



Opgal's EyeCGas optical gas imaging cameras

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Compressed Air



Fire & Explosion Safety

An extensive range of explosion protection equipment.
From supply to full turn-key solutions

Flash 2 Explosion Suppression System

The latest version of the industry leading StuvEx Flash suppression system has many advanced features.



- Single and multipoint injection suppressors capable of handling 4 ducts from one suppression bottle
- New Master Control Unit can handle up to 16 Zones.
- A range of explosion detectors for various applications.
- New Gas Generator - no pressure vessels used.
- Atex Certified.

Earthing Control

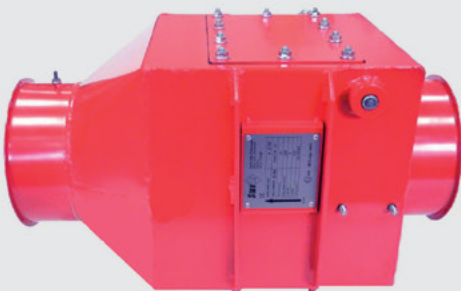
There are two Earthing Monitors within the StuvEx range for Gas and Dust applications.



- Competitively priced.
- Very easy to install.
- Failsafe operation – visual confirmation of correct earthing through green/red lights.
- Automatically recognises the object to be earthed.
- Atex Certified.

Explosion Isolation

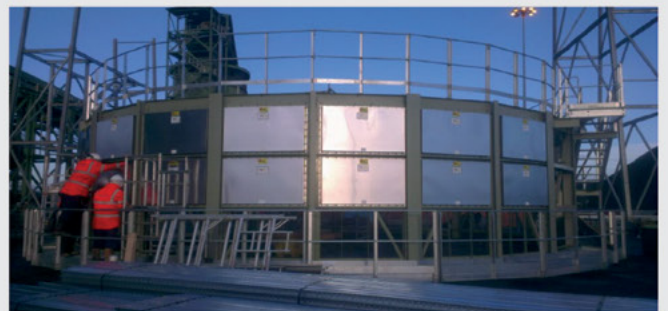
Isolating an explosion is vital. There are five different explosion isolation devices in the StuvEx range.



- NOREX valve. Designed for filter inlet ducts, though can be used elsewhere.
- Ventex Valve. For installation to a filter air intake.
- Fast Shutting Gate Valve. The most efficient way to isolate an explosion.
- Diverter Valve. Used to divert a potential ignition source to a safe area.
- Fire Trap Valve. Protects 'Down-Stream' machinery in the event of a fire or explosion.

Explosion Venting

StuvEx supplies a range of explosion venting devices.



- StuvEx Explosion Vent. A 100% efficient vent for silos, bins, filters etc.
- StuvEx DQS. A maintenance free, flameless vent for installation to an internally located vessel.
- StuvEx Flameless Indoor Vent. Allows an explosion to safely occur inside a building.

In This Months Issue



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gas imaging cameras**

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Engineering & Brexit!

Post Brexit Britain is a place that is scary for many, people are in fear of what will affect them and to what extent, or if it will affect them at all. In terms of manufacturing and engineering, there are the positives, the negatives and still the unknown...

An obvious impact of the referendum is the sterling's rapid depreciation against other currencies. This in fact makes exports cheaper, so buying British goods becomes more attractive to foreign purchasers who suddenly realise their currency will go a lot further than in previous years. Essentially this might mean we are giving other countries a bargain when we can't really afford too, but this will give Britain a short term boost for the internal market. Manufacturers are becoming more likely to source components for products domestically, as buying from abroad becomes a little more expensive. Sourcing components from local manufacturers means cars can claim back the old-Made in Britain statement which could lead to interest from companies abroad in the long run.

Since the financial crisis and dark days of 2008, production seems to have declined slowly since the all time record set in 1972. Now, new technology, models and investments, even new company owners are aiming to put this depressing trend in reverse! There have been predictions that the UK could speed past the previous record and hit 2m for the first time in the next three years. That's exciting news for all, with approximately 160,000 people employed in the vehicle manufacturing business and a total of 800,000 across the wider industry it certainly seems that Britain's car industry is in high gear, although

this was also the case before Brexit, with most manufacturers voting remain, so there is some obvious remaining concern.

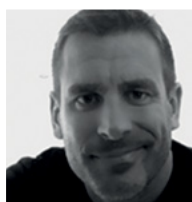
Brexit presents unprecedented opportunities that will increase trade deals that are of benefit to both the UK and foreign partners. There are already steady reports in gains of revenue and profit as we approach mid 2017. The result was unexpected for the business and people are still trying to get their head around the change, the main disadvantage to the industry being the time it takes to negotiate new sales strategies to the rest of the world outside of the Brexit drama.

The Royal Academy of Engineering has revealed a heavyweight analysis of both the threats and opportunities the referendum has brought with it, which include the need to maintain a supply of skilled labourers. Those in the industry are aware this is a critical time for Britain's engineering sector with plans for a new industrial strategy being announced after the referendum took place, people are in high indications that the government realises how important engineering and

manufacturing are to the overall economy. Making up approximately 10% of the UK's economy and contributing approximately 280bn gross added value (which leads to about 20% in total) means these two industries must not be overlooked for Brexit to be a success.

The Academy has warned a lack of skilled staff in the UK is trumping their other concerns and are determined more time and money should go into the encouragement of young people to follow in the field. Hiring people from all over the world, not just Europe needs to be made easier to fill the void of skills that Britain seem to be suffering from. This is putting politicians in a difficult spot of trying to satisfy voters' desires to control immigration but simultaneously support the crucial engineering sector who need more variety of staff, skills and knowledge.

It appears that Brexit can have many positive advancements for both the manufacturing and engineering trades, but in order for those benefits to become clear the industries need to work on the issues that remained before the referendum. The new wave of manufacturing and engineering will be able to come forward and be bigger and better than ever, predictions for the next half decade are very exciting and the industries need to remain positive in times of uncertainty and continue doing what they do best.



Michael Dominguez, Publisher.



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Ion Science Launches 'World's First' FalcoTAC Fixed Photoionisation Detector

Latest VOC monitor incorporates 10.0eV lamp for reliable detection of total aromatic compounds including benzene in high humidity environments

Ion Science has launched its 'world first' FalcoTAC fixed photoionisation detector (PID) with 10.0eV lamp for fast and reliable detection of highly toxic total aromatic compounds (TACs), including benzene, in high humidity environments. Designed for plant-wide safety and the on-going protection of workers in global petrochemical and oil & gas applications, the new FalcoTAC instrument also boasts the company's innovative typhoon technology for unrivalled accuracy in condensing atmospheres and extreme weather conditions.

Aromatic chemical compounds produced by oil refineries and petrochemical plants form the building blocks for numerous important materials including dyes, detergents, solvents, adhesives, plastics, synthetic rubbers and pharmaceuticals. However the TACs produced in these environments such as benzene, toluene and xylene isomers, are also highly toxic.

Utilising the proprietary high output Ion Science 10.0 electron volt (eV) detection system, the new FalcoTAC volatile organic compound (VOC) monitor offers fast response times and the best possible protection for plant personnel, giving early warning of any harmful levels of exposure to hazardous TACs, including benzene.

Simple to install and operate, the FalcoTAC features an external intrinsically safe sensor for quick and easy servicing without the need for a hot

work permit, and can be serviced and calibrated in a hazardous environment without having to remove the power.

Ion Science's advanced typhoon technology prevents condensation forming on the sensor which helps to stop the FalcoTAC short circuiting and make it ideal for harsh conditions and wet outdoor environments, without the need for weather enclosures.

By incorporating Ion Science's market-leading PID sensor and patented fence electrode technology, FalcoTAC does not experience quenching of response due to humidity in the ambient air. This increased resistance to humidity and contamination ensures ultimate reliability in the field, as well as considerably reduced drift issues and extended run time.

FalcoTAC is operated via an intuitive user interface with OLED display and five magnetically activated switches – up, down, left, right and enter – which are back lit to help confirm the correct button is being pressed. For added convenience, safety and ease of use, brightly coloured red, amber and pulsing (optional) green status indicators are clearly visible in sunlight allowing checks to be conducted from a distance.

The FalcoTAC utilises a diffusive sample technique which ensures less contamination issues than



pumped systems and reduced lamp cleaning and servicing requirements. Pumped models are available for applications where a sample needs to be drawn to the unit.

The FalcoTAC 10.0eV is available offering a detection range of 0.01 – 50 parts per million (ppm).

The explosion proof enclosure is certified to EX d IIC T4 II and the external sensor to EX ib IIC T4 Gb II. A 4 – 20 mA analogue output enables FalcoTAC to be easily integrated into a DCS control system to give warning or control of high VOC levels in the working environment. Two relay outputs means it can be connected remotely plus RS485 output with Modbus protocol included as standard allows the instrument to be connected to a network.

For more information visit:
www.ionscience.com

Svantek Launches All-In-One Solar Power System For Popular SV 307 Noise Monitoring Terminal

Remote, pole-mounted 'SolarBox' option provides essential power to low cost SV 307 for permanent noise monitoring using an integrated Class 1 sound level meter

Reinforcing its position at the forefront of noise and vibration instrumentation for environmental and occupational health monitoring applications, Svantek UK (www.svantek.co.uk) has launched SolarBox, an all-in-one solar power system for use with its popular, low cost SV 307 Noise Monitoring Terminal.

The remote, pole mounted SolarBox provides essential power for Svantek's small, lightweight SV 307 Noise Monitoring Terminal. The SV 307 has generated significant interest since its launch last summer which Svantek attributes to an extremely competitive price point and innovative Class 1 MEMs microphone with lifetime warranty.

The new SolarBox is a solar mount and enclosure in one neat unit, topped by a 110W DC-Solar 12V professional grade panel. It utilises monocrystalline SunPower cells offering quality, compact design and high outputs in low-light conditions. The built-in lead-acid battery helps ensure the system can run continuously, even in the worst of UK winters.

Protected by an IP66-rated waterproof, removable casing, Svantek's SV 307 integrates a Class 1 (IEC 61672) sound level meter with 3G modem for fast data transfer over the internet to PC with standard connectivity. Offering optional airport and community characteristics, a Class 1 MEMs microphone enables wide frequency range up to 20 KHz with the measurement data stored on a microSD card.

The energy efficient NMT incorporates an innovative patented system check with an inbuilt reference sound source producing level of 100dB at 1 KHz. As an option, the SV 307 can perform real-time frequency analysis in 1/1 and 1/3 octave

bands and save results with the time history data. In addition, it can record the audio signal as standard WAVE files for noise source recognition.

A large colour OLED display and 10 push buttons enable easy configuration of the NMT in the field removing the need for an external handset or reconnection to a PC.



The large windscreen is highly efficient in reduction of wind noise effects even at high wind speeds. Metal spikes protect the NMT from birds.

The SV 307's waterproof casing can be easily mounted to a post and removed for quick access to the user interface. It also offers protection against extreme weather conditions whilst fulfilling Class 1 accuracy.

The SV 307 has an internal Li-Ion battery and interface for connecting the SolarBox. A waterproof mains adapter for charging the battery and powering the station is also included for continuous operation in the field.

Svantek's SvanNET cloud service monitors the wireless communication, powering and access

to the SV 307 data. The scope of the basic SvanNET can be extended with multipoint project management that offers data storage in the cloud, data sharing, advanced alarming and reporting features. SvanNET is an on-line solution which means it doesn't require software installation and is accessible through a web browser. The responsive design enables use of SvanNET on various devices such as smartphones or tablets.

The SV 307 is available with a number of optional functions including an accurate GPS hardware module providing information on the localisation as well as measurement time synchronisation.

The SvanPC++ Environmental Measurements feature is designed for post processing of data recorded by the NMT. It offers a powerful calculator and an automated noise event finder for noise source identification.

The option for 1/3 octave real-time analysis allows measurement of the noise frequency contents and is used for verification of noise sources in the environment. Plus time domain signal recording to WAVE format works during measurement and is logged in parallel to a time history. Once downloaded to PC it can be played back. The SV 307 is supplied with a factory calibration certificate and 36-month warranty card.

Svantek is part of the AcSoft Group which also comprises AcSoft Sound & Vibration, AcSoft Health & Safety and GRAS UK.

For more information visit:
www.svantek.co.uk

Safety First

C.K's Solution for the Best in Cable Routing

Every tradesman is familiar with cable routing and the risks of splinters with some cable rods. That became a painful reality for Jason Price of Jason Price Electrical Services, whose hand was badly injured last year when a cable rod by another supplier splintered during use.

Three Steps to Safe Cable Routing

Working with professional tradesmen helps C.K find solutions to end user needs and enables C.K Tools to develop the most advanced cable routing products. The C.K MightyRods PRO are specifically designed to combat the issues of painful splintering and snapping, thanks to an innovative SplinterShield™ coating - Europe's first splinter-proof material - that protects the rods and allows both safe efficient working conditions.

C.K realised that flexibility is also key to successful cable routing and introduced its super-flexible SPIRA-FLEX rod, perfect for accessing tight corners, bends and other obstacles. The SpiraFLEX draw tapes offer fantastic benefits when it comes to hassle-free cable routing. The super flexible and immensely tough 4mm Ø SpiraFLEX draw tape, offers a major improvement on standard nylon and steel draw tapes, which are often prone to twisting and kinking.

The latest introduction – the C.K Gloworm Cable Router – adds another dimension to the range and is perfectly designed for running cables around tight corners, through insulation filled walls, underneath flooring and across ceilings. Gloworm's clever glow in the dark phosphorescent polymer construction, aids routing in low light conditions and easier navigation towards exit points. When charged under natural light, Gloworm provides an effective glow for up to 30 minutes.

For further product information please visit www.carlkammerling.com or call 01758 704704.



Thanks to C.K, Jason became the proud owner of a C.K MightyRods PRO Cable Rod Set, which offers total protection against splinters due to a unique SplinterShield™ coating.

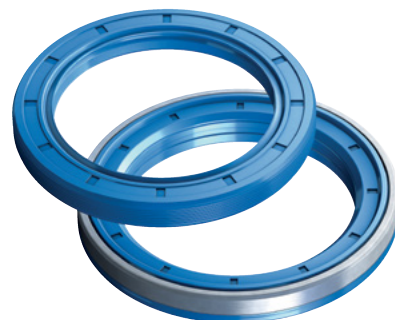
Will Sheridan from C.K originally heard Jason's story during a visit to wholesaler, Seryn Electrical and, by chance, recently met him again during another visit. Jason is still suffering intense pain in his injured hand and an operation to remove the splinter has proved unsuccessful, leaving the splinter embedded and resulting in ongoing

pain. On a lighter note, Will took the opportunity to present a delighted Jason with C.K's SPIRAFlex rod, to help make his work that much easier.

"As you can imagine, I lost complete faith in cable rods and had stopped using them" said Jason, "as did other electricians when word got around. But now the C.K MightyRods PRO with their splinter-proof coating have given me the confidence and reassurance that I can work safely and won't find myself in a similar situation again."

Freudenberg publishes online marketplace for industrial components

Freudenberg Sealing Technologies is creating a turning point in the purchasing of B2B seals and components with their “Industrial Supply and Services” online platform exclusively starting in United Kingdom as first local market.



The Industrial Supply and Services (ISS) platform is the first online marketplace for high-quality B2B sealing solutions and components, setting new standards in the procurement of industrial parts. Constant time pressure and waiting for offers are now a thing of the past. 24/7 availability and local order processing enable unrivalled speed for deliveries within the UK.

More than just an anonymous marketplace

Industrial Supply and Services platform is much more than a simple online shop or anonymous marketplace with thousands of offers from daily changing merchants and from completely different needs segments – ISS is an industry-focused marketplace for the UK that includes the offerings of trusted local vendors. To make this possible, Freudenberg has worked with its long-

standing local trading partners and integrated them as platform vendors in the project. The advantages are obvious: for the customers, this means a larger selection of products as well as comparisons regarding price, availability and additional services. The local order processing also ensures the fastest possible shipping.

Freudenberg is the operator of the online marketplace in the background. Only selected, trustworthy merchants are facing the customers on the platform.

Step by step to success in the digital business

The range of products in 2018 for UK is limited to seals of the Freudenberg and Dichtomatik brands, but already includes more than 40,000 items – from O-rings to pneumatic seals and rod

seals. However, Freudenberg will expand rapidly in terms of entering other regions and extending its product and service offering.

A big advantage of the integration of trading partners is the possible integration of their broad product portfolio, because the success of industrial dealers is mainly due to their enormous range, flexibility and speed. In the future, ISS will exploit this potential to create the first “B2B One-Stop-Shop” for seals and related industrial components. Everything on one platform – and guaranteed by certified, trustworthy trading partners.

With just one click to the high-quality seal and more

Several tens of thousands of Freudenberg and Dichtomatik products are already available on the platform. Premium Freudenberg seals are always used when highly demanding applications exist. Dichtomatik’s industry-standard seals include tested merchandise for applications which are not safety-critical. This way, all requirements can be covered.

The online platform makes it possible to get to the desired product with just a few clicks. Payment is easily made by credit card or invoice.

The aim is to digitize and streamline the industrial business to meet the evolving customer needs in the future.

More information is available at uk.iss.fst.com.

Surveillance Technology in Hazardous Environments: A Look at the Future

Simon Reed, Regional Sales Director Europe, ONVU Technologies

Safety and security are two critical pillars in organizations, such as oil and gas E&P, chemical processing and manufacturing.

Technology developed to meet these organizations centered on the balance between providing innovation with functionality, and security. While these environments can become the target of threats, such as vandalism, theft and even terrorist attacks, measured response incorporating emerging technology solutions can protect employees, assets and the surrounding communities.

At the center of this innovation are several technology buzzwords: artificial intelligence (AI), machine learning, Internet of Things (IoT), advanced cybersecurity, and video-centric analytics which rely heavily on video. For hazardous environments, the protection of video capture equipment and the implementation of robust camera functionality bring increased insight into a site.

Machine learning and AI-enabled devices.

Software manufacturers are looking toward machine learning and AI to help propel advanced analytics to deliver more situational awareness and an increased ability to proactively assess threats. AI/machine learning make existing applications such as facial recognition more accurate and will increasingly be used to make sense of the large amounts of data generated by intelligent sensors and to analyze the growing amount of video.

Rise of connected devices.

IoT is continuously expanding to an increasing number of industries where sensors are integrated into a network. The collection and analysis of the

data will give rise to applications such as intelligent management of facilities, an increased ability to detect anomalies, advanced asset performance management and ultimately perform predictive maintenance.

Increased focus on cybersecurity.

Cyber-attacks have become and will continue to be a major threat to businesses. All network connected devices are vulnerable, leading manufacturers to build additional cybersecurity into their products. Integrators and end users are starting to factor in cybersecurity as a major buying criteria for physical security hardware and software.

Increasing use of video in new markets and applications.

Video is the cornerstone of security, providing both real-time and forensic coverage of threats and incidents. In industries such as oil and gas, there is a trend toward extending video coverage to monitor operations in harsh and hazardous environments, so surveillance manufacturers should develop appropriately certified equipment to meet this demand. Manufacturing facilities such as food processing plants are also increasing their use of video for training and HSE compliance.

Video Central to Robust Protection in Hazardous Environments

The implementation of robust video surveillance, combining both exceptional video quality and protective enclosures, make the safekeeping of critical sites possible. The strategic placement of panoramic surveillance cameras, now available with ATEX, IEC and IECEx certified enclosures for explosive locations, takes the surveillance of critical infrastructure to the next level. When exploring options around video surveillance,



the solution should be an open platform as it delivers the flexibility and scalability required to utilize existing systems and to implement new ones.

It also brings forth integrations between disparate systems, incorporating video data capture, and the ability to collect information from third-party systems, including access control, motion and leak detection sensors, thermography, and other analytics features.

Specialized 360-degree surveillance technology has emerged as a major element in a comprehensive security plan, providing full situational awareness through wide angle views of large open areas. 360 degrees coverage offers the ability to see an expansive area without blind spots, allowing operators to zoom into areas of interest while simultaneously recording video in real-time and playback. A single 360-degree camera can also replace several traditional cameras, resulting in a more expansive, cost-effective solution.

Whether it's to defend against organized crime, provide evidence of incidents or be compliant with HSE requirements, panoramic surveillance delivers a robust, highly reliable monitoring and safety tool for hazardous environments.

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A single Oncam 360-degree camera can replace several traditional PTZs, giving operators an unobstructed and complete view of their hazardous environment

Operational Efficiency

Operations managers can access footage remotely to oversee and monitor operations in hazardous and remote areas

HSE Compliance

Oncam's 360-degree technology offers total situational awareness that enhances the monitoring of activities, helping prevent incidents and injuries

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Getting Gas Detection Right

by Peter Sherfield, Product Specialist Manager, Shawcity Ltd

Many workplaces have a need to monitor the air where gases can present an immediate or longer-term danger due to flammability, toxicity or asphyxiation. Explosive atmospheres caused by flammable gases, mists, vapours or combustible dusts should be monitored using ATEX-standard equipment.

For expert advice, consult an occupational hygienist (BOHS member), manufacturer or a manufacturer-trained supplier such as Shawcity, who will assess your workplace and provide specific advice. Always look for professional credentials and industry memberships, consider the experience and longevity of the organisation and ask your peers for recommendations. Single manufacturers will only offer you their product range, so explore different technologies and consider a range of options.

Aim to work with manufacturers and suppliers who will go further than simply selling you a product and will fully support you in your responsibilities to achieve ongoing compliance and effectively protect your workforce. Shawcity offers free training and specialist technical phone or site visit support to resolve any issues as part of your ongoing aftercare.

Shawcity will also support you with your instrument asset management. This is vital when it comes to managing your fleet, traceability of asset history, record-keeping, service and calibration records as well as long-term planning. As an ISO 9001 supplier, Shawcity has rigorous processes in place to provide a complete service. This is vital if, for example, an incident happens in the workplace and proof of instrument maintenance is required during the investigation.

Personal Gas Detection

Individual employees may be exposed to a variety of potentially dangerous gases or a known specific

gas at some point during their working day. These staff should wear a personal gas monitor which identifies, monitors and measures one to six gases simultaneously.

Single- and multi-gas detectors are relatively inexpensive and the newest models are often disposable. Once activated they remain on 24/7 and are replaced on battery expiry. 'Always on' monitors are also ideal for multi-shift workplaces, as they can be passed from one employee to the next, effectively halving the number of monitors required in a fleet.

Portable Detection

Handheld and portable detection devices are ideal for walking surveys where specific areas need to be monitored quickly and easily. With the option of photoionisation detectors (PIDs) to identify volatile organic compounds (VOCs), over 480 VOCs and toxic compounds can be detected right down to levels of 1ppb (one part per billion).

Area Detection

The detection of gases present outdoors can be achieved by setting up a network of portable devices networked together to form a perimeter or a boundary monitoring system. Or for a permanent indoor solution, installation of a fixed gas detection system.

Shawcity offers manufacturer-trained technicians who will undertake on-site calibration and service visits. They are authorised by the manufacturer and fully insured to carry out site work.

Servicing, Calibration and Repairs

All gas detection instruments require servicing and calibration to ensure they are fit for purpose and in good working order. The most common recommendation is annually but check your instrument's specific schedule.



Shawcity offers its customers a manufacturer-approved, fully insured in-house service centre and will send you service and calibration reminders. We have a fleet of hire instruments for you to 'hot swap' while yours are with us, ensuring no downtime and removing the need for spare instruments to keep your workforce fully protected.

Bump Testing

The most important action for gas detection instruments is to bump test them, as performance can become compromised due to knocks, damage, humidity or sensor contamination. Bump testing means passing a small amount of test gas over your monitor sensors before each use. This is in addition to annual servicing and calibration and is a simple function test to make sure your monitor and the sensors within it are working as they should before it is deployed.

Shawcity Ltd

Tel: 01367 899419

email: solutions@shawcity.co.uk

www.shawcity.co.uk.

SPE Oil and Gas India Conference and Exhibition Offers an In-Depth Technical Journey

The 6th edition SPE Oil and Gas India Conference and Exhibition is a place where industry professionals can share, exchange, and discover new technologies to drive the industry towards a sustainable path.

The conference enables all attendees to ignite open dialogue through highly intuitive panel and technical sessions.

Agenda Highlights

21 Technical Sessions, 117 papers from 33 companies and 16 countries. 50 ePoster presentations and 12 exhibitors.

Executive Plenary Session:

Driving India's Energy Future Excellence through Sustainable Growth

Moderator

Samarendra Roychaudhury
Cairn Oil & Gas, Vedanta Limited

Speakers

Sami Alnuaim
2019 SPE President
Saudi Aramco

Sudhir Mathur
Chief Executive Officer
Cairn Oil & Gas, Vedanta Limited

Sashi Mukundan
Regional President and Head of Country—India
BP India

Nitin Prasad
Chairman
Shell India

Special Session: D&I—Let's Look at the Report Card

This discussion will review both global and Indian E&P sector trends. Senior executives will reflect on the industry's journey and provide insights into the actions that made a difference in how diversity

is created and embraced in their organisations. Actions to progress the agenda even further will be identified. The discussion will also provide insights into what individuals can do to advance the agenda for themselves and their organisation.

Panel Session 1: Increasing the Resource Base

The focus of this discussion will revolve around the following topics:

- Identifying New Resource Base: Doing things right, from understanding petroleum systems, to play identification and evaluation, lead and prospect assessment, and appraisal.
- Exploiting the Existing Resource Base: Re-evaluate the assessment and appraisal with new technologies and see what was not visible before.
- Re-evaluate the formations to find missed, bypassed, or hidden oil even in brownfields.

Panel Session 2: Extending the Economic Life and Improving Recovery

Renowned panellists will share their experience about how their organisations have successfully implemented innovative, or simply fit-for-purpose, solutions to improve recovery from their assets, and sometimes reverse the decline.

Panel Session 3: Big Data Applications in the Indian Oil and Gas Industry

The objective of this session is to highlight relevant case studies related to digital transformation through implementation of IoT.

Panel Session 4: Project Management—Field Development from Concept to End-Of-Life

Projects in the oil and gas industry are challenging due to increasing complexity and technological demands. Schedules and budgets are tight, safety is critical, and every project faces stakeholders concerned about the project's impact on the environment and community. Managing the trade-offs between costs, schedule, technical solutions, and stakeholder requirements to preserve the project's economic value is the core of all project management principles.

Successful project management relies upon a coherent, consistent framework that puts in place processes enabling effective decision-making.

Panel Session 5: Building Partnerships—the Way Forward

The focus of this discussion will revolve around the following topics:

- Impact of global energy market on E&P companies and their service providers
- The evolution of relationship between these two sectors
- The positive benefits that can be realised through application of a new business model
- Sharing of risk and reward to promote innovation and new technology

More information available at:
<http://spe.org/go/19ogic>

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- > Bus powered
- > ATEX, FM, cFM and IECEx certified
- > IP66 enclosures
- > Dot matrix backlit display
- > Shows up to 8 process variables
- > Choice of 11 standard screen formats, including bargraphs.



BEKA associates www.beka.co.uk
Hitchin, Herts. SG5 2DA, UK
sales@beka.co.uk Tel +44 (0)1462 438301



Wolf

WORLD LEADING MANUFACTURER OF ATEX & IECEx HAZARDOUS AREA LIGHTING.

T: +44 114 255 1051
E: INFO@WOLFSAFETY.COM
WWW.WOLFSAFETY.COM

Speedor acts to reduce vermin access

Working for an international food, agriculture, financial and industrial products and services business, Hart is installing a number of its Speedor high speed door range at a major UK production facility.

With 19 Hart doors across six production facilities already operational, the current contract is to replace existing roller shutters, which remain open all day, with seven Speedor Storms, one Speedor Super and one fast action roller shutter.

Peter Cairns, Hart's area salesman, says "the emphasis is on speed of open/close cycles to significantly reduce vermin access mainly from pigeons, seagulls and geese attracted by

the feed/agricultural nature of the production process".

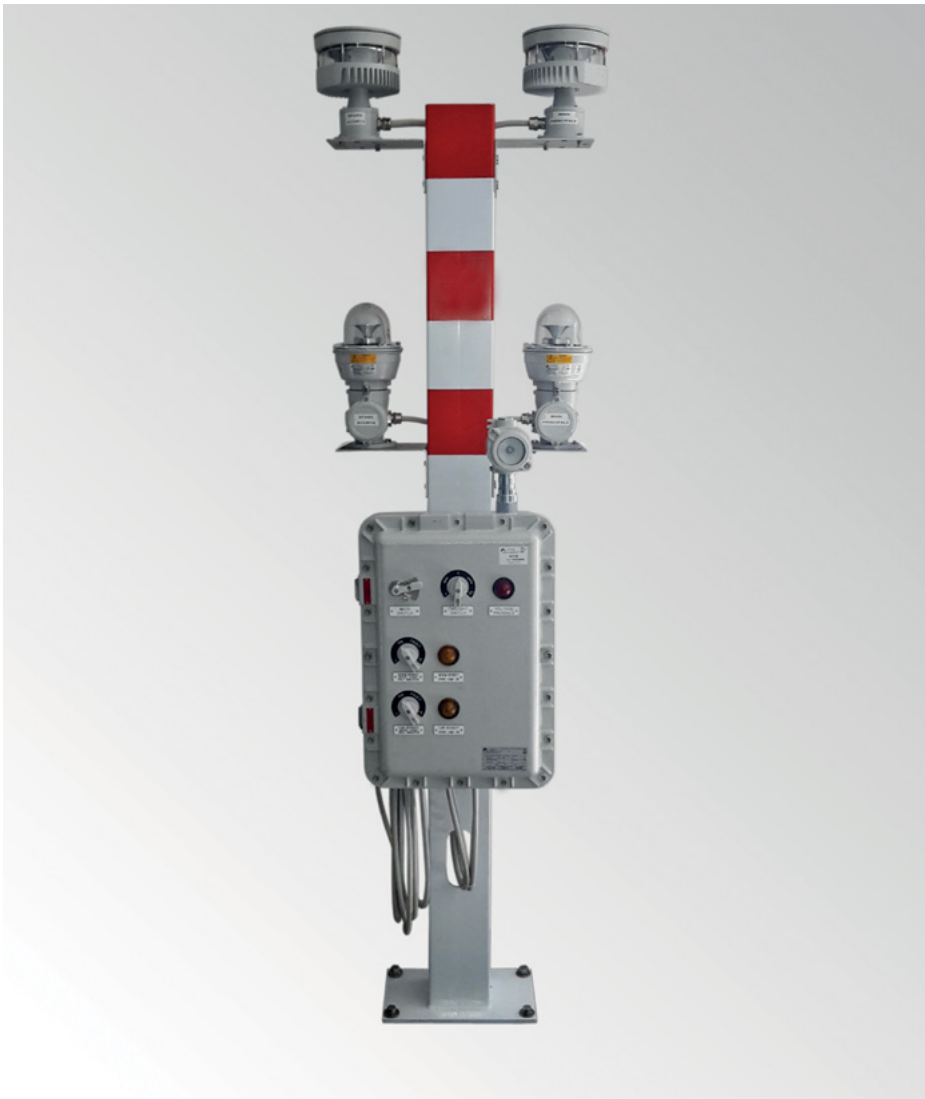
Hart is also delighted to be part of a drive to improve energy efficiency by 5% by 2020 and to maintain a better working environment and temperatures within the building as well as preventing unauthorised access to different areas of the plant.



For more information:
www.hartdoors.com
Tel: 0191 214 0404

Light-Signalling In Case Of High Obstacles - The New Ex System “Safefly Light System” By Cortem Group

CORTEM GROUP presents SAFEFLY LIGHT SYSTEM, a versatile and innovative high obstacle light up system powered and controlled by a control panel installed at the base of the plant.



“Obstacles to fly” are commonly defined vertical constructions such as buildings of large dimensions, power lines, antenna repeaters, supports, chimneys, wind generators, cableways, stretched ropes and similar infrastructures that exceed a certain height from the ground.

There are different international and regional standards that regulate the location and the

relative positioning of the aircraft warning lighting equipment such as ICAO, FAA, ENAC.

Even for environments with danger of explosion with structures coming out of the ground level with heights that fall within the parameters of the regulations, it is necessary to foresee their warning with the same criteria provided by the standards.

1. HOW THE SAFEFLY LIGHT SYSTEM WORKS

The system consists of the new series of low-intensity XLFE-4/1 (>32 candela) series and the medium-intensity XLFE-MIB (> 2.000 candela) series obstacle signalling lighting fixtures characterized by excellent lighting and mechanical properties designed for areas with an explosive atmosphere and for installation in industrial plants. If necessary, the SAFEFLY LIGHT SYSTEM automatically switches on the warning lights and indicates the problem on the control panel. It also synchronizes two or more signal units via CABLE or GPS signal.

The light switch can be activated either manually or automatically, or via a twilight sensor.

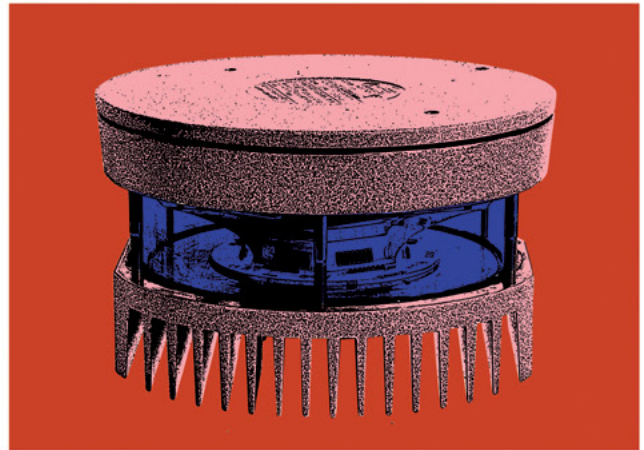
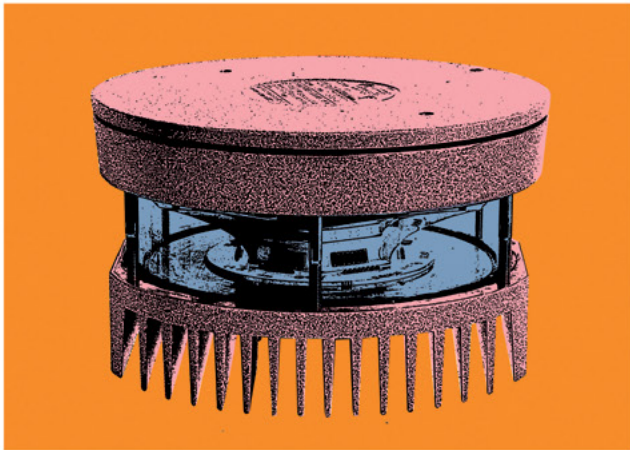
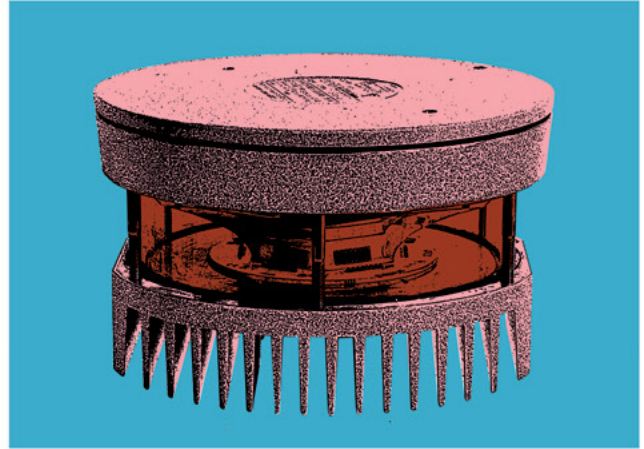
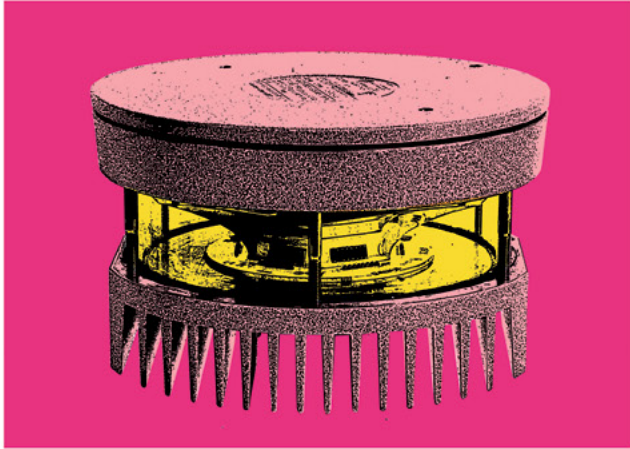
2. THE XLFE SERIES

XLFE-4.../1 series lighting fixture, red in color with a luminous intensity of more than 32 candles, complies with the ICAO Annex 14 standard for low intensity aviation warning lamps type A and type B (corresponding to the FAA L-810). It is equipped with an internal reflector in chromium-plated anticorrosive aluminium alloy and it can be provided with double circuit (main/spare).

XLFE-MIB series lighting fixture, red in color too, features a lighting intensity of more than 2.000 candles and a flashing operation at 20 fpm. The particular design avoids any type of optical error typical of the glass globes.

The installation of the XLFE series is made easier by the reduced dimensions and the wiring through a simple metal cable gland connected to an increased safety junction box, integrated and equipped with its own support terminal board, thus avoiding the use of cable glands to be sealed at height.

For more information visit:
www.cortemgroup.com





We will be world-famous for 5.260.320 minutes

YOUR SAFETY IS SAFELY LIGHT SYSTEM

XLFE SERIES



-  FLASHING RED LED LIGHT
-  LOW INTENSITY TYPE A/B AND MEDIUM INTENSITY TYPE B
-  EASY INSTALLATION AND SMALL DIMENSIONS
-  PATENTED DESIGN
-  'Ex db eb op is' PROTECTION
-  HORIZONTAL COVERAGE OF THE LIGHT BEAM 360°

Cortem Group presents **Safely Light System XLFE series**, the new **lighting fixtures for the signaling of air obstacles**

Thanks to the use of the latest generation of LED source, the new signaling system is characterized by excellent lighting and mechanical properties and an estimated life time of over 10 years.

The XLFE series has been designed for industrial areas with the presence of explosive atmosphere classified as Zone 1, 2, 21, 22 and complies with ICAO and FAA requirements for air navigation.

ICAO, FAA COMPLIANT





ABTECH
Gamma

- Low profile LED floodlight for Zone 1 & 2 hazardous areas
- Stainless steel construction for extended life in harsh environments
- 5700K crisp white light
- 5 year complete system warranty
- Ambient temperature range -50° to +70°C

IECEX
Ex

www.abtech.eu

in Twitter f

Gamma LED now for use in High Ambient Locations

Abtech's range of Gamma LED luminaires has been further enhanced with the release of the new high temperature Zone 2 floodlight. Suitable for use in ambient locations that can reach up to +70°C, this version allows LED technology to be adopted in areas that were previously off limits.

ATEX and IECEx compliant for use in hazardous gas and dust environments, the Gamma range has been designed with consideration for the rigours of operation in extreme locations. Constructed from marine grade stainless steel, with toughened glass and stainless steel fixings throughout, the luminaire body is rugged enough to last as long as the lifetime of the LED light source.

The 96W, Zone 2 Gamma is a compact, low windage floodlight configured for wide area lighting. It utilises four high output LED modules to provide over 13,600 lumens of crisp white light.

Its low-profile design with reversible mounting arm and uniform light distribution mean it is equally suited for use as a highbay in Ex-rated warehousing and workshop applications.

The Gamma is also available as 72W version for use in Zone 1 and 21 hazardous areas. Its unique 110-254V driver has been specifically designed, removing the need to encapsulate the LEDs as is commonly the case for Ex eb certified luminaires. The luminaire provides an output of over 10,800 lumens and is not subject to the potential effects of encapsulant degradation or clouding.



All Gamma variants incorporate surge protection to EN61000-4-5 and EMC to EN61204-3 and undergo through burn in tests prior to shipping. All Gamma luminaires are supplied with a five-year complete system warranty.

Full details can be found at on the Abtech website: <http://www.abtech.eu/latest/Gamma>

Lighten the Load with Turck Banner Hazardous Area Lighting Products

In the not too distant past the LED lighting revolution was driven largely by the universal acceptance of the effects of global warming and the need to save energy. Significant cost savings were realised with LEDs which prompted further adoption.



Today, the benefits of LED lighting in standard applications are well known and in the world of hazardous area lighting such benefits are perhaps even more desirable.

Leaders in Sensors, Automation and LED Lighting, Turck Banner are well versed in the supply of hazardous area equipment, including intrinsically safe sensors, interface modules, remote I/O systems, passive and active I/O blocks and cordsets.

The company has recently added to its comprehensive portfolio with the introduction of the HLS27, a range of LED strip lights for hazardous areas which epitomises the advantages of LED lighting.

The HLS27 is a 12–30 volts DC powered light, certified for gas and dust Division 2 locations. ATEX/IECEX:(Gas & Vapours: II 3 G Ex ec IIC T4 Gc

(Groups IIC Zone 2). (Dust: II 3 D Ex tc IIIC T85 C Dc (Groups IIIC Zone 22).

It utilises tough aluminium housings encased in a shatterproof, UV-stabilised, polycarbonate shell. Water resistant to IP67 the HLS27 is ideal for harsh indoor and outdoor applications such as cabinets, spray-booths and outdoor shelters.

In addition to the classic cool white models, the HLS27 is also available in single and dual colour models. Colours can be used for direct status indication, to supplement illumination with indication, or to provide coloured illumination, for example red light at night.

With eight length options and an impressive 750 lumens per 30cms light output, the HLS27 easily replaces bulky, energy-hungry fixtures. In addition to the integral 50% dimming option, models with a variable dimming input are also available for customisation of light levels. The integral ITC-ER

rated cable is available in multiple lengths to allow for simple installation directly to the junction box without expensive conduit.

As part of their proud boast of being a total solutions provider, Turck Banner are able to offer planning support to LED lighting customers in the form of 3D illumination modelling, providing accurate custom made solutions.

Turck Banner also offer a range of Hazardous Area LED Indicator Lights (K30L & K50L) featuring extensive ATEX and CSA approvals. The indicator lights are safe to use in every classified zone or area in Europe and North America.

Furthermore their IECEx approval means quicker authorisation for use in locations outside Europe and North America.

To accommodate diverse hazardous applications, the K30L and K50L are available in intrinsically safe (Ex ia), encapsulated (Ex mb/Ex ta) and non-sparking (Ex nA/Ex tc) models. The indicators also offer enhanced display flexibility, featuring five colours—green, red, yellow, blue or white—with up to three colours in one device. To eliminate false indication from ambient light, the indicator appears grey when turned off.

For reliable operation, the IP67/IP69K indicator lights can operate in temperatures ranging from -40 to +50 degrees Celsius (-40 to +122 degrees Fahrenheit).

For more information visit:
<https://www.turckbanner.co.uk/en/>

AEMT Ex Course recognised by IECEx Training Provider Programme

After being scrutinised by the IECEx Recognised Training Partner Programme (RTPP) Review Panel the AEMT (Association of Electrical & Mechanical Trades) Ex Training course for the repair, overhaul and reclamation of hazardous area rotating equipment is now recognised as the 25th IECEx RTP in the world.

1. Proposition that an independent and voluntary assessment programme will enable employers to evaluate merits of their staff's training and education.
2. Adequacy and consistency of Ex training at national and international levels can be ensured.
3. Assurance that training is being provided with linkages to the latest versions of relevant Ex Rules and Standards.

As an IECEx RTP the AEMT is able to demonstrate a capability and history of providing training to technical orientated persons in Ex repairs and the IEC 60079 series of standards.

The AEMT offers regular training courses in the UK, South East Asia and the Middle East as well as several other locations across the globe.

Thomas Marks, Secretary of the association, comments, "To be recognised by the IECEx RTP programme compliments the Continual Professional Development (CPD) recognition the course received earlier in 2018. It now means companies looking to train their staff can be confident in knowing they are using one of the very best providers of this training course around the world!"

For more information about the AEMT Ex course on the repair overhaul and reclamation of hazardous area rotating electrical equipment, visit the association's website www.theaemt.com/ex-training



Established in 2016, the IECEx RTPP currently consists of 25 international training organizations offering training courses for all aspects of hazardous area businesses. As well as offering fundamental training to Unit Ex 001. The AEMT is one of very few in the world who covers the repair, overhaul and reclamation aspects of the field, Unit Ex 005.

Dr. Martin Killeen, lead lecturer for the AEMT, has been part of the AEMT Ex courses for over 20 years, giving him an understanding of the content that is second to none.

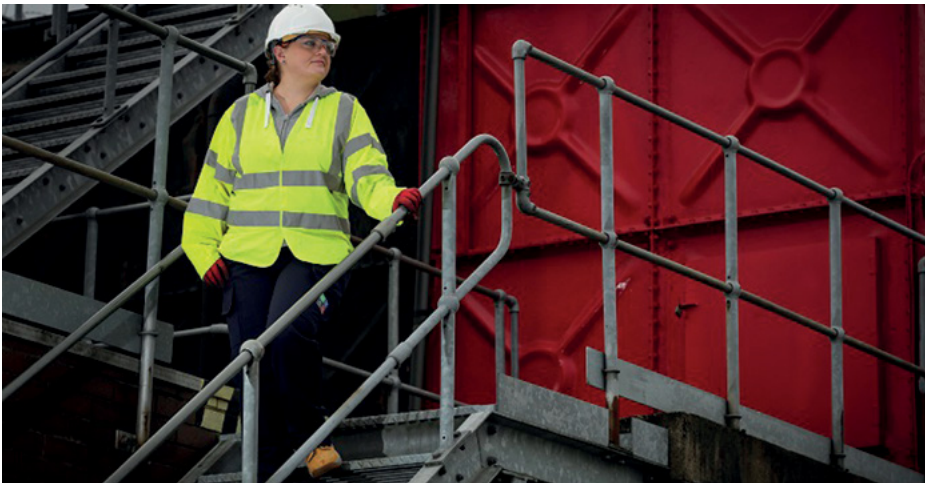
He comments, "this is a terrific achievement, and bodes very well for the future of the course. In international markets, this will make a big difference as more and more engineers endeavour to complete the IECEx CoPC scheme."

All aspects and elements of the IECEx RTPP are defined in the Operational Document (OD) 521. As with all IECEx documents, this paper can be downloaded 24/7 and free of charge from the IECEx homepage. It contains a framework based on the following elements:

Let's Get More Women Into Engineering

– an International Women's Day plea from training provider DTL

Attracting more women into construction and engineering must become a higher priority for government and employers, urges Develop Training Ltd (DTL).



The training company says redressing the gender imbalance is not just desirable from an ideological viewpoint but also a means of helping to tackle the chronic skills shortage afflicting the industry. Two thirds of employers say a shortage of engineers is a threat to their business.

DTL, whose customers include household names in the utilities and energy sectors, highlighted the issue to coincide with International Women's Day on Friday March 8.

This year, International Women's Day kicks off a year-long campaign with the theme #BalanceForBetter. Organisers say: "Balance is not a women's issue, it's a business issue. The race is on for the gender-balanced boardroom, a gender-balanced government, a gender-balance of employees... Gender balance is essential for economies and communities to thrive."

John Kerr, DTL's Director of Education & Training, said: "The industries we serve are among the most male-dominated in the country. Only nine per cent of the UK's engineering workforce is female,

and we have the lowest percentage of female engineering professionals in Europe."

He said the challenges included improving the way construction and engineering were portrayed in schools, encouraging girls and young women to study engineering-related subjects and changing perceptions of working in the industry.

"In many ways, the obstacles to bringing more women into the sector are the same as we face in attracting young people," said Mr Kerr. "The industry offers well-paid, secure and skilled work with great career prospects, but it still encounters prejudiced ideas of dirty manual labour. There are a number of excellent initiatives to attract women into engineering and construction, and some great role models, and we hope that broader changes in society will also play a part in breaking down barriers. We support International Women's Day and the Balance For Better campaign in their efforts to make a difference."

One female role model is DTL's own Nicola Smith, who swapped life as a stockbroker to become an engineer.

Nicola has been a Lecturer in Smart Meter installation with DTL since February 2017, passing on the skills and knowledge she developed during her time as a hands-on installer to others. Having started work as a cashier for a building society, she quickly progressed in the financial services sector, eventually becoming a stockbroker based in London's Canary Wharf, but she had a nagging feeling that she wanted to do something else.

At age 19, she applied for a mechanics course, but the man she spoke to about it put her off. Years later, when an apprenticeship at British Gas came up, she grabbed the opportunity.

"At that time British Gas were one of the few companies offering to pay people while they learned," Nicola recalls. "Fortunately, many more companies offer apprenticeships today."

Nicola said she was completely accepted by her team-mates, but she had to challenge public perceptions that engineers were men. "Customers would say to me 'but when will the engineer be here?' and I'd have to explain that I was the engineer," she says.

Nicola hopes that at DTL, she can play a part in encouraging women into engineering: "I'm a massive advocate of encouraging more women into the industry. I really want to encourage women to see it as a career choice. There's genuinely nothing a man can do that we can't. With practice, you become just as capable as your male colleagues. I really can't shout loudly enough about it."

For more information visit:
www.developtraining.co.uk

Certified Thermographers Courses Throughout The UK

Thermal imaging is getting smarter. Even troubleshooting infrared cameras have standard features that were once only the preserve of top-of-the-range models. Sophisticated user interfaces allow simple point and shoot operation.

One click saves the image in a variety of modes, complete with embedded thermal data for subsequent analysis.

Essentially this is good news but, although the technology is exceptionally easy to apply, the need for training is more important than ever. It is

vital that the camera user understands the science behind thermal imaging. Without it, thermal images are virtually meaningless and findings are at risk of serious misinterpretation.

FLIR Systems Infrared Training Centre (ITC) is an accredited authorised training organisation for



the British Institute of Non-Destructive Testing and it has just confirmed its programme for 2019 that spans three levels of certified competence; Categories I, II and III. The course duration for Category I and III is four days and for Category II it's five days.

A new three-day course for Optical Gas Imaging has also been introduced to this year's programme in response to a growing interest in the use of infrared to pinpoint the source of industrial gas leaks.

Start date	Course	Location
Mon 25th March '19	ITC I	West Malling, Kent
Tues 9th April '19	Optical Gas Imaging	West Malling, Kent
Mon 29th April '19	ITC I	Fareham
Mon 20th May '19	ITC I	Stockton-on-Tees
Mon 17th June '19	ITC I	Lymm, Cheshire
Mon 24th June '19	ITC I	Bristol
Mon 1st July '19	ITC I	West Malling, Kent
Mon 8th July '19	ITC II	West Malling, Kent
Mon 16th Sept '19	ITC I	Stockton-on-Tees
Mon 23rd Sept '19	ITC I	Nottingham

To register for any of the following go to www.irtraining.eu

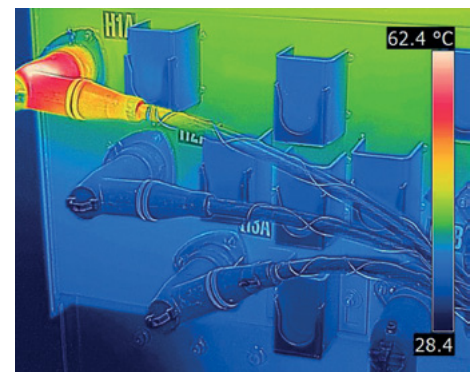
Webinars Added To ITC Training Programme For 2019

To make it as easy as possible for would-be thermographers to deepen their understanding of the science behind infrared inspection and apply it successfully in their working lives, FLIR Systems' Infrared Training Centre (ITC) has extended its training options.

As well as its BINDT-accredited Category I, II and III courses and application-specific taster sessions, ITC has introduced a programme of webinars. These online tutorials are running

throughout the year, cover a variety of subjects and are designed to prepare delegates for further in-depth study and qualification.

Each webinar starts at 10:00 hrs, occupies 30



minutes and is hosted by Jon Willis, the ITC Training Manager, who also conducts the post-tutorial question and answer session.

Friday 26th April 2019	Capturing Great Thermal Images
Friday 31st May 2019	IR for Electrical Applications
Friday 6th September 2019	IR for Building Applications
Friday 4th October 2019	IR for Building Applications
Friday 8th November 2019	IR Thermography Basics

To register for any of the follow go to www.irtraining.eu

Size Matters For Safe Thermal Inspection

For hazardous applications such as establishing the health of electrical components at a substation, the ability to measure temperature accurately over a distance is critical. Achieving this depends on several factors and two of the most important are the resolution of the detector and the chosen camera lens.

You can compare resolution to human eyesight. If you have 20/20 vision, you can define the smallest letters at the greatest distance and that's the equivalent using an infrared camera with a high-resolution detector. A low-resolution detector is the same as a person whose sight is low on the visual acuity scale. The vision is improved by glasses and in the case of the IR camera by adding a magnifying glass to optically reduce its distance from the target.

This enables the camera to take an accurate temperature measurement by allowing it to get more detector pixels on the target, giving more detail in the thermal image. And it's important to note, digital zoom doesn't improve accuracy, so higher resolution or also narrow field of view is key here.

To stand a chance of diagnosing an electrical fault with a less sensitive camera means you must stand closer to the subject and this is where safety is compromised as there is serious risk of arcing. So, although the entry-level, troubleshooting cameras with a pixel array of typically 180 x 160 or less are great toolbox tools they are only suited to



doing a quick short-range scan for hotspots where it is safe to do so.

Resolution boost

The higher resolution cameras that best serve this type of application are also available with software features that allow the image to be enhanced. In the case of the FLIR T-Series, UltraMax™

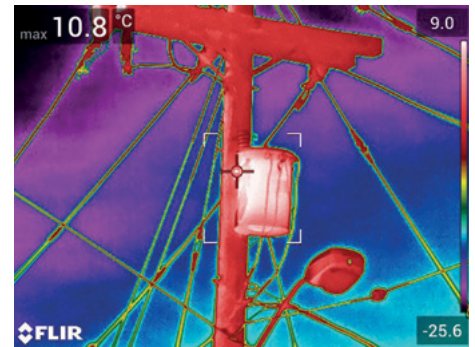


technology is a good illustration. It captures a series of thermal images and combines the data into one new image that has many more pixels of the target, resulting in a resolution greater than that of the original camera detector.

In fact, the result effectively quadruples the thermal pixels, including full radiometric measurement data. This means that with UltraMax™, a 640 x 480 resolution model can boost an image up to 1.2 megapixels and a top of the range 1024 x 768 camera up to 3.1 megapixels.

New lens technology

The sophisticated high-resolution cameras also



come with exchangeable lenses so they can be used optimally for a broad variety of applications, and developments have recently been introduced that greatly improve this combination for small target/long distance work.

The FLIR T1k thermal imaging camera is often used for power generation inspection and specified with an extra seven-degree lens to optimise spot-size ratio. This combination of kit can make it on the heavier side weighing around 2kg.

Customer feedback confirmed that users wanted a camera with an optional magnifying lens that was more portable and sufficiently stable to hold in one hand. As FLIR develops and manufactures its own lenses in-house, it has been able to achieve that in its new FLIR T840 model with Ultramax™ and six-degree lens that is ideal for looking at connectors on overhead powerlines.

While a thermal imaging camera with the maximum resolution detector – 1024 x 768 pixels - is still needed to get the best image of a conductor on a 90-metres tower, this model is well suited to a wide variety of inspection applications over distance. And to make it even more adaptable it comes with an eyepiece, allowing it to be used in all weather conditions and especially on sunny days.

For more information visit:
www.flir.co.uk

Opgal's EyeCGas optical gas imaging cameras

Over 35 years of industry experience, R&D, and listening to the clients' feedback allows Opgal to deliver state-of-the-art optical gas imaging solutions that are trusted in over 60 countries globally.



Opgal aims to produce OGI cameras that exceed requirements set forward by the customers. The result is OGI offerings that meet the strictest regulations, follow highest safety standards, and offer best-in-class efficiency and speed.

Following the introduction of the EPA's QuadOa regulations and thanks to the effectiveness of optical gas imaging technology, OGI cameras are now the tool of choice for detecting volatile gases in the oil & gas, energy generation, and chemical and petrochemical industries. Detection of industrial gas leaks is crucial for businesses. OGI cameras help improve safety, increase operational efficiency, and protect the environment.



EyeCGas® 2.0 VOC

Building on customer experience from the first generation EyeCGas. EyeCGas 2.0 is the only OGI

camera with wireless capabilities. Equipped with Wi-Fi and Bluetooth communication, EyeCGas 2.0 allows live video streaming and video download. Saving time and reducing costs of data analysis and report generation.

EyeCGas 2.0 is LDAR ready, allowing for easy integration with leading LDAR software tools. In addition the new thermography mode allows temperature measurement and multiple-color palettes for better versatility.

With NETD of < 12mK, EyeCGas® 2.0 is the most sensitive OGI camera in the market, and can detect even the smallest leaks at remote locations, where a traditional leak survey can be problematic. The camera comes with a glare shield that supports magnification by 300% and reduces fatigue for the user.

It is certified to meet OOOOa requirements.



EyeCGas® CO2

EyeCGas® CO2 is a rugged OGI device. In addition to all the improvements made to the EyeCGas 2.0, it is equipped with a high-sensitivity detector, and can detect even the smallest CO2 concentrations (as low as 3%). Applications

include repair confirmation, power generation plants and enhanced oil recovery operations. The camera is certified for ATEX zone 2 and UL class I Div II hazardous environments.



EyeCGas® CO

EyeCGas® CO is also a rugged handheld camera specifically engineered for detecting small leaks of carbon monoxide and a number of other harmful gases. Its primary application is in the steel, chemical, and power generation industries where toxic gases are part of the manufacturing process or a byproduct of the production.

It is the only OGI camera that is certified for ATEX zone 2 and UL class I Div II hazardous environments.

Closing words

OGI cameras have become indispensable tools for ensuring the safety and efficiency of industrial facilities. Facilities that regularly use Opgal's innovative OGI products not only save money by not having to shut down plants, but also considerably reduce emissions. They achieve this by simply using the right technology and detecting fugitive gas leaks early.

For more information please visit:
<https://eyecgas.com>

Want to understand more about explosions and their consequences?

Are you responsible for industrial premises that fall under the DSEAR or ATEX regulations? Are you involved in designing new process plants or maintaining existing ones? Do you work in hazardous areas?



If so, you will need a full understanding into the phenomenon of explosions, and the requirements of UK and EU regulations relating to health and safety in potentially explosive atmospheres. IChemE's Comprehensive Explosion Science training course provides the perfect learning opportunity.

This two-day course is designed to provide a detailed understanding into the phenomenon of explosions, what effects and consequences can be expected, and how to become compliant with the regulations in force whilst delivering a sound basis of safety to protect personnel and equipment as far as reasonably practicable. It is delivered in partnership with Gexcon, a world-leading company in the field of safety and risk management and advance dispersion, explosion and fire-modelling.

Topics covered include gas and dust explosion theory, the DSEAR and ATEX regulations, ignition sources, hazardous area classification, risk assessment and protection concepts. The course will also examine several industrial explosions

and the vital lessons that can be learnt from them. This is an excellent opportunity to understand the science behind explosions, their effects and consequences, and the regulatory requirements for a safe and compliant working environment.

GEXCON
IChemE ADVANCING
CHEMICAL
ENGINEERING
WORLDWIDE

Comprehensive Explosion Science takes place on 18–19 June at IChemE's (Institution of Chemical Engineers) offices in Rugby, UK. More course details are available at www.icheme.org/explosion-science. The course can also be delivered in-company. Please contact courses@icheme.org for a quotation.

Comprehensive Explosion Science

18–19 June, Rugby, UK

Want to understand more about explosions and their consequences?

Our Comprehensive Explosion Science course provides the perfect opportunity. Topics covered include explosion science, the DSEAR and ATEX regulations, ignition sources, hazardous area classification, explosion prevention and protection measures, and risk assessment methodology.

If you are responsible for industrial premises that fall under the DSEAR or ATEX regulations, or are involved in designing and maintaining new or existing process plants, then this course is a must to ensure the safety of your assets.

Find out more:
www.icheme.org/explosion-science

Delivered in partnership with

GEXCON



IChemE ADVANCING
CHEMICAL
ENGINEERING
WORLDWIDE

Ashtead launches intrinsically safe dust monitor

Ashtead Technology has added TSI's latest personal aerosol monitor, the SidePak™ AM520i to its fleet of instruments available for both rental and sale.



"This is a major addition to our equipment portfolio," comments Senior Sales Manager Josh Thomas. "Many workplaces include areas that contain or produce explosive or potentially explosive atmospheres, and a high proportion of these zones contain risks associated with particulates. So, an intrinsically safe monitor is required to test these areas, and the launch of the TSI AM520i makes that possible with a lightweight instrument that is ideal for personal monitoring."

Potentially explosive atmospheres exist in locations where work activities create or release flammable gases or vapours, such as petrochemicals, VOCs from paint spraying, or in workplaces handling fine organic dusts such as grain flour or wood. Applications for this new intrinsically safe personal dust monitor therefore include a wide variety of workplaces within the oil and gas, petrochemical, manufacturing,

processing, aerospace, and bulk material handling sectors, as well as those with confined spaces such as mining and wastewater.

Employers are responsible for the classification into zones of areas where hazardous explosive atmospheres may occur. Each zone's classification and its size and location, depend on the likelihood of an explosive atmosphere occurring and its persistence. Schedule 2 of the Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) contains descriptions of the various classifications of zones for gases and vapours and for dusts.

DSEAR requires employers to eliminate or control the risks from dangerous substances, so monitoring is essential in ATEX zones, and the AM520i is certified for dust measurements in Zone 0. ATEX is the name commonly applied

to the two EU Directives for controlling explosive atmospheres; the 'ATEX Workplace Directive' and the ATEX Equipment Directive' which necessitates the use of intrinsically safe monitoring equipment for example.

The SidePak™ Personal Aerosol Monitor AM520i is a small, single-channel, battery-operated instrument that provides real-time aerosol mass concentration readings of dusts, fumes, mists, smoke and fog within a worker's breathing zone. Typically, the monitor is fitted to the wearer's belt, or left in a location of concern. Alternatively, it can be used as a portable monitor providing real-time readings in survey mode.

With a built-in pump and internal datalogger, the instrument can provide continuous measurements, which provide extremely useful temporal information in comparison with gravimetric methods.

Operators are able to select from a choice of inlet conditioners providing size fraction cut points for PM10, PM4 (Respirable), PM5 (China Respirable), PM2.5, PM1 and 0.8 µm Diesel Particulate Matter (DPM).

Summarising, Josh says: "The non-intrinsically safe version of this instrument has been hugely popular for many years, so the technology is well proven, and the launch of this new EX version will mean that anybody with a potential requirement for monitoring in explosive atmospheres, can rent or purchase an instrument that can operate in all areas.

"We are also a TSI Gold Partner, so customers can be assured that we have the resources to ensure that TSI equipment is supplied and maintained in perfect condition."

For more information visit:
www.ashtead-technology.com

BEKA panel lamps gain dust certification

BA390 intrinsically safe panel lamps from BEKA associates now have IECEx and ATEX dust certification in addition to their original gas approval.

Permitting installation in all dust Zones, this additional certification further extends the applications for this extensive range of panel mounting LED lamps.

Available in five different well defined colours, all the lamps incorporate a 20mA current regulator which maintains a constant lamp brightness independent of supply voltage variations.

Mounted in an industry standard 22.5mm diameter hole, the front of the lamp has IP66 protection making it suitable for installation in areas which will be washed with a hose. The lamps terminals have IP20 protection, which can be increased to IP66 by an optional BA599 rear

sealing kit which includes a gland to seal and support the connecting cable.

Also included in this range of panel lamps are very low current intrinsically safe BA390S models which have been optimised to provide guaranteed performance at 4mA, but will continue to function at lower currents. These do not incorporate a current regulator and their high efficiency allows them to be powered by almost any intrinsically safe voltage source such as a logic signal, or an output from a multiple I/O fieldbus module.

In addition to IECEx and ATEX certification, all intrinsically safe models have FM approval for use in hazardous gas atmospheres.



Uncertified BA590 models are available for applications in non-hazardous areas.

For further information including datasheets and certificates please visit http://www.beka.co.uk/led_panel_lamps.html or phone the BEKA sales office on 01462 438301.

Boom for extraction systems in the UK: Welding companies trust in KEMPER

KEMPER records extraordinarily high growth in Great Britain. The demand for effective extraction systems has increased significantly since the introduction of stricter health and safety regulations in February.

The background is the reclassification of welding fumes: According to this, the Health and Safety Executive (HSE) no longer only assesses hazardous substances from stainless steel welding, but also from mild steel welding as carcinogenic. The occupational health and safety organisation therefore even prescribes that an air fed welding helmet must be worn when welding outdoors. Due to the new requirements, many welding companies rely on high-quality extraction

technology. "KEMPER has the world's broadest portfolio of extraction systems for protection against carcinogenic welding smoke," says Björn Kemper, Chairman of the KEMPER Management Board. All KEMPER mobile systems, from the basic to the high-end extraction unit, have W3 approval. With certification by the German Institute for Occupational Safety, these extraction systems are also suitable for capturing carcinogenic welding fumes. "In the context of constantly



tightening occupational safety regulations, companies worldwide are gaining legal certainty through the use of KEMPER technology". Even the cleaned air can be returned to production with such systems. Central extraction systems from KEMPER are also W3-certified.

More information can be found at: www.kemper.eu

HSE Safety Alert For Mild Steel Welding Fume

The UK HSE have recently released an alert warning that exposure to mild steel welding fume can cause lung cancer; and potentially also kidney cancer.. This is based on recent research by the International Agency for Research on Cancer. Mild steel welding fume has now been reclassified as a human carcinogen.



What does this mean for employers?

The immediate outcome is that HSE will have a higher expectation of employers. All employers who have staff welding mild steel will be expected to introduce a significantly higher standard of protection and to be able to demonstrate the effectiveness of this protection. We understand that insurers will also be looking for improved protection and in some cases have already refused to cover welding processes without significant improvements being put in place.

Key points to note are:

- LEV will ALWAYS be required when working inside.
- RPE will always be required where LEV does not effectively control fume.
- Welding without LEV or RPE in place will not be accepted, even if working outdoors.

- HSE will not accept any duration of welding activity where fume is not adequately controlled.
- Is my existing weld fume extraction system sufficient?

If your existing system is fully effective, you may not need to make any changes. However, you should review the effectiveness of the system to be sure you are working safely. If you have an AirBench, talk to us and we will provide recommendations. If you have a system provided by another supplier, contact them. Your system may need upgrading or recommissioning.

It is unlikely that welding hoods or extraction arms will be considered adequate to control weld fume in future given the unreliable nature of these systems and their tendency to expose operators to high levels of fume when incorrectly used.

What action are AirBench taking to respond to this?

AirBench Ltd aim to help customers comply with these enhanced expectations.

Firstly, we have developed upgraded filtration for our FPW range of welding benches. This filtration is to H13 grade; which has a minimum efficiency of 99.95%. This has necessitated design changes to the FPW range. These have now been fully tested and the upgraded systems are now available to purchase.

For existing customers, in most cases this upgraded filtration system can be retrofitted. For new customers, we will be recommending the new H13 grade final filter as standard for welding operations.

For more information visit:
www.airbench.com

Air Design launches standard range of Air Handling Units

With increased demand for improved energy efficiency and Indoor Air Quality (IAQ), Air Design, the leading brand of air handling units from Elta Group, has answered these requirements with the launch of PURA - a new range of standard energy recovery Air Handling Units.

Using heat and/or coolth* recovery technologies, the standard range of extruded aluminium pentapost frame Air Handling and Energy Recovery Units are able to minimise utility bills for improved energy savings and increased performance. The PURA units are suitable for both internal and external applications and in a range of sectors, from industrial and commercial buildings to healthcare and educational facilities.

The units come equipped with a plate heat exchanger or rotor and an electric heater or low pressure hot water (LPHW) coil for heat provision. For cooling, a chilled water or refrigerant coil can be used.

Responding to the need for improved IAQ, the PURA units have achieved a casing air leakage classification of L1 for minimum ingress of polluted air and have a filter bypass leakage ration below 1%. Rated according to EN ISO 16890, the standard filters also achieve efficiencies of up to ePM1 70% to promote the supply of good air quality.

Ana Cross, Associate Product Manager Air Handling Systems (UK) at Elta Group comments: "Air handling units are arguably the most important part of a ventilation and air conditioning system, as they remove polluted air from indoor spaces

and replace it with clean, fresh, and sometimes humidified air, at the right temperature.

"At Air Design, we are well accustomed to creating bespoke ventilation products for our customers to fulfil any requirement but have noticed increased demand for standard products which are equally efficient and reliable."

For more information on Air Design, visit: www.air-design.com

***Coolth includes transfer of hot and cold air**

Corrosion Resistant Test Chamber Extraction

Test chambers are designed to examine various types of materials in many different ways for a wide scope of applications. Chambers may be required to measure corrosion or to test components to destruction. Their primary function is to speed up the processes to simulate time in an environment.

Finding the long term resistance to corrosion for various types of materials requires the speeding up of corrosion up by using certain substances. For example, a salt spray testing chamber would recreate the effects of a harsh offshore environment to evaluate the corrosive properties of supplies, such as, paint coatings and phosphated surfaces. This will simulate the effects of years of exposure to salt spray. By testing in a chamber the variables can be controlled to ensure the measure of corrosion is as accurate as possible. Components are subjected to a corrosive environment without introducing other contaminants into the test area.

Chambers are often designed to test for compliance with standards. When components or surface finishes pass testing, they are considered compliant with corrosion resistance standards such as, MIL-STD-202H, BS EN 60068-2-52 or ASTM-B 117.

As the environment in the chamber is designed to corrode metal or similar materials the extract system will also corrode if standard metal fans and metal ductwork are used. Axair supply polypropylene fans suitable for this type of application as they are resistant to corrosion. The fans are single inlet centrifugal types complete



with a pedestal for floor or wall mounting. Different materials are available for the pedestals, depending on the setting.

To fine tune the required airflow rate, Axair also offer inverters for fine speed control of the fan. The inverter can also have pre-selected speeds depending on requirements.

For more information, visit www.axair-fans.co.uk, contact Axair's team on 01782 349 430 or email sales@axair-fans.co.uk.

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BSRIA Instrument Solutions gets personal for worker safety in hazardous environments

Now available to buy or hire from BSRIA Instrument Solutions is the TSI SidePak AM520i personal aerosol monitor, a small, lightweight, single-channel, portable, battery operated, datalogging, light-scattering laser photometer that provides real-time aerosol mass concentration readings of dusts, fumes, mists, smoke and fog within a workers' breathing zone.

The innovatively designed inlet conditioners increase the mass concentration capability and provide size fraction cut points including PM10, PM4 (Respirable), PM2.5 and PM1 by using the various interchangeable impactors supplied with the kit.

The AM520i is IECEx and ATEX certified, meaning that combined with its robust and unobtrusive design it can help achieve continuous compliance for worker protection in a variety of volatile environments. It is ideal for use in a range of industry applications, including but not limited to aerospace, bulk material handling, chemical manufacturing and processing, confined

spaces, mining, oil and gas, petrochemical and pharmaceutical.

With a large easily readable screen, the AM520i displays real-time readings and has data logging capabilities for additional, offsite reporting. The user friendly TrakPro software allows the operator to download logged data and quickly analyse the findings, allowing for the identification of source problems and corrective action to be taken in less time, helping to improve safety and comply with regulations. Where more immediate monitoring information is required there is also an alarm function (both audible and visual) that can be triggered if a threshold concentration is breached,



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paramount for worker protection when personnel are operating potentially hazardous processes.

The AM520i combines proven instrument design and intuitive controls, with portability, long battery life (up to 20 hours) and rapid rechargeability (within 4 hours for a fully depleted battery) for long-running real-time monitoring in environments requiring intrinsically safe instrumentation.

Contact BSRIA Instrument Solutions on 01344 459314 or instruments@bsria.co.uk for further details or a price.



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This is the world's only reliable and simple-to-use ultrasonic thickness gauge that has been certified intrinsically safe to the highest possible ATEX rating; this makes it the number 1 choice for all engineers working within potentially explosive environments such as food processing plants.

Certified intrinsically safe to ATEX Marking Group I & Group II / CSA Class 1 Group A, B, C & D Division 1 means that the Cygnus 1 Intrinsically Safe thickness gauge is ideal for use in Zone 0, Zone 1 hazardous areas and requires no plant shutdown or hot work permit. In addition to oil & gas production facilities, the gauge has been approved for use in mines and is also useful in maintenance and inspections of LPG vessels and FPSOs.

As with all Cygnus ultrasonic thickness gauges, the Cygnus 1 uses the Cygnus multiple-echo technique which provides the most accurate and reliable thickness measurements and can read

through coatings and corrosion.

The gauge body has been designed to be rugged, durable and shock-proof, and has been IPX5 and IPX7 rated meaning that this heavy duty sealed unit is highly water, dirt and dust resistant.

**Quote HES032019 for a 10% discount on a gauge*

To find out more information, visit www.cygnus-instruments.com.
Alternatively, call us on +44 (0) 1305 265533 or email sales@cygnus-instruments.com.



Vertical air receivers now in stock at Hi-line industries

As a company that listens carefully to changes in market demands and industry trends, Hi-line Industries now holds a range of class-leading Vertical Air Receivers in stock. The top-quality vessels are available immediately at highly competitive prices.



Currently, four sizes of Vertical Air Receivers are being stocked at Hi-line: 300, 500, 1000 and 2000 litre variants. The vessels are manufactured at Hi-line's new factory, centrally located in Burton-upon-Trent where the company has a storage facility populated with the vessels ready for

immediate shipping or collection.

Receivers provide valuable temporary storage for compressed air, particularly at facilities with high air consumption. The vessels also serve to stabilise pressure peaks and provide steady air

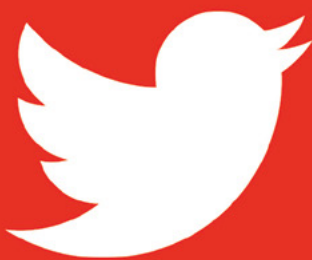
flow. Not having one as part of a compressed air system can increase the load/unload cycles on the compressor, making it work harder.

All of the Vertical Air Receivers stocked by Hi-line are powder-coat finished in compressed air blue (RAL 5015) and are PED compliant to 2014/68/EU. Indeed, quality is the primary attribute of the vessels, which are built by robots to ensure perfect and consistent welding quality. In addition, high-quality 5mm plate and fittings are used throughout. As a result of this build quality, the Vertical Air Receivers are twice the weight (pro rata) of standard catalogue vessels.

All four models of Vertical Air Receiver being stocked by Hi-line Industries offer 11 bar working pressure and come with a 10-year warranty. The vessels can be supplied with or without fitting kits to suit individual preferences. Safety valves, gauges and drains are also available as options.

As a member of the British Compressed Air Society, Hi-line is proud to be part of the 'Made in Britain' campaign that promotes the best of British manufacturing.

Further information is available from:
Hi-line Industries Ltd,
www.hilineindustries.com



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Clean up your compressed air

Potential risks from contamination of compressed air are taken extremely seriously by the food and drink sector. Mark Whitmore from BOGE sums up the contaminant hazards, their sources and how to tackle them.



Compressed air has multiple uses in manufacturing and processing food and beverages, serving applications such as handling, cooling, freezing, labelling, cutting, peeling, bottle filling and packaging.

Contaminated compressed air can damage vital machinery, compromise product quality and seriously affect consumer and employee health.

There are three main contamination sources: the atmosphere, the compressor, and the piping for receipt and distribution of air. Contaminants fall into three interacting forms:

- Solid – including dust and microorganisms drawn from the atmosphere and particles from abraded or corroded system components
- Liquid – including atmospheric water pulled into the system, or condensing from vapour, plus

compressor lubricants and coolants

- Gaseous – including vaporised water, lubricant and coolant

Measures to avoid compressed air contamination should be part of a food and beverage company's HACCP (Hazard Analysis and Critical Control Points) plan. 'BCAS Food Grade Compressed Air Best Practice Guideline 102', a voluntary code agreed by the British Compressed Air Society and British Retail Consortium, should be followed.

A variety of methods can be combined to meet the code's requirements:

- Water separators – for bulk removal of condensed water and liquid oil
- Coalescing filters – dealing with water or oil

which has formed an aerosol of small droplets

- Drying systems – such as pressure-over-generation, refrigeration, membrane and adsorption (desiccant) dryers
- Dust removal filters – removing dry particulates and other solids
- Sterile air filters – ensuring absolute removal of microorganisms and solid particles
- Routine maintenance – including regular draining, cleaning and sterilisation of pipework

And of course, high-quality, oil-free air compressors with low-wear components should also be chosen wherever food and drink are involved.

For further information, visit:
www.boge.com

Activated Carbon Towers Now Available From Hi-Line

Hi-line Industries, a leading UK supplier to the compressed air sector, has unveiled a range of Activated Carbon Towers to suit a number of diverse applications, including those involving breathing air equipment or food production, for example.

The new carbon towers are manufactured from the same high-quality vessels used for Hi-line's dryers, and filled with either zeolite minerals or carbon to suit the specific application.

Activated Carbon Towers are an increasingly popular addition to compressed air circuits, thanks largely to their ability to adsorb contaminants such as oil vapour and odour. As a result, oil levels within the compressed air can be reduced sufficiently for use in sectors where high purity levels are required, like oxygen/nitrogen generation, food and beverage, pharmaceuticals, electronics and healthcare. Such performance levels exceed those possible using desiccant air dryers together with associated filtration.

In the new units, compressed air flows through the activated carbon bed, adsorbing oil vapours and odours. Flow distributors are deployed to ensure uniform air distribution. Some 15 models are available in the range, extending from the smallest at a capacity of 80 Scfm, 136 Nm³/h, up to the largest, at 2000 Scfm, 3400 Nm³/h. The units come with stainless steel gas distributors and are PED compliant to 2016/68 EU, while R55 long-life hybrid activated carbon is used to ensure reliable performance, day-in, day-out. A five-year warranty is offered as standard on parts and labour.

Vessels are held in stock at Hi-line Industries to ensure short lead-times. Both the vessels and the



robust box section frame are powder-coat finished in RAL 5015, although they can be manufactured in any colour at no extra charge.

For more information visit:
www.hilineindustries.com

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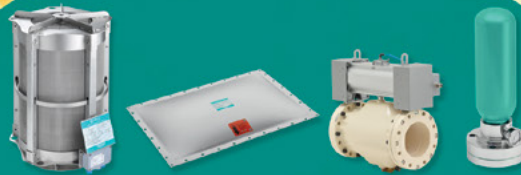
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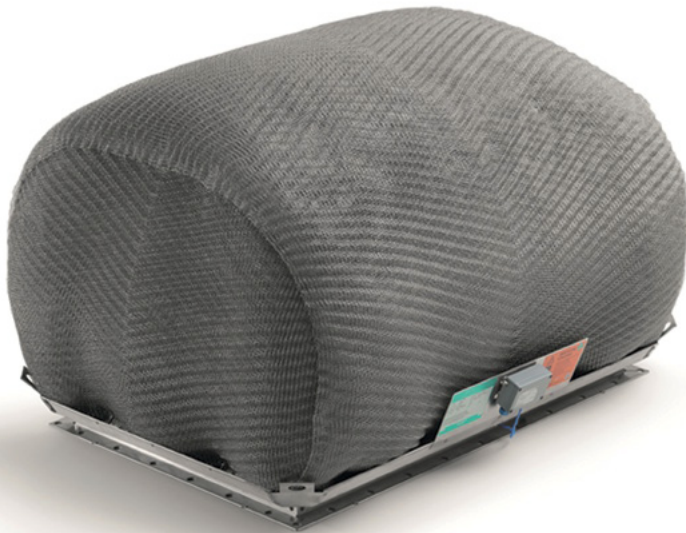
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Q-Ball – the minimum weight solution for flameless explosion venting

As a pioneer in developing systems for flameless explosion venting REMBE GmbH Safety + Control has fundamentally changed the world of explosion protection already in the eighties. With Q-Ball the German engineers are now presenting a new development, which possesses the potential to revolutionise the flameless explosion venting once again.



This is because the Q-Ball is going to set a new benchmark in venting effectiveness and weight. Primary designed for elevators, the principle of contour parallel venting -developed by REMBE engineers- applies with the Q-Ball. A maximum venting effectiveness is guaranteed and at the same time the required vent area is reduced to a minimum. The design is characterised by another new feature: The extreme low weight of the Q-Ball, enabled by construction related setting aside of outer frame profiles. Competitive products with

comparable performance will easily reach more than double weighting. Because of its minimum weight, the Q-Ball is ideally suited for components with a low strength. The dimensions of the four available Q-Ball sizes are designed to fit perfect to elevators. Moreover, the integrated signalling enables a reliable monitoring and maintenance. An optional available sanitary cover protects the Q-Ball in a perfect way against wetness and dust indoors and outdoors.

Nowadays it is a common industrial standard for systems of flameless explosion venting that in closed rooms and spaces neither flames, nor pressure or dust can exit the unit. The dangerous effects of explosions need to be reduced to a harmless level; the noise of the explosion bang shall be minimised to an acceptable level. In ideal case production downtimes can be avoided or significantly reduced.

REMBE meets these requirements with explosion-proof housing structures that will stay stable even during extreme dynamic explosions. Additionally filter inlets made of a special stainless mesh material developed by REMBE cool down hot flame gases (up to 3000 °C) extremely efficient within only 500 milliseconds. This reduces the volume of ejected gas and extinguishes the explosion – heat, dust and pressure remain in the facility. Proximity to an external wall is not required, so this simple protection solution can even be used in the middle of production halls. The optimised production process remains in the building.

For more information visit:
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B&CE urges construction companies to train employees in occupational health, in wake of new report

B&CE1 is urging construction companies of all sizes to provide at least one employee with occupational health (OH) awareness training to ensure compliance with regulation and encourage understanding of occupational health and relevant standards, throughout the organisation.

The call follows the launch of a new report from Loughborough University Improving occupational health risk management in SMEs: the role of major projects which looked into how major projects such as the construction of the Defence and National Rehabilitation Centre (DNRC) can support their supply chain to develop good practices in occupational health.

In light of the report's findings, B&CE is also calling for improved training materials and increased education regarding OH obligations.

The research, which was carried out in the School of Architecture, Building and Civil Engineering at Loughborough University, was made possible after they were named recipients of the B&CE Charitable Trust OH Research Award 2016 worth £25,000.

Commenting, Margaret Grahamslaw, Head of Occupational Health at B&CE, said:

"These recommendations centre around the

importance of training in occupational health awareness to ultimately improve the wellbeing of workers in the construction industry across the UK. By ensuring at least one member of staff in any company, regardless of size, is trained in this area, this can encourage the spread of knowledge in both common OH issues and those that are less well understood.

"We're grateful that our charitable trust could provide Loughborough University with the funds to facilitate this important research and look forward to using our joint voices in the industry to make these recommendations a reality in construction."

Lead researcher, Dr Wendy Jones, Loughborough University said:

"Health often ends up as the poor relation of safety in construction, and it can be particularly difficult for smaller companies that don't always have the right expertise, or who have limited budgets, to get the

right arrangements in place. This research found that some small and micro employers are improving their management of hazards such as dust and musculoskeletal disorders as a result of working on major projects such as the building of the DNRC, which the research was centred on. This is good news and confirms that good practices 'trickle down' through the sector for health, as they do for safety.

"We still have a long way to go, particularly in terms of the way we educate our workers, managers and OH professionals about managing health risks and the way the industry manages health surveillance: but this research shows we are heading in the right direction."

The research report, which includes recommendations for those leading on major construction projects and for the industry more widely is available here².

The B&CE Charitable Trust OH Research Award is awarded annually to research initiatives that aim to improve the occupational health in the construction industry. Applications for the 2019 award open later this year.

For more information visit:
<https://bandce.co.uk/>



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