

Hazardous Engineering Solutions



Incorporating Health & Safety

The International Magazine For
Hazardous Area Professionals

October 2016 | Issue 31

A photograph of a worker in a red protective suit and blue helmet working at a workstation. The worker is wearing yellow gloves and is pouring a substance from a container into a metal cup. A fume extraction system with a flexible black hose is positioned over the workstation. The worker is sitting on a blue machine with the 'Nederman' logo on it.

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Personal Protection Equipment



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A better way to perform maintenance inspections



Beamex has created a new, mobile, paperless solution for maintenance related inspection activities like checks for preventive maintenance, safety instrumented systems and hazardous area installations. Beamex bMobile is a new mobile app for Android devices. Combined with CMX calibration software, the solution creates a totally paperless system for maintenance checks.

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info@beamex.com



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Contacts

Publisher

Michael Dominguez

Editorial

editors/contributing: Jon Barret, Christer Idhammar

Advertising

Steve Aslett

Steve Pheasant

Email

Info@hazeng.com

Website

www.hazeng.com

Phone

tel: +44(0)1634 731646

Fax: +44(0)1634 731644

Address

MSL Media LTD, Cobalt House, Centre Court,
Sir Thomas Longley Road, Rochester, Kent,
ME2 4BQ



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Fixed Point Gas Detection Solutions

Gas detection for commercial and industrial applications often requires a bespoke system to ensure the installation protects personnel against specific toxic, flammable and asphyxiate gas levels.

Shawcity provides a flexible range of wireless or hard wired fixed-point detection systems from leading manufacturers such as Honeywell, GDS, Crowcon, RAE Systems and GFG. With such a wide choice of solutions, we can design, install, commission and service standard and bespoke systems to suit every environment and even fabricate specialist equipment. Systems are available in flameproof, intrinsically safe or safe area formats and housing options include weather caps for extreme environments.

Gas detection heads are installed in hazardous areas and transmit data to control panels, which are usually located in safe areas but can be installed in IS/ATEX rated zones. They handle Gas Detection Head inputs (up to 64) and can be networked

to a central point so that multiple control panels or systems can be monitored remotely. Locally, the control panel has relays and signal output to interface with Building Management Systems or Programme Logic Controllers as well as actuate equipment (e.g. shut-off valves) and alarms.

A wide range of target gas options are available including toxic, flammable, oxygen and volatile organic compounds. Common gases include: Ammonia, Chlorine, Ozone, Hydrogen Sulphide, Hydrogen Cyanide, Sulphur Dioxide, Phosphine, Nitric Oxide, Nitrogen Dioxide, Carbon Monoxide, Volatile Organic Compounds (VOCs), Carbon Dioxide, Ethylene Oxide, Chlorine Dioxide, Methane, Pentane, Propane, Hydrogen, Ethanol, Flammable Gases, Methanol and Butane.



We also offer thermal conductivity sensors to monitor volume concentrations of gases and poison-resistant pellistors for flammable detection including hydrocarbons, hydrogen, ammonia, jet fuel, leaded petrol and vapours containing halogens. However these lists are not extensive and further options are available, contact us for more information or to discuss your requirements.

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HBM Expands Its Headquarters With A New Production And Logistics Centre.

HBM - a market leader in the field of test and measurement is pleased to announce the launch of its new dedicated production and logistics facility, which is based at its Darmstadt headquarters, in Germany.

Due for completion at the end of 2017, the transparent design of the new production and logistics centre has been carefully selected to reflect the key core values of HBM; precision, innovation and reliability.

To mark the opening of the new facility, a HBM time capsule was buried at a traditional foundation stone laying ceremony, which was attended by local dignitaries, HBM employees and executive leadership. Containing a HBM load cell, daily newspaper and a HBM company brochure, the capsule was lowered into the ground by the Mayor of Darmstadt, Jochen Partsch, to celebrate the launch of the building.

Emphasising its commitment towards its headquarters in Darmstadt and setting the course for future growth, Karl-Heinz Pohlmann, Vice President Supply Chain at HBM explains its reasons behind the new investment. "By creating 6,000 square meters of extra space for the production of heavy-duty and torque sensors, we will be able to create the prerequisites for efficient logistics and modern office space with close links to production".

Situated in the 'City of Science', home of many scientific institutions, universities and high-technology companies, the new HBM Production and Logistics Centre in Darmstadt, which employs over 750 members of staff, is also connected to a number of major roads, which means that parts can be quickly and expediently distributed.



Founded in 1950, HBM is the technology and market leader in the field of test and measurement. With its headquarters based in Darmstadt, HBM is a global technology company with production, development and distribution companies in over 30 countries throughout the world.

For further information, contact HBM on:
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or visit the HBM website at:
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Intertek



FFKM Seals Can Outperform Metal O-Rings At High Pressures & Temperatures

The deformation of metal O-ring seals can occur where process operating conditions reach temperatures up to 300°C, with liquid pressures also as high as 100 bar.



perfluoroelastomer which is resistant to over 1800 different chemicals while offering the high temperature stability of PTFE (327°C). The advanced properties of the product help maintain seal integrity with increased production safety, while also helping to minimise manufacturing and maintenance costs.

Typical worldwide markets that can benefit from the proven advantages offered by Kalrez® products include aggressive chemical processing, food and pharmaceutical production activities, oil and gas recovery, petroleum applications, power generation together with semiconductor wafer processing involving a wide range of industrial and electronic grade chemicals.

Subsequent removal or in-situ repairs of affected equipment such as gear pumps, centrifuges, reactors and quick-release couplings can be expensive, particularly if the MTBF times are of short duration, leading to high unscheduled costing levels together with production shut-downs and process liquid losses. Labour costs alone covering major component strip-downs or complete unit replacements can be very substantial.

This form of seal failure can result in leaks, causing safety concerns while also necessitating clean-up operations and the interruption or total suspension of production line activities.

However, costly breakdowns can be reduced or even virtually eliminated by utilising the DuPont™ Kalrez® perfluoroelastomer (FFKM) O-ring seals. In examples where these high performance products have replaced the OEM fitted metal seals, uninterrupted production periods in excess of 10 years have been experienced without any lost production processes due to seal failures.

Scheduled maintenance periods can also be safely extended leading to manpower savings coupled with increased production outputs.

The Kalrez® O-ring seals are available in the UK from authorised distributor Dichtomatik Ltd. Finished O-rings, custom shapes, sheet and cords are manufactured exclusively by DuPont™ from raw material right through to the finished products, and Kalrez® is now the choice of elastomer for the most demanding sealing applications.

Kalrez® is recognised as the market leading

Further information is available from:
Dichtomatik Ltd, Donington House,
Riverside Road, Pride Park, Derby
DE24 8HX
Telephone: 01332 524401
Fax: 01332 524425
e-mail: kalrez@dichtomatik.co.uk
www.dichtomatik-kalrez.co.uk

Spot on in zone 1 – versatile and robust LED floodlights

The new 6125 series (for zone 1) and 6525 series (for zone 2) floodlights from R. STAHL are designed for challenging environments such as chemical, food and oil and gas extraction. Offering a service life of 50,000 hours, they feature high corrosion resistance supported by a robust IP66/67-rated enclosure.

Energy-efficient LED technology makes R. STAHL's new generation of flexible floodlights for hazardous areas shine. High-quality TIR lenses minimise scattered light and glare effects and enable light distribution focussed on angles of 10°, 40° or 120°. The devices are therefore not only suitable for spot and wide-angle lighting, but can even be installed as pendant lights. The new 6125 series (for zone 1) and 6525 series (for zone 2) floodlights achieve excellent luminous flux: 21,000 lm in versions with 210 W power consumption and 12,000 lm in 120 W models. With this luminaire efficiency of 100 lm/W, they are not only far more efficient than conventional HID lights, but also require significantly less maintenance. The lens panel modules are equipped with hinges for easy installation, maintenance and repair of the removable components. Even under extreme conditions, the service life of these products is specified at 50,000 hours of operation

at maximum ambient temperatures. Their superior durability fully enables them to sustain challenging environments e.g. in the chemical industry or in oil and gas extraction over the long term. Their high tolerance for ambient temperatures in a very broad range from -40 °C to + 60 °C is a stand-out feature in this product class. Featuring a corrosion-resistant body and comparably low weight, these floodlights are an especially good choice for onshore and offshore applications. Special designs with heat sinks made from salt-water-resistant aluminium are also available.

For some applications such as general lighting in production and storage facilities in the food industry, they can be ordered with a scatter protection for the glass front panel. The robust enclosures provide IP66/67 ingress protection and a very high shock and impact resistance (IK10). They are available



either in powder-coated sheet steel or stainless steel versions. For explosion protection expert R. STAHL, these new floodlights are the final complement to a comprehensive portfolio of highly efficient LED lighting solutions.

R. STAHL presents further information about this new series, LED technology in general and real-life experiences with explosion-proof luminaires in harsh conditions at: www.stahl-explorers.com

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Humidity & Temperature Monitoring in ATEX Environments

A new generation of Intrinsically Safe humidity and temperature sensors for ATEX rated dust and gas environments is available. Conforming to the latest international standards, the HygroFlex5-EX transmitter from Rotronic is galvanically isolated. Interchangeable probes are available for all applications. Rotronic developed the HygroFlex5-EX for the pharmaceutical, biotechnology, grain & sugar, petrochemical and oil & gas industries.

HygroFlex5-EX

- Stainless steel probes certified for operation in Zone 0/20
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- ATEX certified ranges -40...85 °C, 0...100 %rh
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- Robust aluminium transmitter housing; IP66 protection
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Visit www.rotronic.co.uk for more information or call 01293 571000

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This monitor is the perfect solution for real-time, personal aerosol sampling in a variety of workplace environments, including but not limited to general industry, foundries, construction sites, chemical

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- Complies with the latest ATEX standards



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Now available: the iRFID500, a powerful new handheld Bluetooth passive RFID reader

Extronics, a designer and manufacturer of hazardous area equipment for over 24 years, has developed the new iRFID500, a powerful handheld passive RFID reader. Practical and cost-effective, the iRFID500 reads UHF tags such as Extronics' iTAG500 range.

If you don't need or have access to a smartphone or tablet, use the iRFID500 as a standalone device for a more cost-effective solution. A large internal memory records tag reads alongside a date and time stamp, which can be easily downloaded via the included USB connection cable to show a clear audit trail and help prove compliance.

Safety is paramount, and the iRFID500 is certified to ATEX, IECEx, and North American regulations for hazardous areas, including Zone 1/21, Class I Div 1, and mining (M1). It also holds radio approvals for ETSI and FCC frequencies, making it suitable for use worldwide. With IP64 protection and an extended temperature range, the iRFID500 can go wherever your workers go.

Easy to carry and use throughout long shifts with minimal operator fatigue, the iRFID500 enables workers to be more efficient with no need to remove gloves thanks to the large buttons and stylus nib. The operator can simply adjust the reading range to read tags in hard-to-reach areas, or identify a particular asset amongst a crowd. The battery lasts for over 12 hours whilst connected via Bluetooth and taking thousands of tag reads and there's even a colour-changing LED to show remaining power, letting you know when to recharge and avoiding downtime.

See the benefits for yourself with a demo kit, including an iRFID500 unit, a USB cable to both charge the iRFID500 and download tag reads, a wrist strap, and a selection of passive RFID tags. You also gain access to a demo app to try it out, and software development kits (SDKs) for either Windows or Android to help you build personalised integrations with your systems.

Get your hands on the iRFID500; contact info@extronics.com or call +44 845 277 5000.



The iRFID500 is designed to integrate with your existing systems to streamline business processes like tracking assets such as drill pipes or tools, monitoring maintenance tasks and planning, and demonstrating regulatory compliance.

The rise of the Industrial Internet of Things has kicked off another trend within the process industries; equipping workers with smartphones and tablets. Used alongside Bluetooth accessories like the iRFID500, these smart devices improve on the

laborious manual methods or awkward PDAs of the past.

The iRFID500 is able to connect with these smart devices via Bluetooth. View tag reads in real time, and add more information such as what maintenance tasks were carried out, or which operator was working on which piece of equipment. What's more, you can use the tablet operating system of your choosing; the iRFID500 works with Windows, Android, and Apple devices.

Israeli hazardous materials logistics handling company uses TVOC fixed monitors for leak detection

Latest project forms part of successful tender by key distributor Amos Gazit for the design, supply and installation of a complete gas detection system



Ion Science (www.ionscience.com) – leading specialist in gas detection instrumentation for environmental and occupational health monitoring – has recently provided 12 TVOC fixed volatile organic compound (VOC) monitors as part of a successful tender by its distributor, Amos Gazit Ltd, for the design, supply and installation of a complete gas detection solution at leading hazardous materials logistics handling company, Israel-based Globus.

Globus has established the largest, state-of-the-art logistics handling centre for hazardous materials in Israel. Located in Ne 'ot Hovav near Be'er Sheva, which is the largest city in the Negev desert, the 23,000 metre facility extends over 25.6 acres. The centre has received all the necessary approvals from the Israeli Ministry for Environmental Protection. Ra'an an Katz from Ion Science distributor, Amos Gazit comments: "There are a wide range of hazardous materials that require monitoring at the

Globus facility. With potential VOCs such as Toulene, Heptane, Dioxane, Tetrahydrofuran, Dimethyl, Formamide, Dichloromethane, we were quick to recommend the Ion Science TVOC fixed PID as a robust, reliable and accurate leak detection solution for this application."

Some of the TVOC fixed VOC monitors have been installed within Globus' reinforced concrete storage building for hazardous materials. It is divided into six separate areas with three storage rooms in each section. There are two TVOC monitors located in opposite corners of each room.

In addition, several TVOC systems have been fitted in refrigerated containers which are also being used by Globus to store hazardous substances. The monitors are fixed approximately 30cm above floor level as they are detecting vapours heavier than air.

Ra'an an continues: "There are numerous chemical substances present in the storage rooms but the area isn't generally accessed by people, except when transporting materials to and from the units using a forklift, so we were confident the application required a leak detection solution rather than TLV monitoring."

Each TVOC system features a custom-designed cage to protect them from being damaged by the forklift trucks that regularly access the facility.

The gas detection control system is located externally, outside the Globus storage building, and linked to horn and strobe units which are triggered by alarms generated by the TVOC monitors in each section. Operators are alerted via SMS text messages sent to mobile devices using an integral cellular modem.

Ideal for use in manufacturing and process industries where VOCs are typically present, the Ion Science TVOC boasts a selectable detection range of 0-10 parts per million (ppm), 0-100ppm or 0-1000ppm. The unit's advanced PID capabilities utilise the Ion Science advanced patented Fence Electrode technology, a three-electrode format with increased resistance to humidity and contamination.

With a 4-20 mA analogue output, the TVOC VOC monitor can be simply integrated into a DCS control system to provide warnings and enable control of high VOC levels in the working environment. Plus ATEX approvals facilitate a three-wire TVOC system to be used in Zone 2 hazardous areas, without safety barriers.

Ra'an an adds: "As the storage rooms contain a broad variety of substances and the application is defined as leak detection, the measuring range has been set at 1,000ppm, with an alarm level to 100ppm and a cycle time of three minutes."

"The Ion Science TVOCs are easy to install, maintain and service and have proved very reliable for the Globus application," Ra'an an concludes.

For product information:
tel: + 44 (0) 1763 208503
email: marketing@ionscience.com

SGS Baseefa can now certify Ex equipment for North America

SGS Baseefa is pleased to announce that they have been formally recognised to conduct all work necessary to issue North American certification for hazardous area products.



Providing you meet these requirements you will be issued with a certificate and listing, and will be able to affix the "SGS USA and Canada mark", allowing you to sell your equipment directly to both markets. The "SGS mark" is accepted by all relevant "Authorities having Jurisdiction" within the US, putting it on a par with the marks from other NRTL's in North America.

As part of a Nationally Recognised Test Laboratory (NRTL), SGS Baseefa is recognised by the American Occupational Safety and Health Administration (OSHA) for safety and compliance and can assess, test and certify your equipment for the US "Hazloc" market, as well as the related Canadian Standards.



SGS Baseefa is world renowned for its experience and dedication to the certification of hazardous area products, and obtaining this recognition for North America is a natural step as Ron Sinclair, Technical Manager explains;

"As SGS Baseefa is a major provider of ATEX documentation and the world leader in issuing IECEx certificates, our customers will now benefit from being able to certify their products for ATEX, IECEx, USA and Canada, all at the same time, as one single project, thus avoiding the need for multiple points of contact".

How it works:

We will carry out an assessment, testing and factory inspections which will determine whether:

- Your equipment complies with the national safety standards
- The materials, production and conditions of production comply with the product safety requirements
- Your quality system ensures consistent quality of the equipment

In addition to the standards for Division based installation, we are proud that we are part of the first NRTL to cover all the relevant standards for zone based installations, using the ISA 60079 series.

SGS Baseefa can test and certify your products in our NRTL OSHA accredited facilities by our experts in the UK. If you are interested in having your equipment assessed and certified for North America then please contact us:

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New Products Detailed in Latest Straightpoint Catalogue

Straightpoint's global distributor network has received the manufacturer's latest catalogue that details new products, including the Wireless Low Headroom Link and Wireless Impact Block.

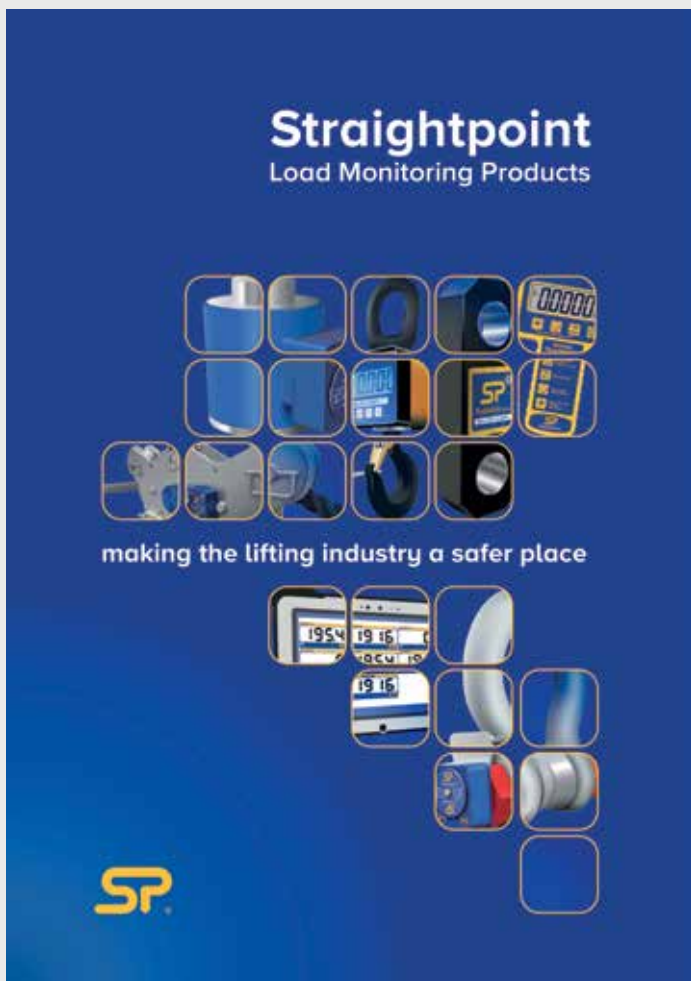
much of the wireless load cell range. At the turn of the year, Straightpoint launched a version of its most popular product, the Radiolink plus wireless load cell, which met Zone 0, 1 and 2 hazardous area classification, but the catalogue includes the Wireless Load Shackle, Wireless Compression Load Cell and Running Line Dynamometer ranges in ATEX and IECEx versions, in addition to what David Ayling, director at Straightpoint, called a "game changing" product in the Wireless Load Pin for hazardous areas.

Ayling said: "The catalogue itself, like every edition before it, represents completion of a large-scale project in its own right, combining the expertise of many different departments at the company and our trusted sources in industry. However, what gives the team the most satisfaction is that the document encapsulates innovative, technologically advanced load cells and other equipment, the application of which makes the lifting industry a safer place."

The distributor network is abuzz over a revelation on page 22 of the catalogue that Straightpoint will unveil Stage Safe, a load cell for the entertainment industry, in the coming months. Its systems have already been widely embraced by theatres and live events venues, but end users will soon have access to a dedicated product.

Ayling said: "We staged last year's launch of the Wireless Load Shackle at an entertainment industry event, while the Loadlink plus and other products have also been widely consumed by the sector. However, it is an industry that requires dedicated solutions because of the many unique requirements of lifting in such environments and the breadth of potential that's apparent. Stage Safe is much anticipated and we look forward to full details being a cornerstone of the next edition of the catalogue."

Tel: + (0)2392 484891
Fax: + (0)2392 472211
www.straightpoint.com



They are among a myriad of other force measurement, load monitoring and suspended weighing load cell innovations in a 48-page document that was launched in three languages on 12 October 2016.

Now available in a wireless version, the Straightpoint range of low headroom links is designed to provide accurate measurement of loads in the most

challenging applications where headroom restrictions are a major factor. The Impact Block, meanwhile, measures the shock load and weight of branches as they are cut during tree felling or maintenance; it has proved popular with tree surgeons and other professionals from the arboriculture industry.

Among other changes to the catalogue are details of ATEX and IECEx hazardous area approval on

Mondi Dynäs setting new standards with vibration monitoring for PM5

Swedish sack and speciality kraft paper producer Mondi Dynäs has decided to modernise its paper machine PM5 with a new online system for vibration monitoring. The Intellinova online system with vibration monitoring units thus will replace the paper machine's older monitoring system, all in order to increase machine availability, profitability, and safety.



In conjunction with the installation of the Intellinova system, existing vibration sensors and cabling will be used. The online system will also be expanded to include more parts of the paper machine, where some three hundred DuoTech accelerometers will be installed and connected to the system. Overall, the Intellinova system will comprise over five hundred measuring points. In addition to PM5, the winder and various auxiliary equipment will also be equipped with online monitoring.

Mondi Dynäs maintenance manager Micael Koch justifies the choice of SPM as a supplier: "The choice fell on SPM because they could offer the best total solution that fits well into our future approach to personal and operational reliability work."

The new DuoTech accelerometer combines the best of two cutting-edge condition monitoring technologies. Vibration measurement with HD ENV and shock pulse measurement with SPM HD make it possible to obtain a complete condition status of the monitored object, with exceptionally clear readings and very long pre-warning times for reduced mechanical condition.

SPM is the main contractor for the project, responsible for installation and commissioning carried out by SPM service engineers. New cable routes installations are carried out by Eitech under SPM's lead. After completed installation and commissioning, Mondi Dynäs preventive maintenance staff will undergo training at SPM Academy.

Tomas Årman, Sales manager of SPM Sweden, comments on the deal: "This is an extremely important order for us. It confirms that we are a leading supplier of condition monitoring equipment, with measurement technologies and systems in the extreme cutting edge. We look forward to a long and close cooperation with Mondi Dynäs."

Dynäs mill, by the river in Våja, Kramfors, started its saw mill production in 1884 and developed to become one of the top-addresses for high-quality unbleached sack and speciality kraft paper in the world. Starting pulp production in 1915 and paper production in 1917 the mill was acquired by Mondi in 2000.

For More Information Visit:
www.spminstrument.com



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Nederman Introduces Most Flexible Dust Collector Ever

To ensure a perfect fit into virtually any manufacturing application that generates dust, smoke or fumes, Nederman has now introduced its new L-series, a modular and fully configurable dust collector.

In manufacturing facilities where dust, smoke or fume is generated during the production process, the primary objectives are to create a safe working environment for the workforce whilst achieving low emissions to atmosphere, to meet increasingly stringent environmental and health and safety regulations. Since no two facilities are the same, Nederman has designed its new L-series dust collectors, to be fully flexible and configurable to match a wide range of needs in the collection and recycling of dust, smoke and fumes.

How we create the Perfect Fit

The core of any dust collector is the filter media. The Nederman L-series dust collector offers a wide portfolio of filter media in bag or cartridge format, which ensures that performance and filter life is optimised, whatever the contaminant. After selection of the correct filter media, the dust collector is configured to match the required airflow and application characteristics. The L series is modular and assembled from a limited set of stocked panels. This panel stocking enables Nederman to offer very low lead times for all the range, with some standard pre-configured filters available in just two working weeks!

Flexible, efficient and future-proof

Nederman's wide expertise in extraction as well as collection of dust, smoke and fumes helps ensure not only a perfect fit, but also efficiency and a future-

proof solution. The new L-series can be expanded to adapt to future process changes or new regulations. New filter modules can easily be added whenever increased filter capacity is required.

Low total cost of ownership

The L-series offers low total cost of ownership due to low power consumption, minimum maintenance needs and extended filter lifetime. It can be supplied either pre-assembled or be fully built on-site, for those occasions where access requirements prohibit the installation of an assembled filter. This may also generate considerable savings on shipment costs. The Nederman L-series is available in ATEX compliant configurations for safe handling of combustible dusts, as well as with a variety of ancillary components and equipment for configuring the dust collector and system to match all of your facilities operation and maintenance needs. These options include pyramid or trough type hoppers, a no-hopper venting version, dust discharge valves, dust storage bins with 50 or 100L capacity, integral or floor mounted fans and fan silencers.

Wide range of applications

The portfolio of filter media options and configurations available makes the L-series suitable for a wide variety of applications, including crusher extraction, spray dryers, foundries, mixers, grinders, kilns, welding, plasma cutting, shot blasting, thermal



spraying, biomass, mining, metallurgical, food and pharmaceutical processes.

Unlimited capacity

Nederman has built the L Series to be suitable for rigorous environments and applications. It is robust, resilient and weatherproof, and whilst the modular method of construction makes the air flow capacity virtually unlimited, there are standard sizes which cater for flows of approximately 5,000 to 300,000m³/hr, dependent on the application and the media selected.

For more details on how Nederman can clean up your work environment, please contact your local Nederman representative on Tel: 08452 743434.

Nederman 'At-Source' Extraction

The Nederman Fume Eliminator 840/841 is a small, lightweight, portable extraction unit that has proven invaluable in improving the air quality of workshops where light welding is carried out. Ideal for a diverse range of workshop demands, the Fume Eliminator is the epitome of a flexible working solution.

The Nederman FE840 model is provided with a manual start/stop function, whereas the FE841 includes an innovative automatic start/stop feature that starts and stops the extraction with operation the welding torch. By eliminating welding fume at source, via either on torch extraction or extraction nozzle, the Fume Eliminator with its integral 99.7% efficient filtration is undoubtedly the most cost effective means of reducing airborne particulate. Furthermore, the automatic feature on the 841 Series ensures that extraction is only used when required, thereby improving efficiency and reducing running costs for the end user.

This efficiency is also incorporated into the Fume Eliminator design, with a powerful 100W motor that

creates an airflow of up to 150m³/h and a maximum suction of 22kPa through the 2.5m long hose, and to permit the welding operative to freely move the Fume Eliminator from one work area to the next, it has an extremely lightweight design with a total weight of 16kg. This is packed into an 830 by 230 by 410mm (L X W X H) frame that allows the unit to be used in the most compact and demanding of work areas.

To cater for the various demands of the workplace, the Fume Eliminator is available with three optional nozzles. The TM80 nozzle has a 500mm length with an 80mm diameter hose whereas the TM200 is supplied with a 570mm hose length with a slot nozzle that is 200mm wide and 30mm high. The



final nozzle option is the PM300. This provides a slot width of 300mm and a slot height of 5mm, making this nozzle the preferred choice for seam welding applications. For further details on the Fume Eliminator, please contact your local Nederman representative.

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Lighting Up The Darker Months with Exloc's Range of Explosion-Proof Lighting.

Exloc Instruments offer a full range of explosion-proof lighting for every application.



From portable lanterns and inspection lamps to full banks of flood and high bay lighting, we have a scalable solution for you.

Portable Lanterns & Worklights

ATEX and IECEx certified, Intrinsically Safe lighting products are rigorously tested to ensure maximum reliability with power, longevity and flexibility at your fingertips:

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- Intrinsically Safe
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Portable Inspection / Strip Lights:

Suitable for use in Zones 1,2,21 & 22, these lights can be used as individual units or connected together to form a complete lighting system using simple plugs and sockets.

Weatherproof to IP66/67 and impact tested to 7 Joules, they are suitable for use in the harshest environments.

The very small diameter means it can be used as a handheld inspection lamp as well as a fixed light depending on requirements.

Features

- Lightweight, ultra compact explosion-proof fluorescent light
- Atex approved for use in Zones 1,2,21 & 22
- UV Resistant, Anti-Static Polycarbonate Tube
- Impact Tested to 7 Joules
- IP 66/67
- End of Life Protected
- 24V ac/dc, 110V ac & 230V ac
- Available as: Single light, interlinking light or a set of lights to create a system.

Floodlights and High Bay Lighting

Floodlights and High Bay lights are high output, robust and reliable LED lighting for use in oil & gas, petro-chemical, aviation, marine and utility applications.

Suitable for use in Zones 1,2,21 & 22, weatherproof to IP66 and with a robust LM6 alloy housing, all models are suitable for use in the harshest environments. Utilising high output LED light



engines, they provide excellent illumination while running very cool to ensure high reliability and long life.

All floodlight and high bay lights are fitted with custom built drivers which ensures the driver lasts as long as the LED and is more suited to the extremes of temperature encountered in an explosion-proof application.

Heatsinking and thermal management has been optimised using CFD (computational fluid dynamics) to ensure maximum heat dissipation, essential for reliable LED functionality and long life.

Models in each series are scalable and range from 3000lm units to 11,500lm units.

Features

- ATEX/IECEx approved for use in Zones 1, 2, 21 and 22
- Lightweight, robust and vibration resistant design
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Our activities extend beyond just certification; we offer an accessible source of expertise in many related areas. With over 300 years collective experience, we have extensive knowledge of the application of industry standards in many areas. We actively participate in the committees formulating standards both at European and International level.

Technical Advice:

Our customers value our unbiased advice on how the standards apply to their particular product or service. We believe that customers value direct access to the individual engineers who will be working with them, and we encourage contact by email, telephone or face-to-face meetings.

Making expert knowledge available to all our customers is an absolute priority for us. We are happy to offer advice on an "as needed" basis, as part of the Technical Advice Service we provide alongside our certification work, or through selected modules contained in our training programmes.

Training:

Our portfolio of training courses is unsurpassed and includes courses for those new to the Ex environment or needing a brush-up in the basics to courses covering detailed subjects such as Area Classification, ATEX/DSEAR, and QA System Planning.

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WHEN YOU NEED TO BE SURE

Extensive Handling Equipment Range Features Explosion Protection As Standard

The J D Neuhaus extensive range of handling equipment, including hoists and cranes are all engineered for extremes, providing safe operation in dust laden atmospheres or other explosion-hazardous areas such as the chemical manufacture and processing environments.



All the JDN products, which include both compressed air and hydraulically operated units are Explosion Protected as Standard.

This ensures that all JDN products are safe for continuous and long-term operation in potentially explosive chemical atmospheres as well as the more insidiously dangerous conditions where high levels of airborne dusts exist. This can include combustible dusts, high concentrations of airborne dusts, or wherever a dust cloud is confined with an oxidant present (ie typically atmospheric oxygen) and particularly where there is an ignition source. The oxidation of other commonly known materials such as coal and sawdust can also be the source of a dust explosion. However, many other normally inactive materials such as grain, flour, sugar, powdered milk and even powdered metals can form potentially explosive dust cloud suspensions in a busy working atmosphere.

The easy to use Profi TI hoist range is the workhorse of the industrial and commercial world, and the operating air supply can be set at 4 or 6 bar pressure, with a standard load lift height of three metres being provided throughout. Other optional lift height requirements can also be specified and accommodated as required.

Their Profi TI range of air operated hoists includes a total of 19 models providing lift capacities from 250kg up to an impressive 100 tonnes. These incorporate many years of design and development, and have successfully proved their versatility and universal reliability following installations within a wide range of light, medium and heavy duty industrial workplaces. Their compressed air power supply is also utilised for control functions. It does not initiate sparks, so providing an unbeatable advantage when hoists are operating in potentially explosive atmospheres. Even greater safety can be achieved by the prevention of sparks generated by static discharges or metal to metal friction contacts.



Standard versions of JDN hoists and crane systems (which utilise Profi TI hoists for lift operations) have the explosion protection / classifications and markings EX II 2 GD IIA T4 / II 3 GD IIB T4.

Increased spark protection can be achieved, which involves copper galvanisation plating of the hoist bottom block and load hooks, together with fitting brass safety catches to achieve a rating of EX II 2 GD IIB T4.

With even further increased spark protection for explosion group IIC, the hoist horizontal movement trolleys incorporate running wheels and travel gearing which are manufactured in bronze for an impressive EX II 2 GD IIC T4 rating.

All Profi TI hoists incorporate a top suspension hook, with optional overhead trolleys also available to accommodate lateral movement of suspended loads. Three trolley options incorporate load traverse movements combined with precise load positioning. One trolley is manually operated for horizontal movement of the suspended load. A second trolley has a manually operated reel chain mechanism for lateral load movements. The third motorised trolley provides traverse as well as load raise and lower movements, together with precise load positioning, utilising compressed air power. All trolley systems can negotiate overhead rail curvatures, with trolleys optionally fitted with rack and pinion drives for safe load handling on offshore platforms and sea going vessels. For installations with overhead space constrictions, a low headroom trolley option is also available, suitable for loads up to six tonne.

The hoists are all 100% duty rated with unlimited duty cycles, so minimising any downtime conditions.



Their compact modern design eliminates any protruding control hoses or similar external parts susceptible to damage, emphasising the suitability of the Profi range for even horizontal pulling. These standard hoists are also insensitive to atmospheric dust or humidity and can withstand working temperatures ranging from 20°C to +70°C. Their patented, low maintenance vane motor brake systems ensure fail-safe starting and positive braking, while also being low maintenance as well as providing lube-free operation. Various pendant controls can be fitted for sensitive, single speed, multi-function or remote control operation. These design-led hoists also provide strong, fast and silent operation combined with high performance efficiency and reliability even when operating at high lifting and lowering speeds. The compact hoist designs ensure minimum product dead-weight, and when operating with loads from one tonne upwards also feature overload protection as standard.

Selected models from the range of air operated hoists and trolleys can be supplied with nickel plated components for clean room operations and other specialist applications that also require hygienic working conditions or washdown facilities. These include chemical and pharmaceutical production establishments, together with the food and drink industries covering all aspects of both handling and product manufacture.

The models currently available in the nickel-plated range include: the Profi TI hoists with 0.5 and 1 tonne lift capacities, together with a big-bag handling unit with a rated 1 tonne lift. A low headroom trolley hoist of 1 tonne capacity is also available, which is designed for operation in areas subject to low headroom capacity. Where Profi hoists are utilised with trolleys for overhead rail mounting, both manual operated (type LN) and

motorised (type LM) trolleys can be provided which have also been subject to appropriate nickel-plating treatment for use in hygienically critical areas.

For less severe operations the JDN Mini hoist range is available for light – medium lifting requirements. These cover four models for individual lift capacities of 125/250/500 and 980kg, with manipulator variations available for single handed operation during lift/lower/traverse and even final load positioning operations.

Hydraulically operated versions of the JDN Profi range can also be made available, together with hoists specifically designated for operation within unique working conditions. These include hoists available with compressed air or hydraulic operation, which are suitable for underwater work. These specialised hoists have been utilised in subsea conditions to provide weightless underwater movements of suspended loads. Typical operations have included the replacement of a 45 tonne replacement rudder blade for a cargo ship while remaining at sea.

Overhead monorail air hoists having air or hydraulic drives can also be supplied with 11 models in the range covering lift capacities from 10 to 100 tonnes. Further ultra low headroom versions are also available for lifting operation up to 100 tonnes including specialised products available for BOP handling up to 200 tonnes. Hoists for specialised lifting in cryogenic conditions down to temperatures of -45°C are also now available.

Full crane systems together with self assembly crane kits can be provided for onshore/offshore operations with optional compressed air/hydraulic drives. These products can be supplied to suit individual customer requirements including jib cranes, plus top running and underhung overhead travelling cranes.

All JDN products are covered by a worldwide service for annual checks, inspection and repair together with complete overhaul and installation facilities.

Further information is available on request to:
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Go For Zero With On-Site Safety Sign Printing

Whenever a risk emerges in the workplace, it often takes a long time to order and wait for new safety signs that can warn co-workers about danger and instruct them on how to avoid an accident.

By using a professional safety sign printer and software, companies can design, print and implement new signs a lot faster in order to support their Go for zero programme and avoid workplace accidents.

Reduce workplace accidents

According to Eurostat, 2.5 million non-fatal (minimum 4 days absence) and 3515 fatal workplace accidents still occurred in the European Union and United Kingdom in 2012. The numbers show there is room to increase workplace safety, reduce the number of accidents and reduce their associated costs. Ask yourself what if a simple sign could prevent a co-worker from losing a finger, or even just

reduce the severity of an accident because it urged to use the right protective equipment?

Use safety signs

Prohibition, mandatory, warning, first aid and evacuation or fire signs are instrumental in any Go for zero programme that aims to reduce workplace accidents to an absolute minimum. The major advantage of safety signs is that they can easily communicate important information where it is needed most to avoid accidents. Examples include safe work procedures right next to a machine, the contents of pipes on the pipe itself, or warning signs at the entrance of a dangerous area.



On-site printing power

Brady's range of printers and safety software enables users to create durable standard and customised signs in a great number of shapes, colours and sizes. When safety risks emerge in the workplace, simply walk up to the printer and create signs to communicate the necessary precautions to co-workers. An on-site printer is a great tool to support any Go for zero programme.

Email emea_request@bradycorp.com to receive the Safety and Facility Printer brochure.

Scott Safety demonstrates product innovation at ExpoProtection Show 2016

Scott Safety, a world leader in the design, manufacture and sale of innovative breathing apparatus and personal protective equipment (PPE), will be showcasing an selection of its latest products including lightweight and ergonomically designed powered air respirator (PAR) Duraflow, at the ExpoProtection Show 2016 on stand E129, 7 - 9th November in Paris, France.

The innovative Scott Safety exhibition collection includes the comfort-focused AVIVA half-mask. Novel features such as enhanced voice intelligibility enables the wearer to be clearly heard by those around ensuring clear lines of communication and thus eliminating the need for short term mask removal. AVIVA also provides a reflex seal allowing for increased movement, flexibility and comfort whilst still maintaining a positive seal. The positive fit check button feature built into the device guarantee the user has a secure fit of the half-mask. The AVIVA half-mask is available for use with a wide range of filters permitting use of the device in a variety of applications and industrial situations.

Scott Safety will also showcase the highly versatile Duraflow PAPP, which provides sophisticated

real-time air flow control technology. The advanced new solution gives complete wearer assurance of respiratory protection with automatic monitoring features that ensures the airflow rate is maintained at the correct level to protect the worker. Visual and audible diagnostics alert the user to any drop in airflow below the required level or when the battery needs re-charging.

Scott Safety's will highlight the company's expertise in Asbestos, Powered Air and PPE industries. Additional Scott Safety highlights to be exhibited at the show include the HC42 Bumpcap and Reflective HXRK sticker kit.

In addition visitors to the who will get to see for the very first time a preview of Scott Sight, Scott's



new world first in-mask thermal imaging intelligence camera, set to revolutionise the fire market, by providing vision to every firefighter. Scott Sight has also been shortlisted for the Innovation Award at this year's show.

For further information, please visit: www.scottsafety.com/emea.

Arco Unveils Bigger-Than-Ever Big Book Catalogue 2016/17

Safety experts Arco has launched its latest Big Book catalogue, featuring one of the largest ranges of safety equipment, workwear, and workplace safety products, offering customers the best possible choice.

New products for 2016/17 include the highly anticipated, award-winning Women's Hazardwear - the industry's first comprehensive range of Hi-Vis hazardwear designed and tailored for women - in yellow and GORT orange. Debuted on the catwalk at this year's Safety and Health Expo, the Hi-Vis collection won the coveted Professional Clothing Award Best Stock Design prize.

In the personal protective equipment (PPE) category, Arco reveals new additions to its eyewear range including Arco Skarn Safety Spectacles. The sporty framed spectacles are completely metal free and lightweight, increasing comfort for the wearer.

The catalogue also launches two new products that are available exclusively through Arco, The Sundstrom 900 / 905 is a new adaptable respiratory protection solution that enables the user to customise the half mask to their requirements, either by moving the filter to the back to reduce the weight and profile, or to combine it with a powered or airline system. Also, the uvex sportsline safety trainer offers enhanced protection, comfort and style and is ideal for light industry such as warehousing, logistics, automotive, aerospace and tradesmen.

The new Arco Big Book 2016/17 is available from 5th September 2016. To get your copy and access Arco's wide range of products, call your local sales office, visit your nearest Trade Counter, or go online to: www.arco.co.uk/catrequest.



With over 20,000 own brand and leading named brand products, including 561 new solutions, this year the Arco Big Book is bigger than ever spanning 1,000 pages.

Due to popular demand Arco has introduced Arco Essentials Contractor Workwear, offering

value without compromising on quality. The range provides, bulk-packed garments; including fleeces, sweatshirts, polo shirts and T-shirts, supplying workforces with uniforms and workwear packaged in sets of 5 or 10 pieces to make on site distribution easier to manage.

Crowcon's Laser Methane mini (LMm) portable methane detector goes green for improved visibility in ATEX-rated environments

Key Facts:

- Combines ATEX approval with a green laser guide-light for improved visibility
- Enhances safety with remote monitoring from up to 30 or 100 metres
- 0.1 second response time and monitoring through glass minimise risk to operators
- IR laser absorption spectroscopy technology eliminates the risk of false alarms



Crowcon – a specialist manufacturer of gas detection equipment - announces that the next generation of its Laser Methane mini (LMm) gas detector combines full ATEX approval with a new green laser guide-light for improved visibility across a range of conditions, including in strong sunlight. The use of infrared laser absorption spectroscopy enhances safety by allowing operators to remain at a safe distance from potentially dangerous leaks and provides an almost instantaneous response in the presence of methane gas.

Unlike conventional methane detection methods, which must be in direct contact with the gas in order to detect it, LMm enables remote detection of gas leaks. With a range of 30 metres in standard mode, or 100 metres with a reflector, LMm enables operators to detect methane gas from a safe distance. As the laser beam can penetrate some transparent surfaces, such as glass, LMm also detects methane through a window allowing closed

premises and confined spaces to be checked faster and more safely.

LMm is ATEX approved for use in explosive environments, including remote-monitoring applications such as closed or confined spaces, above-ground riser pipes, and pressure-regulating stations.

The typical response time of LMm is just 0.1 seconds, making it ideal for quickly scanning an area for a suspected leak and further minimising the time that operators are exposed to a potentially hazardous environment.

LMm uses infrared laser absorption spectroscopy which measures the specific wavelength of infrared light that is absorbed by methane gas. This provides superior accuracy and specificity for operators by making LMm immune to other gases and eliminating the risk of false alerts.

LMm performs a shelf check and an internal calibration at start up. This requires no training and ensures readings are always accurate and reliable. As LMm doesn't need regular recalibration, it doesn't require the routine 6-monthly maintenance that other detectors need.

LMm is a compact and lightweight unit, which enhances operator comfort and ease of use. All measurements are displayed in both numerical and graphical formats to simplify operation.

LMm is widely used in gas distribution companies by teams responding to reports of leaks, as it enables them to respond rapidly and stay safe.

About Crowcon

Crowcon Detection Instruments specialises in developing, manufacturing and marketing innovative, reliable and cost-effective flammable and toxic gas detection equipment. The company was formed in 1970 and has constantly led the field with products designed for safety and environmental monitoring.

Based in Abingdon, Oxfordshire in the UK and with branch offices in Holland, the USA, Singapore, India, the Middle East and China, Crowcon's products are sold throughout the world, serving oil, gas and petrochemical companies, public utilities, clean water and sewage treatment companies, fire brigades, construction companies and other organisations where accidental leakage of gas or vapour can become a toxic or explosive danger. Visit the Crowcon website at www.crowcon.com.

Crowcon is a Halma Company. Halma makes products for hazard detection and life protection and is a market leader in specialist electronic, safety and environmental technologies.

Visit the Halma web site at:
www.halma.com

Comparing the Capabilities of Thermocouples & Infrared Cameras

FLIR Systems has posted a recorded version of a popular webinar that compares two common instruments used for measuring temperature: thermocouples and infrared (IR) cameras.



The webinar provides an informative introduction to temperature measurement with the technologies available today, and explains the basics of how thermocouples and IR cameras work.

To provide a direct comparison of the two measurement solutions an experiment is conducted using thermocouples and an IR camera to measure temperature and the results of this experiment are reviewed.

This webinar will be of interest to anyone who currently uses thermocouples to learn more about the advantages of next-generation infrared cameras for non-contact thermal measurement.

To watch the recorded webinar please visit www.flir.com/science/display/?id=78378 or contact FLIR Systems at: research@flir.com or +32-3665-5100.



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Extracted Key Adaptor from Fortress Prevents Inadvertent Machinery Startup

To prevent the inadvertent startup of dangerous machinery, Fortress Interlocks has developed an extracted key adaptor for use with its robust amGardpro, amGardS40 (IP69K) and mGard interlock ranges.



By forcing an operator to extract the safety key when operating an interlock, the adaptor ensures the key cannot be turned and left in place, inadvertently re-starting machinery.

It is designed to be kept with the operator, ensuring any access points cannot be closed and re-started while working in a hazardous area. Additional safety keys can be released following the forced extraction of the initial key, allowing the protection of multiple users at the same time.

The extracted key adaptor utilises the 'CL lock', which has over 200,000 unique combinations, meaning it works with even the largest systems. It is also available with a padlockable dust cover to be compatible with standard lockout procedures.

Fortress Interlocks Ltd
Tel: +44 (0)1902 349000
E-mail: sales@fortressinterlocks.com
Website: www.fortressinterlocks.com

Elfab launch first range of products for the Tank Protection Market; Flame Arresters & Breather Valves

With over 80 years manufacturing experience, Elfab can now offer customers a higher service level by enabling customers to source a wider range of products from one supplier.

Specifically designed for the tank protection market, both Flame Arresters and Breather Valves offer additional safety relief protection joint with significant cost and performance benefits.

Elfab's latest generation of Flame Arresters and Breather Valves combine the latest patented technology and superior performance characteristics to eliminate problems associated with traditional solutions.

Dependent on the design brief, Elfab have a flame arrester to best suit specific requirements. Tested to the highest quality standards, our technically superior range is designed to stop a flame in its tracks. Elfab's Flame Arresters are used in a

wide range of applications where tank and vessel protection is critical.

Our breather valves have developed from a new valve philosophy, introducing superior, modular designs; a first for the tank protection market.

Leading the industry with technically superior innovations, Elfab are thrilled to supply a comprehensive range of flame arresters and breather valves to its customer base. Vast market knowledge enables Elfab to provide the most advanced solution for tank protection needs by launching the latest breakthrough in flame arresting and breather valve technology.

With the combination of offering both technologies,



Elfab will continue to offer the same superior service and industry best lead-times to a wider range of markets of applications.

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Fax: +44 (0)191 293 1200
E-mail: pr@elfab.com
Website: www.elfab.com

PS200 Now Offers Extended Battery Life

Renfrew, Scotland, UK- Tyco Gas & Flame Detection is pleased to announce that the PS200 portable gas detector is now available with a new catalytic bead sensor option that provides an increased battery life of up to 80 hours in diffusion mode and 20 hours in pump mode.

Both lightweight and durable, the instrument is ideal for protection in hotworks and confined space applications. The PS200 monitors and displays up to 4 hazardous gas conditions simultaneously, detecting all possible combinations of Methane, Oxygen, Carbon Monoxide, Hydrogen Sulfide, and a wide range of flammable gases.

Operator interface and calibration are intuitive and easy by toggling between simple one-button functions. During normal operation the large LCD screen displays battery life and real-time gas

concentrations, but when a hazardous condition occurs users are alerted by three alarm functions: vibration, red flashing LEDs, and audible buzzer.

To ensure the highest level of personal safety, the PS200 is also fitted with an optional man down/motion sensor that activates alarms if the instrument is not moved within a pre-set time. Other features include an optional built in remote sampling pump for confined space entry, manual backlight screen for poor lighting conditions, a customized user identification code setup, calibration due date display and standard datalogging that can be



downloaded with a USB connection to a computer. Accessory components available separately include an Auto Bump and Calibration Station, a 5-instrument multi-charger and an assortment of colored boots/instrument covers.

For more information visit:
www.TycoGFD.com.

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From Seafaring to Belzona Engineering: Memories, Amusements and the Next Chapter

Interview with David Blackwell, Belzona Engineering Director



Q) How did you come to trade the sea for a life on land?

A) I traded my life at sea for an opportunity to see my son grow up, so I accepted a voluntary redundancy as the Company I was working for were reducing their fleet. The idea was then to get an odd job to give me time to look for a position on a rig supply vessel or a cross channel ferry to carry on my marine career. But I applied for a job at Belzona and have been here ever since, because I just enjoy the job so much. It is very interesting, very varied, always busy; it just grabbed my attention and I decided to stay and build my career here.

Q) Throughout your career at Belzona, do any memorable moments in particular come to mind?

A) I was once asked to accompany an Independent Consultant down a coal mine to look at a job on a coalface on one of the coal conveyor machines. As the lift took us to the bottom, I was told that the coalface is actually four miles away, so we had to hitch a ride on a conveyor belt 1200 feet underground. After jumping off the belt, I was looking at the potential job and they failed to mention that they were just about to knock all the props out from behind the coal face. So as I turned

David Blackwell joined Belzona in 1987 after spending 13 years with Shell in the Merchant Navy and rising through the ranks to a Senior Engineering Officer. In Belzona, David has occupied various positions over the years and now heads the company's Engineering Services Department. We had a chance to catch up with David and ask him some questions about his long-lasting experience in the corrosion mitigation industry and some trends he is currently observing in the market.

I also vividly remember the stars at night. At midnight, after finishing a late shift in the engine room, we'd come out, make a cuppa and sit out on the deck in the middle of the ocean in pitch black. Nobody that lives on land can ever see that amount of stars because of the lights from the cities. It is just awe inspiring, it really is. And obviously you see a lot of the world when you're travelling, and I think the only continent that I haven't visited now is Antarctica. That's on the bucket list.

Q) As you spent over a decade in the Merchant Navy, can you please tell us a little bit about your life at sea?

A) I joined Shell Tankers fresh out of school as an Engineering Cadet. It was just a great life being at sea. Until you've been out of sight of land for two weeks at a time, you just don't realise how big the world is, how much ocean there is out there.

You also get a chance to observe some spectacular sights – like the green flash. When the sky is perfectly clear and as the sun sets, all the different colours you have in the spectrum of light start to disappear over the horizon, and the green one is always the last one. Just as it disappears, the whole sky goes bright green and back to blue again before the darkness falls.





Above: Murchison platform replica in the Aberdeen Maritime Museum

away, the roof in the middle just collapsed in one big slab, creating a noise I will never ever forget. At that moment I really thought my end was nigh.

Talking of mining I am often asked to visit diamond and platinum mines when I visit South Africa. This is not something for the faint-hearted, trust me. The security as you can imagine is very strict and you are not allowed to take anything into the mine – including your belongings or your clothes! You have to strip off totally and be searched on the way in and again on the way out – not the most dignified of sales appointments I can tell you!

Diamond mine

I also remember my first application offshore, on a deaerator in the North Sea, which was also the first ever application we did in the Oil and Gas industry. The process vessel was 17m (55.8ft) high and 6.5m (21.3ft) in diameter and we coated the whole thing top to bottom. Up until we lost track when the asset owner sold the rig it was still in service after 12 years. It had a few patch repairs done because of mechanical damage, but the coating itself was intact. I put that down to the way that we held the blasted surface. We wrapped the entire vessel in electric blankets, heated the skin up to 25°C (77°F) and held it there. Even in the harsh climate above the Arctic Circle, we were able to hold the blast to ensure a good application. This platform has now been decommissioned, but a replica is installed in the Aberdeen Maritime Museum, preserving Belzona's offshore legacy, so to speak.

Q) How has the Belzona business changed over the years?

A) We are now getting into bigger types of business, where the applications are getting larger and more complex. And it's a challenge; particularly in my position, to train people to recognise what the issues with large applications are. It is a major challenge to not only provide the materials, but to also provide the service to make sure the applications are done correctly. The validated training we offer helps a lot. The next stage is to propose a system whereby we can provide trained application teams that can help Belzona distributors who need them on a global basis.

Q) Can you comment on how some of the key industries that Belzona is involved in changed over the years?

Q.1) Oil and Gas

A) The Oil and Gas industry has certainly changed. Previously, we saw a greater demand for just product with people employed by the industry taking care of specification. I'm finding now that a lot of people who are in charge of writing coating specifications are relying more on coating manufacturers to provide guidance on when to use and when not to use their products. I think it's a big change, as they want more service when it comes to the practical side of things.

Obviously Health and Safety has taken off now, resulting in a move away from hot work, which gives

Below - From left to right: David Blackwell, Engineering Director; Geoff Binks, Technical Service Coordinator; Ron Campbell, Managing Director, circa 1988





Above: Belzona bonding application for riser bearings and caissons

us a bigger opportunity to develop our solutions in all industries especially since our solutions are cold and our materials are solvent-free, so from an environmental point of view we should be leading the change in the mind set of our customers towards new technologies and solutions to problems.

Q.2) Marine

A) The Marine industry has changed a huge amount as well. When I was at sea, there was probably a complement of 30 people aboard. These days the crew consists of 10-12, sometimes less, because everything is automated. Ships in the 1970-80s were being built bigger and bigger, because it was more economical to transport large amounts of oil slowly, conserving high cost fuel. But now the ships are getting smaller and faster, because the engines are becoming more economical and efficient. Safety also played a big part. The National Maritime Organisation, the policeman of the seas, have introduced a vast amount of legislation. The paint systems have changed, eliminating heavy metals like lead or copper. Ship designs have changed as well with the introduction of double bottoms and wing tanks in an effort to minimise oil spills.

Q.3) Mining

A) The Mining industry has changed quite a lot. Health and Safety has modernised the industry, minimising the amount of accidents. The development of automation and conveying systems made the industry very efficient. Machines are now taking over from people, yet someone still needs to build and fix these machines and hopefully we will be on the forefront of that, especially because we can do it cold with minimal hazard.

Q) What are some of the emerging industries you get involved in?

A) A lot of things are happening in the renewable energy sector, with wind and wave power. We are working on at least three major projects in that sector. There are two major wave generator

manufacturers, which we are working with to specify Belzona to protect their machines and do some bonding applications. Another opportunity is the wind turbine blade's leading edge protection. We had meetings with the three major wind turbine manufacturers in Scandinavia and they have asked us to submit several coatings to go into their test program because they would like to prevent their blades from getting damaged.

Q) And finally, what do you think will happen in the next 10 years in the corrosion and maintenance sectors?

A) If you look at the cost of corrosion worldwide, generally speaking, in any industrial country it is about 4% of their GNP. As far as Belzona is concerned, we haven't scratched the surface yet, we just stroked it gently. So there is a huge amount of potential there. I think we need to develop specific niche market products to address the issues that industry might have in the future. Health and Safety legislation starts to frown upon welding in the maintenance sector. Shutting the whole plant down for hot work repairs is also not economically viable and our kind of industry – repairs that are cold – will have the opportunity to advance faster than ever before.

If you look back in history, ships, tanks, bridges and everything in general construction used to be riveted together. Then we moved from rivets to welding and everybody initially distrusted it. Particularly after the First World War, when we were building a ship per week using welding, as it was quicker to join the metal together. But, unfortunately, welding was in its infancy and the technology was not there, people didn't fully understand the welding process. So a lot of those wartime ships broke in half and sank. As a result, people doubted welding, but gradually as we learned more about the process, we abandoned riveting and now you won't see many things being riveted at all. Industry is now moving away from welding to cold bonding. So in certain industries, in maintenance, I see cold bonding taking over from hot welding. Belzona, in turn, has all the necessary tools to make cold bonding a reliable alternative to welding – experience, high-performance materials, as well as application expertise and support.



Above: Belzona cavitation protection system application to a Naval vessel in Japan

Interviewed and written by: Marina Silva
www.belzona.com

Dialight Introduces High Efficiency Zone 1 SafeSite® High Bay

New Certification Allows for Use in New Hazardous Environments in Europe, Middle East, and Australia

Farmingdale, NJ (June 8, 2016) – Dialight (LSE: DIA.L), the global leader in LED lighting technology, today unveiled the first-ever High Efficiency ATEX/IECEx Zone 1 SafeSite® High Bay. Each high bay feature Dialight's latest world class in-house designed power supply and a full 10-year, full performance warranty and up to 110 lm/W efficiency.

The high output 23,500 to 9,650 lumen SafeSite ATEX/IECEx Zone 1 High Bays offer superior illumination and efficiency for oil, gas, chemical,

petrochemical, pharmaceutical and other hazardous area applications. The ATEX Zone 1 certified SafeSite High Bays include an integrated power supply with 6kV surge protection, and their light weight and low profile makes for easy installation. Options for 3 meter cable or integrated wiring junction box. With typical mounting heights up to 13 meters, the SafeSite LED High Bays represents the ideal retrofit for conventional 400W HID fixtures. The ATEX/IECEx SafeSite LED High Bays are L70 lifetime rated for more than 150,000 hours and operates in temperatures ranging from -40oC to +60oC.



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Bespoke IECEx and ATEX approved resistors

Resistor manufacturer Cressall has demonstrated its design and manufacturing capabilities by producing specialist neutral earthing resistors (NERs) suitable for use in explosive atmospheres.

The NERs meet the international IECEx and European ATEX specifications and allow generator manufacturers and end users to protect distributed generation systems. This ensures regulatory compliance and peace of mind for companies operating in explosive environments.

NERs are used in medium-voltage AC distribution networks to limit the current that would flow through the neutral point of a generator in the event of an earth fault. The resistors limit fault currents to a value high enough to be detected but low enough to prevent damage to switchgear or generators.

Cressall's IECEx and ATEX approved NERs are tested and approved to operate safely for the specifications of Zone 2, T3 classified locations. Zone 2 locations are defined as areas where ignitable concentrations of flammable gases,

vapours or liquids are not likely to exist under normal operating conditions. However, flammable materials are likely to be present in a leak.

Cressall reduced the element temperature of the NERs to meet the requirement of the T3 classification: less than 200 degrees Celsius, but could design to meet other T classifications if required.

"As well as adhering to IECEx and ATEX certifications, the enclosure and electrical components had to be compliant with the customer specified requirements," explained Martin Nicholls, sales director of Cressall. "In addition, the unit needed to successfully pass inspection and testing by a certified laboratory to ensure compliance. "This is not the first time Cressall has successfully designed and manufactured IECEx/ATEX certified



CRESSALL Cressall ATEX neutral earthing resistor (NER) undergoing an IP water test.

equipment, but it was one of the more challenging cases. It is not possible to standardise a range because of the specific requirements customers bring to us. Each project is unique, so we work closely with our customers and partners to make sure we provide the best solution on the market."

For more information about the company's products, or to talk to Cressall about a bespoke project, go to www.cressall.com.

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