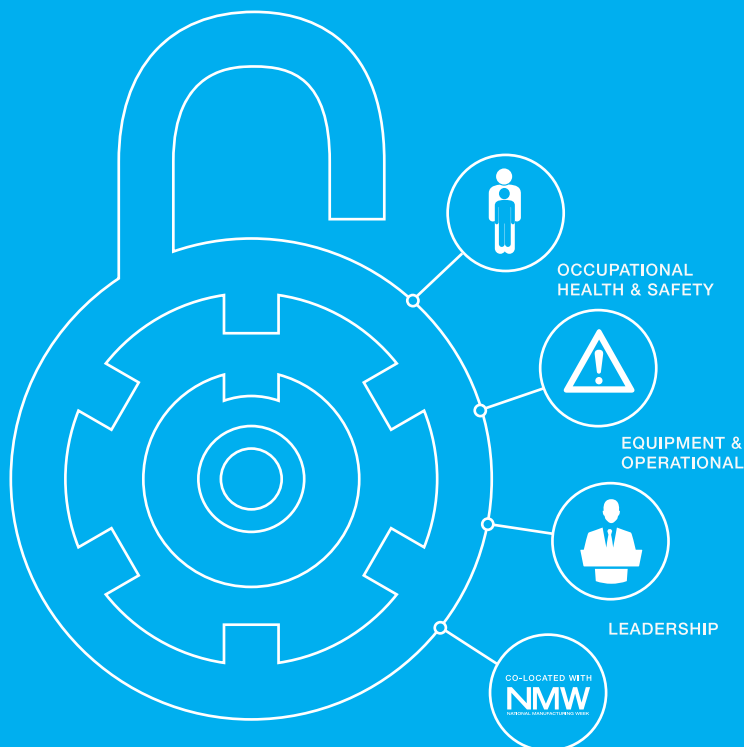
The 'reaction kit', which prevents a torque kickback, is useful as valve movement is always fully controlled, preventing operator injury and fatigue. In addition, the variable torque output feature, which prevents excessive torque being applied, ensures proper and safe valve operation at all times.

The device is highly versatile and can be powered by air, electricity or battery. It can also be custom designed to suit specific site requirements.

Smith Flow Control Ltd
www.smithflowcontrol.com

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Australian machinery design goes global

An Australian designed and manufactured remote control belly plate safety lifter for tracked vehicles has caught the attention of US mining companies after achieving widespread success at home.

Developed by Nivek Industries, the Tracked Elevating Device (TED) has been picked up in Australia by mining giants such as BHP Billiton and Rio Tinto, and is now being introduced to the US by distributor Safety Mining Industrial Trade Suppliers (Safety MITS).

"Factors such as safety and time efficiency have already helped us to make our first sales in the US to global companies," said Safety MITS Director of Product Development Timothy Lightfoot, whose company has opened a US office in San Diego to service North American demand.

"[They] like it because it means they can safely do maintenance in the field, rather than having to take heavy equipment back to the workshop."

The product's key feature is its wireless remote control, which allows the operator to keep out of harm's way during maintenance of belly plates and other internal components, thereby reducing the risk of crush injuries. The plates - made of hundreds of kilos of steel and often weighted down further with accumulated debris on top - are traditionally loosened by

mechanics who may have to crawl underneath heavy machines to line up the bolt holes.

"These vehicles are often large dozers, weighing tens of thousands of kilograms," Lightfoot said.

"The belly plate can be locked, secured or restrained, but the biggest safety concern is still having the mechanic placed directly underneath the dozer or heavy vehicle. If the plate is not appropriately restrained or supported, uncontrolled movement can occur when loosening nuts or bolts, which poses a huge safety risk if a mechanic is working directly underneath 500 kg of steel."

Safety MITS collected customer data from mining and contracting companies over a one-year period and found TED reduced work time by 73.5 % even while using one less mechanic.

In addition to belly plates, it can also be used for equaliser bars, cutting edges, steer cylinders, load rollers, sound suppression equipment and engine sumps.

Designed to travel across harsh terrain and safely lift up to 800 kg, the device is built with compliance to Australian and New Zealand mining standards (ASNZ 4240).

Nivek Industries
www.nivek.com.au



NEW PRODUCTS

SRLs for hot-work use

The Capital Safety DBI-Sala Nano-Lok Hot Work self-retracting lifeline (SRL) range is designed for high-heat applications. The range is arc flashed to eight calories (8 cal/cm²) for hot-work use in applications such as welding, grinding and torching, where sparks and slag can easily compromise standard polyester webbing lifelines.

The compact, lightweight SRL range can be used in place of lanyards and can be directly attached to any harness, reducing fall clearances. Designed for ease of use, the SRLs are virtually unnoticeable to the user when worn and provide good worksite flexibility.

The range consists of three models designed to cover the majority of applications encountered in high-temperature work environments. Constructed from reinforced webbing with Nomex/Kevlar fibre, the range withstands sparks, weld splatter and other high-heat exposure, ensuring safety around high-heat environments.

DBI-Sala's i-Safe intelligent safety system utilising RFID technology is built into each Nano-Lok Hot Work SRL to track inspections, control inventory and manage information.

Capital Safety Group (Australia)
www.capitalsafety.com





Radio repeater for safe radio control

The Jump radio repeater is designed for use with the JAY Electronique safe radio control solutions implementing unidirectional radio transmissions. The device provides a solution for applications in difficult environments where obstacles, troughs and bumps interrupt radio transmissions or in situations where radio performance must be extended to cover a greater distance or greater area.

The repeater is paired with a device by a learning procedure. The repeater waits for correct radio frames generated by a radio transmitter, stores them for 100 ms, then retransmits the correctly received frames. No radio transmission takes place if any incorrect frame is received or if the ID code sent has not been programmed into the repeater.

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

Earplugs

The Howard Leight by Honeywell FirmFit firm foam earplugs are designed to be softer, safer and simpler to use than traditional foam earplugs.

The earplugs are claimed to be 40% softer than standard foam earplugs, and place significantly less expansion pressure on the ear canal, according to independent testing. This makes for a more comfortable fit throughout the day than other foam earplugs, which can increase worker safety compliance.

Vibrant orange colouring makes checking worker compliance easier, while SLC80 22 dB rating means the earplugs also provide better protection in medium-to-high noise level environments from 100 to <105 dB.

They also feature the use of foam with a slower recovery rate that requires less pressure to roll down, making them simpler to insert correctly than traditional foam earplugs.

The earplugs comply with AS/NZS 1270:2002 and are available either corded or uncorded.

Honeywell Safety Products Australia Pty Ltd
www.honeywellsafety.com



SAFETY TECHNOLOGY
www.ifm.com/au



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Hospitality business staying on top of compliance with safety software system

DoneSafe was recently approached by Silk Hospitality, a housekeeping outsourcing organisation, to provide a software solution capable of scaling to the organisation's complex risk environment, which supports more than 400 employees across multiple properties nationwide.

Silk Hospitality had experienced rapid growth and with that growth found that the number of safety-related incidents was increasing in both number and severity. As an outsourcing provider of 'back-of-house' services, the organisation found itself with a high-risk profile which needed a scalable solution that would grow with the business and be usable by its culturally diverse workforce.

Jeremy Dalton, director of Qld operations at Silk, is responsible for a large, state-based team where safety, procedures and environmental compliance are specifically important. "Our business contracts to numerous international clients and their demands for compliance and conformity was a major factor in us choosing DoneSafe," he said.

The DoneSafe safety software is easy to implement and use. It allows users to record and analyse compliance data and provides meaningful insights thanks to its responsive design that works on all browser-enabled devices (phone, tablet, PC).

"Dalton said that DoneSafe makes it so easy for him and his teams to stay on top of their compliance status, conduct observations and audits, and review risks in a user-friendly, no jargon manner.



"As our teams are mobile, the cloud-based platform enables tablet, PC and smartphone access quickly to perform our compliance. The 24-hour support desk has been very helpful ensuring my team had no issues implementing across our many sites and now we couldn't imagine doing our jobs without DoneSafe," said Dalton.

DoneSafe Pty Ltd
www.donesafe.com

NEW PRODUCTS



Compact LED light

The R. STAHL tubular light fitting Series 6036 is a compact LED-based luminaire for use in Ex zones 1/21 and 2/22.

55 mm in diameter and 122 cm in length, the product is suitable for general or machine lighting purposes. 30 light fittings can ensure an illuminance of about 500 lx while its slim design means it can be simply installed in confined or hard-to-access spaces.

The product can be operated in a wide temperature range from -40 to +60°C (reaching a lifetime of 80,000 h in a +60°C environment). The vibration-proof units are IP66/IP67 protected and are suitable for maritime applications.

R. STAHL Australia Pty Ltd
www.stahl.com.au

Horn and strobe range

E2S Warning Signals has added additional fault monitoring to give SIL 2 compatibility to its products.

Initially available for its BEx explosion-proof 117 dB(A) horns and 5-, 10- and 15-joule strobes, its explosion-proof GNEEx GRP range will be the next to be upgraded. The SIL 2 technology in the E2S horns means that the functionality can be remotely checked and an alert sent to the control panel in case of any fault.

A combination of software and hardware removes the need for time-consuming inspection and test of each individual warning device by intelligently reading the sound output of the horn or the light emitted by the strobe to check it is working properly. The technology ensures that spurious signals are not picked up by the sensors to ensure reliable monitoring at all times. To comply with SIL 2 requirements, this is only carried out during an automatic test of the system and any faults are reported back when the system returns to its normal monitoring state. Communication with the system control panel can be configured in two ways: either a contact is closed or a series resistor is brought into the monitoring circuit in the event of a fault.

Mechtrix Pty Ltd
www.mechtrix.com.au



SHINING A LIGHT ON SAFER EMERGENCY LIGHTING

To most of us emergency lighting and exit signs are just part and parcel of commercial buildings, but for many landlords they cost a fortune to run and aren't always reliable - until Deakin University researchers found a cheaper, safer and more reliable way to operate them.

Researchers from Deakin's schools of Engineering and Information Technology have teamed up with power solutions provider MPower to create an automated monitoring product that is claimed to be cheaper to operate and less likely to fail than existing outdated manual models.

Deakin School of Engineering researcher Associate Professor Abbas Kouzani said the networked devices could talk to one another.

"If one device goes down, the communication messages are rerouted through neighbouring devices within the network, facilitating automated self-testing and real-time fault detection which improve the reliability and integrity of emergency lighting systems - potentially saving lives when fires, accidents or natural disasters occur," said Associate Professor Kouzani.

"Whether it be hospitals, universities, factories, retail centres or offices, the technology has the potential to save organisations thousands of dollars."

According to the Building Code of Australia, certain classes of buildings, including office buildings, shops, car parks, healthcare buildings, school buildings, aged care buildings, among others, are required to have emergency and exit lighting.

"The system offers a low-cost wireless mesh network platform in which node failure and signal interference are managed

through the self-healing property of the technology," Associate Professor Kouzani said.


"The wireless system operates at a lower frequency than the standard wireless systems, reducing the chance of interference with mobile and other wireless devices.

"This also allows the signal to have better penetration through barriers such as thick concrete walls and enhances the network's reliability."

Associate Professor Kouzani and Prof Yong Xiang of Deakin's School of IT have been working together to help MPower design the network.

The researchers argue the new system would be more reliable and robust than current monitoring methods because it featured continual central automated monitoring that detected faults or low batteries as soon as they appeared and removed any chance of maintenance short cuts being taken by individual enterprises.

"We believe this technology can have applications beyond emergency lighting and exit systems, offering advances for everything from home appliances to building automation to smart street lighting," Associate Professor Kouzani said.

The project is one of the first to be funded through the federal government's new Research Connections program, which aims to promote innovation by supporting partnerships between industry and research providers. 

Lend Lease to introduce mental health and suicide prevention training

Lend Lease has introduced mental health and suicide prevention training across its building, engineering and services sites in Australia to help workers recognise the warning signs, support their colleagues and connect them to expert help.

Lend Lease Construction and Infrastructure Chief Operating Officer Dale Connor launched the new industry partnership with MATES in Construction in Sydney in March.

"Construction workers are six times more likely to die by suicide than through a workplace accident, and young workers have been shown to be of particular high risk. We recognise the industry faces unique challenges such as stigma about men reaching out and asking for help," he said.

"MATES in Construction is an industry-led approach to an industry problem. Lend Lease will offer the program not only

to our own workers, but all workers on our projects including subcontractors and suppliers. Lend Lease will support MATES in Construction in reaching at least 20,000 construction workers per year nationally.

"To create the best places, we need the best people and we need to support our workers to be their best. The MATES in Construction program will support our workers to speak up, ask for support, or to recognise and offer help when a mate is struggling."

MATES in Construction will deliver three levels of training for site workers: the one-hour General Awareness Training for all workers on a construction site; Connector training for selected workers that teaches signs to look out for and how to connect people at risk to help; and the highest level of training is the two-day Applied Suicide Intervention Skills Training (ASIST) where workers learn how to help a person at risk of suicide.

"This training allows workers to recognise when a mate may be in difficulty or even contemplating suicide, and will give them the necessary skills to keep their mates safe whilst connecting them to help," MATES in Construction CEO Jorgen Gullestrup said.

"Our mates helping mates approach is having a positive impact. In Queensland, where the program has been operating since 2008, the number of suicides has declined by 7.8% while male suicide rates generally have increased marginally."

Lend Lease is already the largest user of the MATES in Construction program nationally training over 6000 workers each year. This industry partnership is a natural progression of Lend Lease's commitment to better mental health in the workplace and is on top of the company's work with beyondblue and Mental Health First Aid Australia.

MATES in Construction
www.matesinconstruction.com.au



NEW PRODUCTS

Laser scanner

The Pharo Safety Laser Scanner is suitable for the protection of workers exposed to risks arising from the use of hazardous machines and automated guidance vehicles (AGVs).

It creates horizontal or vertical protection areas through programming or self-teaching up to an amplitude of 190°.

The scanner conforms to: 2006/42/EC Machinery Directive; 2004/108/EC Electromagnetic Compatibility (EMC); 2006/95/EC Low Voltage Directive (LVD); IEC/EN 61496-1 Ed. 2 e IEC/TS 61496-3 Safety of machinery - Electro-sensitive protective equipment - General requirements and tests; EN ISO 13849-1 Safety of machinery - Safety-related parts of control systems; Part 1: General principles for design - IEC/EN 62061 Safety of machinery; functional safety of safety-related electrical, electronic and programmable electronic control systems; IEC 61508 Functional safety of electrical/electronic/programmable electronic safety-related systems; IEC/TS 62046 Ed. 2 Safety of machinery - Application of protective equipment to detect the presence of persons; UL (C+US) mark for USA and Canada; and ANSI/UL 1998 Safety Software in Programmable Components.

Treotham Automation Pty Ltd
www.treotham.com.au



Disposable floor cloth for spillages



The Vileda Professional SpillEx disposable cloths absorb spillages on hard floors before floor cleaning takes place. One cloth will absorb and hold up to 1.2 L of water and up to 500 mL of NaCl 0.9% (similar to urine).

Once absorbed, the liquid transforms into a gel so it will not drip when lifting due to the high concentration of polymers in its inner layer. A PE foil on the top side will act as a liquid barrier for hygienic removal of the used product.

With no leaking fluids or direct hand contact, the product helps eliminate the risk of cross-contamination in work environments with no risk of soiling the bucket water with the spillage.

Onboard Solutions

www.onboardsolutions.com

Management software for wireless vibration transmitter

Emerson's management software, the AMS Suite: Machinery Health Manager v 5.61, gives advanced spectral resolution options to the CSI 9420 Wireless Vibration Transmitter, enabling a reduction in bandwidth requirements and improvements in power module life.

Data log and configuration capabilities have also been added to streamline user interaction with multiple transmitters on a single gateway.

The software provides 'spectrum on alert' for an efficient means of gaining diagnostic information, acquired through a condition alert on the machine. Users can also adjust the amount of resolution captured, further reducing the bandwidth used and power required to operate the transmitter.

Performance issues can be identified in the field through the software's data log capabilities, which can show the operational history of each transmitter.

The software integrates data from route-based, online and wireless vibration solutions as well as third-party oil and infrared analysis data to provide a complete picture of machinery health.

Emerson Process Management

www.emersonprocess.com.au



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Making pedestrian crossings safer

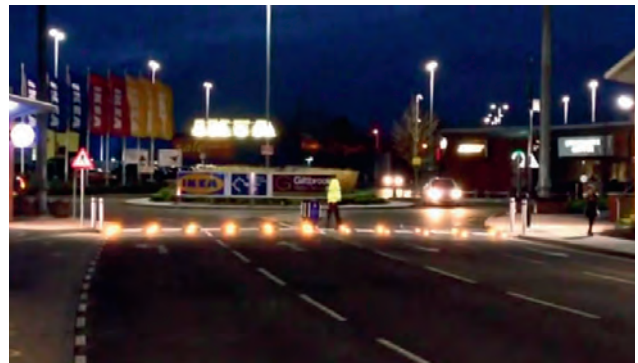
An innovative project at a busy retail park in the UK could provide the blueprint for a new approach to pedestrian safety. The system deployed at the Giltbrook site, near Nottingham, UK, uses flashing road studs and warning signs to create a visual warning for motorists approaching an internal pedestrian crossing that spans the main vehicle access to the park. The LED studs and warning signs are activated by FLIR's C-Walk pedestrian detector.

Managers at the Giltbrook retail park wanted to enhance drivers' awareness of foot traffic and were looking for a technology that was dedicated to pedestrian detection only. They found that FLIR's C-Walk pedestrian detection sensor was a perfect fit for the application.

ITS system integrator Swarco came up with an intelligent solution based on FLIR's C-Walk pedestrian detection. According to reports, the behaviour of drivers changed almost immediately and feedback has so far been positive.

A pole-mounted C-Walk sensor detects pedestrians crossing the street in a predefined detection zone. Pedestrians entering that zone get picked up by the sensor and will activate the road studs and slow-down sign further up the road. FLIR's C-Walk is an all-in-one sensor that integrates a detector and a camera in one unit. It make use of predefined detection zones ('virtual loops') and provides reliable pedestrian detection on a 24/7 basis.

Early indications show that the bespoke system is already persuading drivers to approach the crossing at lower speeds. The flashing studs only work when pedestrians are using the crossing, so drivers know from a fair distance away that they must slow down. People are sometimes not as alert as they should be if lights are flashing all the time, so the fact that the studs blink only when pedestrians are using the crossing creates an instant alert. It is



claimed to be a clever, practical, low-cost and sustainable way to increase safety.

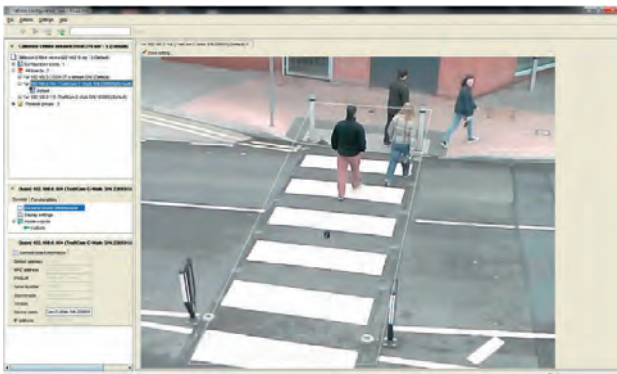
The warning system is designed to improve pedestrian safety, but is not inhibitive to drivers - it simply reminds them they are off the public highway and provides a step change in the thought process. The studs are effective in raising awareness of pedestrians or for applications where hazard warning or enhanced navigation is important.

"The C-Walk from FLIR Systems is really the centrepiece of the installation," says Sukhdev Bhogal, business development director at FLIR Systems. "Take that away and the whole system will definitely fail. The system looks particularly good when it's dark and feedback has been very positive from both customers and tenants."

C-Walk sensors have been designed to avoid expensive installation and maintenance costs. As such, the installation process is quick and simple: install it, connect it and start analysing the pedestrian detection zone. The sensors can simply be mounted on existing infrastructure. Configuration of the sensor is done via portable PC with pre-installed, user-friendly software. It takes less than five minutes and requires no specialist knowledge. Using camera images, virtual pedestrian detection zones can be positioned accurately. Verification and viewing of the detection is possible via MPEG-4 streaming video.

"The FLIR C-Walk sensor is very easy to set up," says Sukhdev Bhogal. "The installation is pretty straightforward and the software environment is very intuitive. What works very well is that you can visually set up your detection zones on your laptop and verify whether the detection actually works."

FLIR Systems Australia Pty Ltd
www.flir.com.au



NEW PRODUCTS



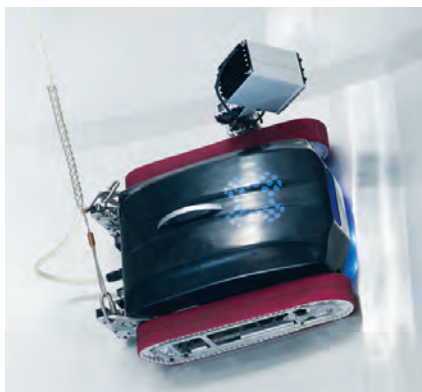
Bunded pallets

The MAXBund Poly and Metal bunded pallets by Accumax are designed for the safe storage of 205 L drums, helping to decrease the risk of spills.

The pallets come in sizes for two or four drums and have been field tested for strength and endurance for high-demand industries such as mining, construction, power generation, civil, defence, health care, public facilities, manufacturing and marine.

The pallets have been manufactured using virgin UV-stable polyethylene for increased resilience. Lockable hard covers, galvanised metal frames and PVC covers are available for outdoor storage.

Accumax Global Pty Ltd
www.accumaxglobal.com.au



Robotic tank inspection technology

Furphy Engineering has introduced the Robotic Tank Inspection Technology, which is claimed to increase safety, reduce risk and improve the accuracy of tank inspections.

Robotic testing replaces the manual process using abseilers, scaffolding and rope to conduct an inspection. It also reduces the number of contractors required to conduct a manual tank inspection as only one controller is required. As all the work is done by the robot, it eliminates the need for individuals to work at height or within confined spaces to conduct inspections.

The climbing robot technology provides remote access, to view the interior surface of a tank. It captures high-definition video to identify surface cracks, fatigue or maintenance requirements.

While the system was originally developed for the dairy industry, the company says the technology could provide benefit to any industry that uses tanks for liquid storage. It is particularly suited to applications with food-based products, consumables, pharmaceuticals or any products with hygiene requirements.

The robot features sliding vacuum pads and a Hi-Grip caterpillar track. It is computer controlled to move up, down and around the interior tank surface, adapting to different surface conditions.

The camera system captures and records high-definition video footage of the tank surface, to identify cracks or any maintenance concerns. The video footage provides an accurate assessment of the interior surface, allows playback or reassessment of potential problems and removes the potential for human error.

J Furphy & Sons Pty Ltd
www.furphys.com.au

Safety glasses

The medium-impact Seal safety glasses from VisionSafe are lightweight and come with detachable foam inserts for added comfort and fit.

They feature anti-scratch lenses and flexible temple ends and comply with AS/NZS 1337.1 standards.

Suitable for a range of work applications, the glasses are available with clear foam-bound frames and clear anti-fog, anti-scratch lenses or grey foam-bound frames and smoke anti-fog, anti-scratch lenses.

Vision Safe (PPE)
www.visionsafe.com.au

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Disposable noise-reducing earplugs

The JB's wear SLC: 26dB Class 5 noise-reducing earplugs are made from disposable polyurethane (PU) foam. The slow-rebound PU is bullet shaped to comfortably fit the ear and the earplugs are attached with PVC cord.

Designed to comply to AS/NZS 1270:2002, the earplugs are certified BSI BMP617677.

Available in boxed sets of 100, the earplug sets are individually sealed in OPP satchels to ensure hygiene levels are maintained.

JB's wear

www.jbswear.com.au

Safety controller expansion module

The Flexi Soft Drive Monitor is an expansion module for the Flexi Soft modular safety controller, allowing drives without integrated safety functions to be used.

The Flexi Soft Drive Monitor also manages safety functions for drives in fixed machines as well as mobile applications. The SLS (safe limited speed), SSM (safe speed monitoring) and SOS (safe operating stop) functions ensure safe drive monitoring. The main advantage is that processes do not necessarily need to be stopped, which makes it quicker to carry out maintenance and adjustments as the machine can be operated at a reduced speed.

In the case of machine tools, mechanical partitions such as covers or protective doors can be used to protect hazardous points. To ensure that tool or work pieces can be changed quickly and safely, the Flexi Soft Drive Monitor module first brings the drive to a secure stop and prevents any possible restart. Immediately afterwards, it releases the opening of the mechanical physical guard.

The quick and safe operation are said to considerably improve the machine's productivity and availability without delay. In the event of an emergency, it is crucial that the machine stops right away: the SS1 and SS2 functions (safe stop) ensure that the machine is safely stopped in a controlled manner.

SICK Pty Ltd

www.sick.com.au



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Remote area lights

Pelican Products has engineered alternatives to generator-powered lights with the 9480 and 9490 Remote Area Lighting Systems (RALS).

The 9480 RALS has up to 4000 lm and 28 h of run time with three preset light levels. In comparison, the 9490 RALS has up to 6000 lm and 24 h of run time, including an intelligent control setting that calculates and displays battery life to help the user regulate the intensity of the light and choose the desired run time.

Both lighting systems can be controlled using a smartphone (iPhone only) and are self-contained with a rechargeable and swappable 12 V power supply pack. The products each contain a multiposition deployable mast with 340° rotation and have a maintenance-free LED array with a life expectancy of over 50,000 h. Tested to military standards, both devices come with a detachable nylon shoulder strap and are available in yellow or black.

Pelican Products Australia Pty Ltd
www.pelicanaustralia.com



PPE vending machine

The Tambour TX750 vending machine is designed to assist businesses with supplying personal protective equipment (PPE) to their workers in a secure environment. The swipe-card access ensures PPE can be obtained 24/7 by workers when required.

The machine features square bins, eliminating the need for repackaging. It also enables users to create a basket of goods as opposed to selecting each item individually. Other features include a large, user-friendly screen and fingerprint accessibility accounts for traceability of stock usage.

Over 200 customised reports are available via email, and top-up deliveries can be automatically triggered by stock levels.

All of the equipment provided in the vending machine range is sourced from reputable safety brands and meets either Australian or the equivalent global standards.

Staples Australia Pty Limited
www.staplesadvantage.com.au



Ducting technology

The WeldFlex ducting technology from Eximo is designed to protect workers from harmful welding fumes by ensuring quick removal of the fumes from the workplace.

The system is designed for use in a variety of in-

dustries including those where explosion issues and safety are paramount including the petroleum, chemical, paint, fertiliser, solvent and food industries.

WeldFlex ducting from Eximo is a lightweight PVC duct which is flame retardant according to DIN 4102. Its applications include air conditioning and suction of air, welding fumes and light dusts, and it offers temperature resistance of up to 100°C.

WeldFlex has a number of features including being self-extinguishing, high flexibility, extreme helix-like PVC structure and available from 52 to 505 mm in diameter.

Eximo
www.eximo.com.au

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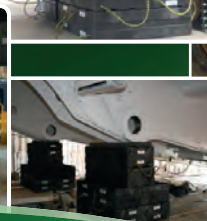


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WORKER SAFETY

A PRIORITY AT WAREHOUSE FACILITY

Lauren Davis

DHL Supply Chain has officially opened its new 90,000 m² campus in Horsley Park, Western Sydney, in a move that has enabled the creation of 500 new jobs and the implementation of a range of innovative technology. At the opening of the \$120 million facility, the company talked about its passion for maintaining a company culture that is driven by safety.



In tandem with its Horsley Park campus, DHL has set up a new operations simulation centre. Leigh Brooks, general manager HR for the company, explained that these centres are utilised by DHL for recruitment, training and retraining of employees. "It gives potential new entrants the opportunity to get an understanding about how a warehouse works, how the warehouse flows, the moving parts to a warehouse - from trucks to manual handling equipment ... the hazards that exist, and minimising those hazards," Brooks said. The use of a simulated environment not only means safety is improved, but impact to actual operation of the floor (and thus any potential delays to product reaching customers) is minimised.

DHL has implemented a range of initiatives in order to maintain a company culture that is driven by safety. The most significant of these is its Certified Supply Chain Specialist (CSCS) employee engagement program, which reminds staff how they are each an essential part of DHL. Brooks explained that every participant in the program is awarded with a passport - "and each time they complete one of the courses, they'll have their passport stamped and signed by the people that were training them".

"It's really exciting for the people to be able to walk away with something," Brooks added, with the course's encouragement of employee engagement enabling cultural change. And while the CSCS training is currently limited to permanent staff, contractors from DHL's casual provider each undergo a detailed induction program to ensure they understand this company culture.


The company has additionally employed exercise physiologist David Winfield to ensure staff are not being harmed by their manual work. With the help of prop skeleton 'Billy Bones', Winfield travels around the country observing how employees work, making suggestions if necessary, and demonstrating exactly what happens to the human body when it gets injured.

"We also have an early intervention program where if someone gets injured, we get them to the doctor straight away," Winfield said. "We've got a network of medical centres and doctors and physios that we can get people to straight away, so they can start getting treatment on the day of the injury, just like football players."

The company has also introduced a drug and alcohol testing program, whereby random employees are tested on the basis of their name coming out of a bingo barrel. "Last year we tested 10% of the workforce," said Winfield, "and we had zero positive tests."

The changes to employee safety over the past 10 years have been remarkable, with DHL last year qualifying to become self-insured for the purposes of workers compensation. Winfield noted that in 2005, there were 64 lost-time injuries between DHL's 600 staff; last year, after an increase to 3000 staff, there were only six injuries.

"For us, that's still six too many ... but we're going in the right direction," he said. "Our aim is zero - we don't want anyone to get injured."

The Horsley Park campus was opened by NSW Premier Mike Baird, who said the state government is currently implementing a significant infrastructure program in Western Sydney - "but what makes it actually work is having jobs in the middle of it". Not only has DHL created 500 new jobs in the region, but it has ensured the workers in those jobs feel valued, well trained and above all safe. 

Averting potential fire danger inside the tunnel

Plenty of people underestimate the danger of a fire spreading through a tunnel. Smoke and heat have no way to escape, and they spread at rapid speeds. The short amount of time needed for hot axles or cracked brake rotors on trucks or motor coaches to cause a fire is also well established. Despite all this, there is a way to identify overheating parts on a vehicle before it enters a tunnel and to pull that vehicle out of traffic: using the VHD Pro vehicle hot spot detector from SICK.

The system has already been used by Austrian autobahn operator ASFINAG and by FEDRO, the Swiss Federal Roads Office. The VHD Pro system monitors the 8 km Karawanks tunnel in Austria and the Gotthard tunnel in Switzerland, which at a length of 17 km is the world's third longest road tunnel.

A VHD Pro system combines the measured data from thermal imaging cameras and laser scanners to catch overheating vehicles before they enter a tunnel. Thanks to the special overhead and side positioning of the LMS511 Traffic laser scanners from SICK, it is possible to measure vehicles in free-flowing traffic both lengthwise and in profile, and also to detect wheels and various other vehicle components. Be it in the cab area, near the exhaust pipe or on the wheels, dangerous outer temperatures at the vehicle's exterior envelope are measured by the thermal imaging camera and matched to the corresponding vehicle segments on the 3D model.



Localising, identifying and evaluating

Every vehicle - even if it accelerates or brakes as it passes by the system - is captured by the scanners, regardless of the weather conditions. The Vehicle Hot Spot Detector software evaluates the 3D data together with the measured temperature values. In this way, potentially dangerous outside vehicle temperatures are accurately localised, identified and displayed on the 3D model of the vehicle. The operating temperature of a wheel indicates a possible technical anomaly as soon as it reaches a value in excess of 60°C. At 100°C and up, the operating temperature for bearing seals is exceeded, which can cause lubricant leakages and other subsequent damage. At over 200°C, the rubber becomes damaged, and pyrolysis begins in the tyre at temperatures of 260°C or higher. The flash point then follows at 350°C.

'Hot' vehicles are 'cooled off'

Once an alarm has been triggered by a temperature that exceeds specified limits, the vehicle is pulled out of traffic in time before entering the tunnel and is given an opportunity to 'cool off'. It is thus possible to avoid disastrous fires and accidents that can be caused by overheating vehicles in a tunnel.

SICK Pty Ltd
www.sick.com.au

NEW PRODUCTS



Equipment foggers

Lafferty Equipment Foggers are used for sanitation in food and beverage facilities and for odour control in food waste processing areas.

The 305 four-way pump-fed fogger projects light, damp mist particles up to 7.6 m each way and features a solution needle valve to finetune the fog particle size. The fogger body is constructed of machined polypropylene and contains a chemical check valve that prevents drips after shutdown.

The fogger controllers are designed to either manually or electronically control the fogger. It can be programmed to run the fogger on a cycle determined by individual requirements and on a repeatable cycle until the unit is either switched off or reprogrammed.

The Dosatron Panel is a central chemical feed system for pump-fed fogging systems. It delivers ready-to-use chemical solution to the fogger by diluting the chemical concentrate in the required ratio via a water-driven proportional dispensing system. It is available in either polypropylene or PVDF construction, with fully adjustable dilution ratios ranges (from 1:3 to 1:5) and choice of seals. It can be supplied as either a complete system, mounted on a panel or within a lockable stainless steel enclosure.

Spray Nozzle Engineering
www.spraysolutions.com.au



Anchor test kit

The Hilti HAT 28 M Anchor Tester Kit can provide a quick and simple method of verifying fastener connections including anchors, nails and studs. The kit is available to rent from TechRentals.

The kit includes a combination of threaded rod and stud adaptors, hexagon extension legs and other accessories, and can test pull-out loads of a wide range of fastenings.

The purpose-made kit will apply loads between 0 to 5 kN/0 to 25 kN and display them on its strain gauge with a maximum load indicator for the upper limit.

Features include: gauge accuracy $\pm 2.5\%$, maximum 25 kN, maximum tensile stroke 50 mm and various accessories for a vast range of fastenings.

TechRentals

www.techrentals.com.au

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Depositing a roll after it is rotated through 90 degrees, using the coregripper.



Rescue kits

The Miller QuickPick Rescue Kits are designed to deliver peace of mind during unexpected and stressful peer-rescue situations involving those working at height. The rescuer can remotely attach the system to the suspended worker while remaining securely

anchored on the working surface. All rescue components are included in an easy-to-store kit with no assembly required - only an overhead anchorage is required.

Designed with a back-up braking system to eliminate accidental release during a rescue situation, the kit includes all the necessary components to quickly rescue a fallen worker.

The kit contains: backup braking system; high-strength, colour-coded aluminium pulleys for easy orientation; 11 mm kernmantle rope; remote connection rescue pole that collapses to 1.2 m and extends to 3.6 m; carabiner clip and pigtail; tool lanyard; cross arm anchor connector; backpack for easy transportation; and carry case for pole.

The Miller QuickPick Rescue Kits provide a professional rescue solution that can enhance worker safety and complies with corporate fall-protection plans by providing a quick and efficient rescue response.

Honeywell Safety Products Australia Pty Ltd

www.honeywellsafety.com

Protoma Trolleys:



The trolley rolls under the shelf - the coregripper on an extension reaches the rearmost roll, to be inserted and lift it out from the shelf.



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Forestry demands worker safety

In New Zealand, the agriculture, forestry and fishing sector has the highest number of fatal work-related injury deaths. In 2013, WorkSafe New Zealand recorded 10 forestry worker fatalities and in 2012, one in 35 forestry workers were seriously harmed at work. In high-risk occupations such as those in the forestry industry, it is crucial for safe workplace practices to be implemented and followed by all workers.

Dennis Hayes Logging has recently enhanced the safety of its forestry workers using a Motorola Solutions radio system, supplied by CRS Communications (Central Radio Services).

Jeremy Hayes, director of Dennis Hayes Logging, says worker safety is paramount and constant, clear communication between logging crew members is key. "The radio system has improved safety as everyone knows what's going on and where everyone is," he said.

Tree fellers often work on opposite sides of a hill, unseen by anyone. Therefore, the radio is an important tool for monitoring the safety of workers in these lone-worker situations.

Previously, workers had to call in every 30 minutes, but now the radio starts an alert tone at 27 minutes "so workers can get

on with the job without having to worry about keeping track of time, yet they're still monitored for safety in the lone-worker situation", said Hayes.

"If they don't call in within two minutes, an emergency beacon is sent to the whole crew," he said.

"Every morning, we record which radio each worker has, so if the emergency beacon goes off, we know who is affected."

The company is also planning to implement the man-down function of the radio, which triggers an alarm if the handset is horizontal for more than a certain period of time.

When dealing with wire ropes extending up to one kilometre long, working loads of up to 25 tonnes and three workers standing in a safe zone dictating rope movements, it's crucial that commands are communicated clearly so they are heard correctly.

Hayes says the company uses the Bluetooth digital headset in the log hauler for clarity of commands. "When I first used it, it was like the guy was sitting beside me," he said.

The radio solution has three channels: one for log extraction, one for felling and general operations, and the loader uses the third channel to speak to the truck driver while loading logs, in order to maintain a safe distance while retaining full communication and control.

Safety and efficiency have improved using the radio solution, which also features text and voice-recording functionality. "We record all voice calls, which is essential for any incident analysis," says Hayes.

"Where trees are dragged up the flying fox system we have colour-coded zones (ie, red means high risk) to determine where guys should stand. We can record employees as they change zones." The GPS-tracking functionality on the handhelds is also being considered for the future, to ensure that employees are the correct distance away from the working ropes.

*Motorola Solutions Australia Pty Ltd
motorolasolutions.com.au*



NEW PRODUCTS



Gas detector

The ALTAIR 2X Gas Detector range incorporates XCell sensor technology to enhance worker safety, compliance and traceability.

The ALTAIR 2XP: H₂S product option features what is claimed to be the first stand-alone bump test, which eliminates the need for bottled gas. Users can bump test anytime, anywhere, without specific calibration gas, which can reduce maintenance and increase productivity. If the bump test passes, a green LED flashes every 15 s and a large on-screen checkmark is displayed. If the bump test fails or expires, a red LED flashes every 15 s and no checkmark is displayed. This product option also features an end-of-sensor-life warning and alarm.

The ALTAIR 2XT product option can monitor two gases on the one device.

Other features of the ALTAIR 2X range include: fast sensor response times; low calibration gas flow rate; expected sensor life is greater than four years; full-time traceability; records 75 alarm events; and 150+ h of periodic data (ALTAIR 2X and 2XP) and 100+ h of periodic data (ALTAIR 2XT). It is also compatible with the MSA GALAXY GX2 Automated Test System and MSA Link Pro software.

The unit has rugged durability with tough overmoulded rubber armour that can survive multiple 7.6 m drops onto concrete. It also has agency-certified dust- and water-tight IP67 construction and an intrinsically safe design.

MSA Australia Pty Ltd
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Electronic logbooks

Emerson Process Management's Logbooks enables operators to electronically document activity records to streamline shift changes, drive operator action and accelerate decision-making. A consistent approach to operator logs supports safety improvement efforts as well as audits and corrective action processes.

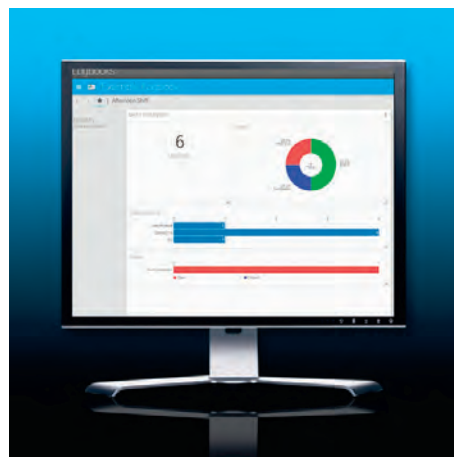
Shift handover can be a risky time for a plant; poor communication can quickly result in process upsets. Logbooks delivers a shift change dashboard that includes a shift summary and detailed information on assigned tasks. Operators can identify priorities for the new shift and access documentation of events from the previous shift, ensuring quality, safety and throughput are protected. The consolidated graphical view makes it easy to provide complete, accurate information to customers and auditors.

Automating task management ensures work is not overlooked or incomplete. With the ability to schedule tasks now, later or on a recurring basis, management can be confident that critical tasks are prioritised and important - but non-urgent - tasks like training, reviews and routine maintenance are completed and documented. Tasks are visible on the shift dashboard, so operators can easily determine criticality and plan work.

By moving to electronic logbooks, operators can establish an online knowledge base to speed up problem-solving and decision-making. Not only can operators search on text within the log entry, but they can also search on category, date/time span, related equipment and a number of other attributes.

Emerson Process Management

www.emersonprocess.com.au



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Bolt-tensioning range

The Technofast Industries EziTite range has been designed to provide fast and accurate bolt tensioning in many high-temperature applications. The range includes the CamNut systems, which are used on steam turbines and temperature applications from -40°C to 650°C; and the EziTite TR hydraulic nuts, which are designed for high-temperature applications up to 550°C.



The CamNut system is used to tighten the typically massive bolts used in large steam turbines without replacing or modifying the bolts. It features stacked hydraulic load cells to reduce tool diameters and a tapered breakaway coupling with a thread for fast engagement of the tensioning tool. The system is user friendly, fast to fit and remove, and suitable for applications with short bolt grip length. Its modular construction reduces overall tool weight.

The EziTite TR high-temperature hydraulic nut features a durable metal seal that allows the fastener to be cycled many times without failure.

The range is claimed to provide bolt tensioning in less time than other methods, such as heating or torque tightening.

Technofast Industries Pty Ltd

www.technofast.com

WHO'S RESPONSIBLE FOR CONTRACTORS' SAFETY?

The notion of harmonisation around health and safety legislation is largely a distraction when it comes to contractor management in oil and gas operations, said Greg Smith, legal practice director at STE Safety & Legal. He presented a keynote on 'Rethinking contractor safety management' at the recent AOG conference in Perth.

Despite the mountains of paperwork deployed in the name of safety, Smith said some organisations still struggle to understand what they are accountable for in a contractor environment. He believes the complexity in the legislation could be part of the reason for this, as offshore oil and gas is not even covered under the WHS legislation.

Most operators (or principals) of oil and gas facilities use commercial contractors and it is particularly common practice in offshore operations. "This can transfer commercial risk to the contractor company," said Smith. "However, when it comes to health and safety risk, it's a different story altogether.

"Principals (particularly large organisations) find it very difficult to simply let contractors do their job under their own safety systems and they continue to interfere in the way that contractors manage safety. By doing this, they often increase their own legal risk and often undermine effective safety as well, most often because it creates confusion about what processes apply and who is accountable for what," said Smith.

It is important that each party in a contractor management situation has clearly identified and understands all the risks and knows which person is responsible for each risk and how each risk is managed. "Principals need to trust the contractors but hold them accountable for their actions," said Smith.

This can't be achieved by simply hiding behind mountains of paperwork, said Smith. He said while most documented contractor

safety management systems include what is required to manage the safety in a contracting environment, they are often designed with no real view to manage the risk but rather to simply try to demonstrate legal compliance.

The documentation creates an 'illusion of safety' as it is often far too complex for the contractor and their worker to understand and, as a result, it's not even used, said Smith. In his experience, he said the majority of contract workers believe the documentation is just designed to 'cover management's backside' and have no appreciation for its content.

"Historically, when a worker is killed or injured as a result of not following procedures, almost inevitably what emerges is that the procedure hasn't been followed by the majority of workers over a significant period of time. There is often a systemic non-compliance with the processes," said Smith.

"Particularly in contractor management, this is not a conversation about the individual worker," said Smith. "It is a failure of management to understand that their processes are not being complied with.

"I think that this is highlighted by comments in the New Zealand Pike River Royal Commission which highlighted that the board appeared to receive no evidence proving the effectiveness of their crucial systems."

While most organisations can tell you what the lost time injury rate was, how many safety walkarounds have been conducted and

how much training has been completed, Smith said there is usually no data or evidence to say that critical risks were actually being controlled.

"Injury rates, in my view, offer absolutely no insight whatsoever into whether the safety management systems are working, and yet in a contract environment they are one of the key tools used to select contractors."

But all too often if a contractor does have an incident, the principal wants to interfere and tell them how to do the job. Liability for safety incidents can very quickly turn to the question of who has control and expertise. Therefore, Smith said: "The more the principal interferes in the way a contractor performs his work, the easier it is to prove they had relevant control."

Smith said principals are not holding their contractors to account, and as soon as you have a question on accountability, problems can quickly slip through the gap and that critical risk may not be effectively managed.

Awarded the Educational Award for 2014 by the World Safety Organisation for his book titled *Contractor Safety Management*, Smith



WHILE MOST ORGANISATIONS CAN TELL YOU WHAT THE LOST TIME INJURY RATE WAS, HOW MANY SAFETY WALKAROUNDS HAVE BEEN CONDUCTED AND HOW MUCH TRAINING HAS BEEN COMPLETED, SMITH SAID THERE IS USUALLY NO DATA OR EVIDENCE TO SAY THAT CRITICAL RISKS WERE ACTUALLY BEING CONTROLLED.

will be talking more about this issue during the 'Managing contractor health and safety' program at the AOG conference. Fundamentally, he will be trying to help people understand the balance between managing legal and safety risk in a contracting environment. It is an intellectual exercise, he said, because making decisions to manage one can potentially create exposures in the other.

STE Safety & Legal
www.stegroup.com.au

NEW PRODUCTS



Fire sprinkler fittings

The Victaulic VicFlex sprinkler fittings are designed to replace threaded hard pipe drops and arm-overs. Suitable for fire suppression contractors, engineers and building owners, the fittings offer simple installation, provide good performance and are cost effective for maintenance and retrofit applications, reducing hands-on time by about 39%.

The product has a variety of bracket styles to suit a range of ceiling types, including commercial suspended, hard lid, hat furring channel, and metal and wood stud ceilings that are preassembled and ready to install. The fittings can also combat differential movement between ceilings, allowing it to move and adjust accordingly in the event of any seismic activity.

Also part of the line is the Series AH2 flexible braided hose, which is 100% kink resistant. With a tight bend radius - UL listed at 2" - the hose is easy to position, reducing the risk of improper installation.

Victaulic Australia/New Zealand
www.victaulic.com



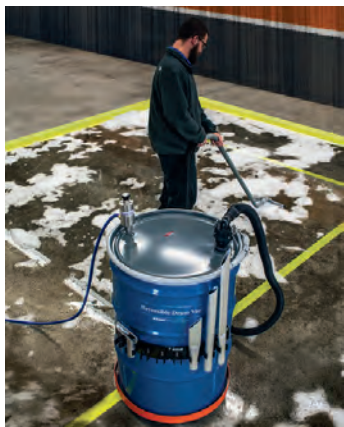
Scaffold inspection tag

The Accumax MaxSafe Scaffold Inspection Tags feature a revised design to suit a wider range of industry applications. Unlike traditional scaffold tags, the MaxSafe tags are not restricted to hanging on horizontal scaffold tubes and can be fitted to a suitable position on the scaffold without the need to cut or alter the tag.

Made from wind-, dirt- and grime-resistant material, the easy-to-read tag design includes a clear colour-coded message of safe use and safety warnings for scaffolders and other workers within the area. Designed to include the total message on one page, the tag is re-usable and its weather-resistant construction helps to keep the important information on the tag readable and visible. It also has a resilient design that prevents it from blowing away or becoming damaged or unreadable.

Specifically designed to suit a range of industry applications in Australia - Sydney, Perth, Brisbane and Melbourne and all surrounding areas - the tag meets or exceeds all relevant AS standards for OSHA compliance and worker safety.

Accumax Global Pty Ltd
www.accumaxglobal.com.au



Liquid spill recovery units

Exair's Reversible Drum Vac and High Lift Reversible Drum Vac are suitable for the recovery of fluids such as coolant, hydraulic oils, sludge and chips, wastewater

and liquid spills. After undergoing rigorous testing by an independent laboratory, the Reversible Drum Vacs have been proven to meet the stringent requirements of the European Union in order to be marked as CE compliant.

The standard Reversible Drum Vac's high-powered vacuum produces 96" H₂O of vacuum and can fill a 205 L drum in 90 s. With the turn of a knob, the same stainless steel pump can quickly empty the drum.

The High Lift Reversible Drum Vac is suitable for pits, below grade coolant sumps, deep wells or bulk storage tanks, which require a longer vacuum hose and more power. The High Lift Reversible Drum Vac produces 180" H₂O of vacuum and lifts liquid up to 4.6 m.

As Reversible Drum Vacs are powered by compressed air, they have no electric motor to wear out and no impellers to clog. They have no moving parts, ensuring maintenance-free operation.

The vacuums attach quickly to any closed head 205 L drum. For small jobs, a 18.9 L Mini Reversible Drum Vac System is also available (drum included, standard unit only). The systems include the two-way pump assembly, flexible vacuum hose (38 mm ID) with 90° quick-release elbow connection and an aluminium wand. Deluxe Systems add a drum dolly, vacuum tools, spill recovery kit and tool holder. Premium Systems add heavy-duty aluminium tools, spill recovery kit and 6.1 m compressed air hose.

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

General-purpose first-aid kit

Compact, lightweight and practical, the First Aid Works general-purpose first-aid kit contains all the essential items required to treat many common injuries.

The product is contained in a durable nylon fabric bag, complete with a convenient pop-open belt loop enabling the kit to be worn on the belt. This ensures ease of access at all times.

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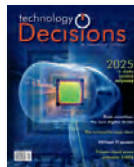


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RESOURCES

Alcohol interlock legislation passes in WA Parliament

The worst drink driving offenders in Western Australia will be forced to install breath testing immobilisers in their vehicles after alcohol interlock legislation passed through state parliament this week.

WA Road Safety Minister Liza Harvey said after a decade of talk about alcohol interlocks, the Liberal National Government had taken tough action on drink drivers.

"This legislation will target those drink drivers who fail to get the message that their irresponsible actions kill," Harvey said.

The Minister said the devices would be fitted to vehicles once drivers served their drink driving penalty time without a licence and would remain in place for at least six months.

"The offender will be responsible for the cost of installing the alcohol interlock system. Once the driver blows 0.02 or less, the vehicle will start," she said.

The scheme will capture first-time offenders convicted of driving under the influence of alcohol and repeat drink drivers who have been convicted of two or more drink driving offences within a five-year period.

Drivers may have to give repeat breath tests throughout their journey. Repeat offenders will also be directed to an alcohol counselling program.

The WA Office of Road Safety will continue working on regulations and anticipate having the interlock scheme in place within 12-18 months.

Alcohol is reportedly a factor in about one quarter of fatal crashes and one in 10 serious injury crashes on Western Australian roads.

Harvey said that since 2008, the rate of fatalities in WA had dropped 23%, but no death on the roads should be accepted.

The Minister said the Liberal National Government would remain relentless in further reducing road trauma through safer roads, enforcement and education.



Industry welcomes new heavy vehicle safety projects

The Australian Trucking Association (ATA) has welcomed the Australian Government's announcement of \$200 million in heavy vehicle infrastructure funding through the latest round of the Heavy Vehicle Safety and Productivity Program.

The program has dedicated \$200 million to heavy vehicle projects across Australia over five years from 2014-15. The projects include road access improvements, new bridges and building new or upgraded heavy vehicle rest areas across the country.

ATA Chief Executive Stuart St Clair said the projects would provide essential support to truck drivers on the road.

"The fatigue laws dictate that truck drivers must take regular breaks, but on many freight routes there simply aren't enough rest areas for drivers to comply," St Clair said.

"In 2008, a review of truck rest areas found that none of Australia's major highways fully met the national guidelines, which require a major rest area every 100 kilometres, a minor rest area every 50 kilometres and a small truck parking bay every 30 kilometres.

"The ATA applauds the government for continuing to improve heavy vehicle infrastructure through the program. By making it easier for drivers to find a place to stop, this funding improves safety for all road users."

Resource Centre App now available for phones



Previously only available for tablet devices, the Capital Safety Fall Protection Resource & Education Centre App is now also available for iOS and Android phones. The app provides instant access to tools that help promote best practice in fall protection and ensure safe work at heights.

"The new Resource Centre App is the way of the future for height safety information, education and compliance," said Michael Biddle, managing director for Capital Safety Australia & New Zealand.

"Now that it's also available on your phone, information is always within easy reach, when and where you need it."

The Resource Centre Phone App can be downloaded from an app store, simply search for: Capital Safety Resource Centre.

Reducing the reality gap with mindful safety leadership

I was recently with a large group of frontline leaders, all of whom worked in high-risk environments and were well aware of the risks that could cause a fatality in their workplace. It struck me, as we talked about the safety leadership role they played, that there was unbridled enthusiasm for ensuring people didn't get hurt. Clearly, there was a passion for doing 'right by people'. What was not as clear or well understood was what they needed to do to make this happen.

In terms of everyday work practices, the leaders were painfully aware of the reality gap between the way 'work was imagined to be done' and how the 'work was actually done'. I was left thinking at the end of the conversation that this blend of commitment and confusion is probably happening across many organisations and worksites throughout Australia. So, why is this happening and what can be done to reduce this reality gap?

Firstly, in management's bid to respond to perceived and actual risks, they have unwittingly allowed the organisation's health and safety management system to grow unnecessarily complex. Layered controls become increasingly difficult to implement at the workplace's 'pointy end'. I recall one Australian mine that had over 6000 procedures. This ultimately sees frontline leaders trying to decide how best to manage the inevitable efficiency - with trade-offs and determining 'core' and 'non-core' procedures.

Secondly, senior and middle managers often stress the importance of system compliance (which should never be underestimated), while in the same breath instructing frontline leaders to continuously improve the culture of safety in their team. Sadly, this conversation often takes place with minimal guidance being provided as to what tangible steps need to be taken to improve the safety climate of the frontline leader's work team.

So how can this important compliance and culture conversation be better led? One starting point is to intentionally work with the frontline in order to nurture a shared mindful safety leadership mindset, where safety is doggedly viewed as an outcome of operational excellence and not merely a required legislative business input. The mindfulness needs to focus as much on what is currently being done right in proactively managing risk, as well as what might go wrong.

This form of mindfulness needs to be supported by crystal-clear clarity on what each leader's safety accountabilities and responsibilities are, so it doesn't just become someone else's problem. All too often we use safety accountability and safety responsibility, interchangeably, which causes unnecessary confusion about who has the authority to make decisions and who is responsible for implementing the decisions.

The other critical step in addressing the 'compliance/culture conundrum' is for mindful safety leaders to place equal weight on supporting people to understand and follow the agreed standards of compliance and modelling the values, behaviours and work practices their people need to aspire to. To this end, a work team's safety climate will be well served if the frontline leader consistently works on three things: building greater mutual safety trust within their team; enhancing the team's engagement with and ownership of the safety values, behaviours and safe work practices; and improving the just and fair culture account balance.

Senior and middle managers can lead the way by clearly exercising their accountabilities in defining and modelling the agreed safety culture leadership model and constructively using their authority to streamline the health and safety management system.

In the end, we need to avoid falling into the subtle trap of making compliance, culture and either/or a choice. If we resolve this trap, we need to go on and show in practical ways how both can be continuously improved.



Marc McLaren is founder and Managing Director of Generative HSE, which specialises in risk management and mindfulness, safety culture development, safety leadership and OHS system design and review. He has extensive strategic and operational experience in the management and delivery of WHS services, risk management, leadership and team development. He has worked with leading blue-chip organisations in Australia and internationally to improve risk and WHS performance across a wide range of industries.



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Head Office:

Cnr. Fox Valley Road & Kiogle Street,
(Locked Bag 1289) Wahroonga NSW 2076 Australia
Ph: +61 2 9487 2700 Fax: +61 2 9489 1265

Editor:

Carolyn Jackson
ss@westwick-farrow.com.au

Chief Editor:

Janette Woodhouse

Publisher:

Geoff Hird

Art Director/Production Manager:

Julie Wright

Art/Production:

Tanya Barac, Odette Boulton

Circulation Manager:

Sue Lavery
circulation@westwick-farrow.com.au

Copy Control:

Mitchie Mullins
copy@westwick-farrow.com.au

Advertising Sales:

National Sales Manager - Nicola Fender-Fox

Ph: 0414 703 780
nfenderfox@westwick-farrow.com.au

Business Development Manager - Jez Whitaker

Ph: 0487 583 770
jwhitaker@westwick-farrow.com.au

NSW, QLD - Kerrie Robinson

Ph: 0400 886 311
krobinson@westwick-farrow.com.au

VIC, SA - Sandra Romanin

Ph: 0414 558 464
sromanin@westwick-farrow.com.au

WA - Mandy Grubisin

Ph: 0468 840 739
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I WOULD ALSO LIKE TO RECEIVE THE SAFETY SOLUTIONS E-NEWSLETTER []

JOB FUNCTION

(please choose one only)

- 1 Management - Director/C-level
- 2 Management - Specialist
- 18 Analyst/Researcher
- 20 Business Owner
- 21 Comms Tech/Engineer
- 13 Consultant
- 14 Contractor/Tradesperson
- 16 Education/Training
- 3 Engineer - Electrical
- 5 Engineer - Process
- 6 Engineer - Project
- 15 OHS/EHS
- 7 Purchasing/Procurement
- 19 Sales/Marketing
- 12 Scientific Officer - QA
- 17 Student - Undergrad/Apprentice
- 10 Technical Officer
- 9 Technician - IT
- 8 Technician - Maintenance/Service

INDUSTRY

(please choose one only)

- 1 Agriculture/Rural
- 2 Building/Construction
- 3 Chemicals/Allied Products
- 40 Cleaning
- 4 Communications Systems
- 50 Consulting/Contracting
- 5 Defence/Military
- 6 Education/Training
- 41 Electrical
- 7 Emergency Services/Law Enforcement/Security
- 8 Engineering Services
- 9 Environmental Services
- 10 Finance/Banking/Insurance/Legal
- 17 Government
- 20 Health/Medical
- 43 Information Technology
- 21 Instrumentalities (eg CSIRO)
- 26 Laboratory - Analytical
- 27 Laboratory - Clinical/Medical
- 28 Laboratory - Life Sciences
- 29 Logistics/Transport/Warehouse
- 30 Manufacturing
- 31 Mining
- 32 Oil/Gas/Coal
- 33 Packaging
- 34 Processing
- 35 Retail/Wholesale/Hire
- 36 Service/Maintenance
- 37 Telecommunication
- 38 Testing/Certification (eg NATA)
- 49 Travel/Tourism
- 39 Utilities

COMPANY SIZE

(please choose one only)

- 1 Under 100
- 2 100 - 250
- 3 251 - 500
- 4 Over 500

[†] For qualified industry professionals outside Australia, the digital magazine and eNewsletters are available FREE of charge. If you would like the print magazine, contact circulation@westwick-farrow.com.au for subscription prices in your region.

WHY SPECIFY A FABRIC BRAND?



*Because this
is too late!*

The **SAFETY** of any flame resistant garment is in the **FABRIC**.

Many companies are selling FR garments today without disclosing the FR fabric manufacturer. Literally, dozens of imitation "88/12" FR fabrics have emerged in the marketplace recently, and they are *NOT* "EQUAL." Critical performance characteristics like arc rating, comfort, shrinkage control, garment wear life, FR durability to laundering, compliance to national and international standards and more are primarily dependent on the *BRAND* of flame resistant *FABRIC* used to make the garment. *Westex UltraSoft®*, delivers all of these benefits on a consistent basis — backed with decades of market-proven performance.

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