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# Health, Safety & Security Review

VOLUME 1 | ISSUE 1 2015

## Middle East

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### REMOVING THE THREAT

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## editor's note

A WARM WELCOME to the first issue of *Health, Safety & Security Review Middle East*. In this edition we look at a broad range of topics including security in the region's oil & gas industry (p8) and construction site safety (p16). We look ahead to OFSEC 2015 (p31), A+A 2015 (p32) and our very own Middle East Health & Safety Forum (p34). We always welcome feedback from readers on the issues explored in each issue, and if you wish to find out more about the brand or simply want to stay ahead of all of the latest industry news, please visit [www.hssreview.me](http://www.hssreview.me) and follow us on Twitter @hssreview.

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## Nestlé Palestine awarded health and safety certification by OHSAS

Photo: Nestlé



OHSAS supports companies on matters of health, safety and occupational hygiene.

### TESTING & CERTIFICATION

Nestlé has received independent certification in employee health and safety for its business operations in Palestine.

The Occupational Health & Safety Advisory Services (OHSAS) awarded the multinational food and beverage giant its 18001 Occupational Health and Safety Assessment System certification for its Palestinian warehouse and office facilities.

Nestlé said the decision, which was announced in tandem with another certification for environmental sustainability,

confirms the company's commitment to ensuring a safe and secure workplace for all of its employees.

"Nestlé in Palestine follows a rigorous internal Safety, Health and Environmental guide, in line with Nestlé's recently published Creating Shared Value commitments to society in the Middle East, which include ensuring that all Nestlé units have the necessary systems in place to deliver the same level of basic safety and health protection for all employees," said Anton Hazboun, Nestlé's general business manager in Palestine.

## RRC helps Bahrain ministry

### TRAINING

The health and safety department at the Ministry of Works in Bahrain recently appointed RRC Middle East to train 96 new engineers as on-site safety representatives, managing contractor health and safety, ensuring rules and regulations are adhered to, and reporting any issues to the HS&E department. Much of the work being supervised is high-risk, involving confined-space entry, highway operations, and activities in the likes of sewage-treatment plants.

RRC Middle East, part of UK-based RRC International, has centres in Manama and Dubai. It has previously worked with the Ministry on a similar training programme for its security officers. This time, the company worked closely with the Ministry's head of training and the senior safety officer to determine their specific requirements.

A one-week course was developed for six groups of around 16 engineers each



between late 2014 and early 2015. The course comprised three main elements:

- Three days covering the syllabus of the NEBOSH Award in Health and Safety at Work – an introductory qualification to

## Researchers from Dubai create safety system for construction cranes

### SITE SAFETY

A team of researchers from the University of Wollongong in Dubai (UOWD) have created a solution designed to help engineers distinguish where they should safely locate cranes on site, as well as provide information on the type and number of cranes that should be used in order to prevent human errors.

Students Marina Helmy, Kirolos Ayad, Mostapha Rashiduddin and Ommarah Siddigui began working on the computerised crane locator for site engineers in 2011 as part

of an undergraduate research project, which soon garnered the attention of the industry during the University's Annual Software Development Trade Show in 2012. The team finished second in the contest held during that event, thanks to the project's ability to correctly calculate where cranes should be positioned by using data provided by an engineer.

With help from mentors Dr. Soly Mathew-Biju and Dr. Tchantchan Abdel Latif, Helmy and Ayad presented their research at the International Joint Conference on Computer,

Information, System Sciences and Engineering. It was recently selected for inclusion in a book linked to the conference detailing state-of-the-art research, published by Springer this year.

"Our solution works by asking the engineer a number of simple questions, including the number, type and height of nearby obstructions and the desired maximum capacity of the crane," explained Ayad.

During its construction boom of the mid 2000s, Dubai was believed to be home to close to 25 per cent of the world's cranes.

## expand its health and safety capability



The one-week course was developed for six groups of engineers.

enable workers to identify, prevent and deal with hazards in the workplace;

- One day of classroom-based practical exercises, covering such important skills such as measuring safety performance;

- One day of site visits to enable the candidates to apply what they had learnt to real working conditions.

Hasan Alaradi, one of the RRC Middle East tutors, said, "The candidates were new and young

graduates. They showed great interest in the topics discussed and absorbed all the information like a sponge.

"The biggest challenge for them was the practical element of the course, where they had to apply their knowledge in real workplace conditions."

The success of the training programme has encouraged the Ministry to sponsor candidates who wish to study further for the NEBOSH International General Certificate in Occupational Safety and Health.

The Ministry's senior safety officer, Ali Murad, commented, "The Ministry now has civil engineers with an internationally-recognised safety qualification, who can act as safety reps on all our sites to ensure contractors adhere to our safety rules and procedures, and who can identify and report unsafe conditions and practices.

"This has improved safety standards on all Ministry work sites and has made the HS&E department's life much easier," he added.

## Innovative car park gas sensor developed

### TECHNOLOGY

German company MSR-Electronic, which manufactures gas detection sensors, controllers and warning devices, has developed an innovative exchangeable sensor that it says is time and cost efficient. The 'X-Change' sensor is optimised to detect different gases for monitoring air quality of underground car parks, tunnels and loading zones.

Gas detection systems today must meet both the latest technological and legal standards. The sensors have to be adjusted or recalibrated at least every two years to ensure proper air quality monitoring. To date this has been a very complicated procedure, with the underground garage operator dependent on an external certified specialist company visiting regularly to do the calibration on-site. This tends to be both costly and time-consuming.

With the exchangeable sensor X-Change, MSR-Electronic sends the car park operator the newly calibrated sensor heads on request. These can then be swapped over according to the principle Plug & Play. This gets rid of the need for the external specialist, thereby minimising time and effort, and is less costly.

The X-Change support provided by MSR-Electronic guarantees a price based on the consumption of the sensor capacitance. For each uncalibrated sensor returned to the company, a credit for the unused capacity of the sensor is received, said the firm.

## SST helps pump specialist Torishima meet international safety standards

### SAFETY STANDARDS

Dubai-based pump specialist Torishima has called on Safety Systems Technology (SST), a UK expert in industrial safety and machine guarding, to help it comply with key European and ISO machinery safety standards. Japanese company Torishima is one of the largest suppliers of pumps in the Middle East, with many used in demanding, large-

scale, seawater desalination applications. To support the manufacture and maintenance of these pumps, the company has a large manufacturing and repair plant in Jebel Ali, equipped with a wide range of machine tools and facilities for product testing and paint spraying.

SST produced all items – principally additional guarding components – necessary for

upgrading the machines to comply with a wide range of European and ISO standards as well as those applicable to specific types of machine tools and presses. Two SST fitters installed and tested the new components on site.

The upgraded machines included a horizontal borer, lathes, milling machines, a hydraulic press, a radial arm drill and a shaping machine.

# Homeland security

Security challenges facing the Gulf's oil sector – from terror attacks and piracy to cyber crime – call for cool heads and clear planning. Martin Clark reports.



Photo: Michael Wick

**“Increasing technological sophistication and weak state power will combine to render the threat from cyber attack, kidnap and terrorism more severe.”**

*ABOVE: Islamic State torched the Baiji oil refinery, which was once responsible for producing close to a third of Iraq's domestic fuel supplies.*

*TOP OF PAGE 10: Threats facing oil and gas companies throughout the region come in a variety of shapes and forms.*

**T**he glut of challenges facing the Gulf's rich oil and gas sector come in all shapes and forms, from maintaining the integrity of critical equipment, and the management of fire and other hazards, through to the protection of field workers.

On the security side alone, these threats can range wildly, from armed raids by gun toting militants to cyber attacks initiated from the across the other side of the world.

Both have equal potential to wreak havoc, disrupt production and cause huge losses.

Even on the high seas during the transit of oil products, piracy is a persistent threat in certain hotspots around the world, among them the dense shipping lanes off Yemen that run into the Red Sea and on towards the Suez Canal. It means all operators, service companies and shippers – and the expert teams of specialist contractors they employ – must maintain a near constant state of

vigilance to protect the region's hydrocarbon wealth.

Indeed, security planning for threats to upstream fields and all others installations calls for cool heads and a close attention to detail. Given the current wave of hostility in the region, with Syria and northern Iraq engulfed in conflict, these are attributes that are perhaps more in demand than at any other time in the region's history.

## IT security

On the technology side, there are multiple layers of security systems designed to maintain the integrity of digital energy assets from cyber attack.

An example of this kind of threat was highlighted in 2012 when Saudi Arabia's oil industry was a target for hackers and the Stuxnet computer virus. Although production was not affected, the attack caused mayhem in the offices of Saudi Aramco for weeks, infecting the hard drives of

more than 30,000 computers, overwriting and destroying data.

At the time, experts called it a 'wake up call' for the industry, a harbinger of a new age of cyber warfare. And such threats continue to grow, according to industry analysts. Control Risks Group's *RiskMap 2015*, which highlights emerging security trends facing multinationals, says weak law enforcement in parts of the world is encouraging more cyber crime. It also notes that terrorists and activists are using common platforms.

"Supply chains are likely to be a more prominent target of cyber attack," it notes.

## Cyber warfare

These are things that national oil companies, such as Aramco, and the multinationals, must tackle head on.

What's clear is that the array of threats appears to be getting ever more diverse, sophisticated and potent, however.





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“Increasing technological sophistication and weak state power will combine to render the threat from cyber attack, kidnap and terrorism more severe,” CRG says in its *RiskMap 2015* introduction. “How one deals with the inevitable attack, as opposed to how one stops it, will become the key question.”

So, if attacks are ‘inevitable’ in some locations, what can industry do about it?

Just as the oil industry and cyber criminals have matured in terms of technology, so too have the state-of-the-art solutions that can help to counter the threat. It is a common trend in the financial markets too, where the integrity of data – which could be moving trillions of dollars at any given moment – is equally vital.

Keeping communication lines open in times of crisis is one primary objective for oil firms. Leading players in this area include the likes of Global Security Network (GSN) and Send Word Now, both communications specialists which took part in the recent Gulf and Middle East Oil & Gas Security 2015 Summit.

US-based Send Word Now provides critical support to ensure communication when it’s needed most. Its web-based emergency notification and mobile apps are used by businesses, government and other agencies the world over.

GSN, a UAE-based, French-owned company, which also took part in the Cyber Defence Summit 2015 in Riyadh in March, has a suite of IT solutions. Its customers include internal security, military, law enforcement, and, of course, the oil and gas industry.



Photo: littlewormy

### Multiple risks

The prevalence of IT security events across the Middle East to counter hackers shows this is a growing concern to all, notably the host governments, not just the energy sector. Sometimes, however, the threats facing oil and gas companies, both upstream and downstream, are far more obvious and dramatic, and violent.

The hijack of VLCC tankers is a global news event, as was the nightmare scenario encountered in Algeria two years ago when gunmen stormed BP’s In Amenas gas field. The attack, and the ensuing gun battles that followed Algeria’s decision to retake the field by force, resulted in the deaths of dozens of oil workers and militants.

Vital lessons have been learned from these incidents, although, as with anything in the security field, there can be no guarantees. Some territories, such as strife-torn Yemen, have long had to navigate these challenges. But others, notably

Syria and parts of Iraq, are also now mired in conflict.

The decision by jihadists from Islamic State (IS) to torch the Baiji oil refinery, which once produced around a third of Iraq’s domestic fuel supplies, underlines the fragility of the assets themselves.

**“Vital lessons have been learned, but as with anything in the security field, there can be no guarantees.”**

### Boots on the ground

More worryingly, collapse into full-scale sectarian violence in Iraq is a genuine risk, say analysts like CRG.

It says with IS unlikely to be defeated by airstrikes alone and no credible ground forces available, a lasting resolution may yet be a long way off.

This means the protection of assets, of upstream fields right through to the refineries, hinges critically on boots on the ground also. In some cases, the protection of such billion dollar assets can fall to the armed forces, often working with dedicated security teams.

Private security is also a major growth industry, as well. Well known providers include G4S which offers protective security and risk management for oil facilities, housing compounds and pipelines around the world.

This includes close protection teams for executives, security guards, check points and patrols for the vast areas that span the largest fields.

There’s no doubt it is a challenging assignment, especially at a time of heightened tensions in and around the Middle East region.

But like most other challenges facing the oil and gas industry the world over, success is always a team effort. ♦



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## Major Omnicast installation at Dubai's airports

### AVIATION

Dubai Airports, which manages Dubai International Airport and Al Maktoum International Airport, has been declared as having one of the largest Omnicast installations in the world, with a security infrastructure that includes 8,000 analogue and IP cameras from different manufacturers' cameras, third-party access control systems and Barco video walls in multiple control rooms.

Genetec, whose Omnicast surveillance system has been installed at Dubai Airports' facilities, was selected by Dubai Airports to carry out scale up operations at its two airports in a big way, while maintaining high system availability. Today, Dubai Airports has more than 6,500 cameras on the Omnicast system at Dubai International and close to 1,200 cameras at Al Maktoum International.

The Federation feature from Genetec allows for the easy access of any camera installed across the airports, as if they were all part of a single system, Genetec stated. The open architecture video surveillance



More than 6,500 systems, synced to the Omnicast IP surveillance system, have been installed at Dubai's airports. (Ritu Manoj Jethani/Shutterstock)

system has enables Dubai Airports to preserve existing analogue investments by adding IP encoders, while also installing newer IP camera models throughout the expansion, added the company. Through multicast transmissions,

operators connect to a multicast IP address of the video stream that is shared among all users. This adds another level of reliability to the system by ensuring the network is stable and optimised within the installation, the firm reiterated.

## Maritime security in the MEA region to be 'fast-growing market'

### MARITIME

The global maritime security market is expected to grow to US\$20.87bn in 2019, from US\$13.94bn in 2014, with the Middle East and Africa (MEA) emerging as a leading market for maritime security services.

According to a report titled *Maritime Security Market by Technologies and Systems, by Services, by Categories, and by Region – Global Market Forecast & Analysis (2014 - 2019)*, the major forces driving this market are awareness of maritime security, maritime threats, regulations and standards, and international trade by sea.

Increasing maritime threats has been cited as a major destabilising factor to international trade by the report's authors.

While vessel security continues to be the largest contributor to maritime security, North Africa is expected to be the biggest market in terms of revenue contribution. Surveillance and tracking systems and solutions, smart container systems, as well as scanning and screening systems, have a high growth rate in the market as well.

Maritime threats are among the leading threats facing global trade networks. (Christian Lagerek/Shutterstock)



## Assa Abloy acquires UAE door firm Prometal Group

### PROTECTION

Swedish lock manufacturer Assa Abloy has acquired UAE-based steel and wooden security door manufacturer Prometal Group.

According to Assa Abloy CEO John Malin, the acquisition of Prometal constitutes a step ahead in the company's strategy to grow its market presence in the

Middle East and other emerging markets. Assa Abloy's Middle East brands include Chubb Locks Custodial Services, effeff, Henderson, IKON, JPM, Nemef, Securistyle, Traka, Union, Vachette and Valli & Valli.

Assa Abloy officials have said that sales for 2015 could likely reach US\$27.22mn in the UAE,

with a good Earnings Before Interest & Tax (EBIT) margin.

The company, headquartered in Sweden capital Stockholm, has a range of door security solutions, which include computer key scheduling, master key scheduling, access control, automatic doors and identification technology.

# Safety through surveillance

## 1. HD IP COEX camera stations from Synectics

[WWW.SYNECTICSPLC.COM](http://WWW.SYNECTICSPLC.COM)

Synectics' new breed of camera stations are well adapted for application in the Middle East, with the ability to stream 1080p video signals in temperatures ranging from +70°C to -55°C.

The HD C3000 units come with built-in H.264 AVC high profile (MPEG4 part 10) compression technology, allowing the C3000 HD IP to deliver a native IP output directly from the station, eliminating the need for separate encoder units.

## 2. Active Edge infra-red beams from GJD

[WWW.GJD.CO.UK](http://WWW.GJD.CO.UK)

Consisting of a separate transmitter and receiver available as 60m or 100m dual beam and 200m quad beam, GJD's infra-red beams can be used for outdoor and indoor perimeter protection.

The equipment only activates alarms and CCTV cameras when a selected combination of beams are breached, can be mounted above pet height level, and are also designed to withstand harsh weather.

## 3. Bosch's Commercial Series motion detectors

[WWW.BOSCHSECURITY.AE](http://WWW.BOSCHSECURITY.AE)

Bosch's new range of wall-mounted motion detectors can detect intruders from wall to wall over an area of up to 15m x 15m, making them suited to application in small- to mid-sized enterprises.

The series consists of two models; the TriTech, which uses passive infrared (PIR) and microwave Doppler radar detection technology along with First Step Processing, and the TriTech+, which is better for higher-security applications.



The security market in the Middle East is forecasted to be worth more than US\$7bn by 2015, according to security company G4S.



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# Arabian CHALLENGES



Darren Platts of Al Jaber Group.

**Darren Platts**, group senior health, safety and environment manager for the Al Jaber Group, and a chartered member of the Institution of Occupational Safety and Health (IOSH) and member of the institution's UAE branch, gives his thoughts on ensuring construction workers' safety and health in the Middle East.

For anyone working in the construction industry within the Middle East there are a number of unique challenges that it brings. Some challenges are common and indigenous to the region, such as the extreme climate, and others are widely generic and inherent in the construction sectors around the globe, such as communication.

Having worked in both the offshore and onshore construction sectors in the GCC for the past five years I have myself come across the varying challenges that come as part and parcel of the role. For that reason I would like to shed light on some of the more unique challenges that I have faced but rarely see discussed that are underlying within the region.

On occasion more often than not, the first time that the health and safety team may be made aware of a contractor is when they arrive for their site specific HSE induction on the project. This is where health and safety teams begin the task of "managing" the contractor. All too often health and safety personnel are not involved in the critical first stage of contractor management – the pre-qualification and selection process. Many organisations still sacrifice safety and health and pursue an option to them that is the most cost effective but not necessarily the contractor with ingrained HSE practices or

excellent historical safety performance. This leads to the challenge of managing a contractor who potentially has no safety awareness or culture and, in certain cases, a willingness to adopt safe practices. This also works hand in hand with the next challenge that can be faced, which is workforce competence and composition.

**"To put it simply, safety and health management makes good business sense. That is something that we as practitioners understand."**

The construction industry in the Middle East is fuelled by a dynamic and eclectic mix of cultures and nationalities from around the globe, forming a singular cohesive workforce. When you have such diversity, it can be assumed that there will be educational disparities across all ranges of occupations, from labourer to safety officer and even through the tiers and layers of supervision and management. Considering that there is only so much talent available in the local market, businesses find it necessary to hire

workers from the outer regions of various countries such as India, Pakistan, Bangladesh, the UK and the Philippines to satisfy the project manning requirements. The challenge for safety departments is ensuring the competence of those workers once they are at site as, on many occasions, health and safety competence is negated and does not form part of the initial screening and hiring process.

There is also a challenge when it comes to hiring from the local talent pool. It can be difficult to find nationals to satisfy the talent requirements from an entry-level perspective and those willing enough to work in the private sector. The majority of the national population wish to work in the public sector, which makes it difficult for construction companies to retain good national employees.

Running with a common theme and working hand-in-hand with the previous challenge is that of investing in safety and health. To put it simply, safety and health management makes good business sense. That is something that we as practitioners understand, but it is certainly challenging when trying to convince your senior management teams. There are many that see health and safety as a burden and an unnecessary cost to the business. The challenge is convincing them otherwise.



The common perception is to invest little money into safety and health to ensure client requirements are satisfied. This misconception is largely due to the competence of those making judgement. If they do not know the benefits then why would they invest?

**“There is certainly no sign of construction in the region slowing down and as such we will face further and on-going challenges.”**

In order to overcome these challenges, a health and safety practitioner in the Middle East needs to be a pragmatic character with patience and understanding. We have to remember that health and safety is still regarded to be in its infancy and not in its prime. Let us consider that the challenges mentioned are all interlinked. If business leaders understand that investment in health and safety makes good business sense then surely they would be willing to invest in a contractor that is of a good rounded standing, including HSE performance and capability, and not just the one who comes at the lowest price. Educating management and supervision in their health and safety responsibilities can play a large role in such outcomes. Arming them with the knowledge they require to make informed decisions can be crucial and key to success.

Involving the health and safety team in the pre-qualification of contractors would assist in the decision making process assuring that a competent contractor is employed for the project, bearing in mind that this can be a mandatory requirement that is often overlooked. Pre-screening employees by taking into account their health and safety knowledge and awareness and yes, you guessed it, competence to undertake the role. Finally, approaching cost-related situations in such a manner that demonstrates adding value. A good example of this is a simple cost-benefit analysis. Is it practical and cost effective to have a glove that is thrown away daily and costs less, or a glove that will last one month but costs a little more?

Demonstrating what their investment will cost, also but what it can save in the long term, can be a major factor in success.

The construction environment in the Middle East is one of many challenges. It is forever evolving as people become more aware of their obligations towards health and safety governance. The UAE, for example, has come a long way in the five years that I have worked here in that there is a greater uptake in businesses developing their management systems and ensuring that their risks are managed and compliance is sought. There is certainly no sign of construction in the region slowing down and, as such, we will face further and on-going challenges. We can only continue as practitioners to assist businesses in their duties of effective health and safety management. ❖

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# Overcoming the dangers of H<sub>2</sub>S exposure

The oil and gas industry faces increasing dangers of exposure to hydrogen sulphide – especially as operations in the North Sea reaches maturity and decommissioning work continues to increase. As companies look for measures to mitigate the threat, Phil Saxton, general manager at Dräger Marine and Offshore, looks at what the firm is doing to improve awareness and training.



**“Training helps workers recognise the dangers of H<sub>2</sub>S and today we are not just better at educating workers – they are also better equipped”**

*ABOVE AND RIGHT: If not tackled effectively, hydrogen embrittlement or sulphide stress cracking can lead to the release of hydrogen sulphide gas.*

**W**ith the decommissioning of assets now underway in the North Sea, between the UK and Norway, hydrogen sulphide is one of the global top priority risks and that is why active monitoring for hydrogen sulphide gas and good planning and training programmes for workers are crucial to the prevention of injury and death.

Hydrogen sulphide (H<sub>2</sub>S) – or sour gas as it’s commonly referred to – is colourless, highly flammable, toxic and explosive. It can deaden a worker’s sense of smell rapidly and exposure to high levels of it can quickly lead to death. As it’s heavier than air, it will settle in poorly ventilated or low-lying areas, dissolving in any water or oil present.

Workers in oil and natural gas drilling, including those based in the Middle East, could be exposed to it when pumping seawater into

rock formations as part of work to maintain pressure. This can lead to a build-up of H<sub>2</sub>S as organic matter degrades and produces the gas in the absence of oxygen.

As higher sulphide levels occur in increasingly depleted wells, well expirations are going to be key growth markets for H<sub>2</sub>S training and safety services in the future.

A report by the Energy Division of HSE’s Hazardous Installations Directorate, suggests the decommissioning of offshore installations could accelerate from 2017, involving many installations, up to 5,000 wells and 10,000 km of pipelines.

This difficult process means risk assessments are vital. These need to be carried out early with escape, evacuation and rescue measures put in place, as many assets have remained in situ for years and taking them apart brings with it a range of new safety challenges.

Metal fatigue, including hydrogen embrittlement or sulphide stress cracking, can result in a release of hydrogen sulphide gas if it is not tackled effectively. When entering a well that has been abandoned, perhaps for years, workers need to prepare for the worst-case scenario, because they will be forced to deal with a lot of unknowns.

As production declines in the UK Continental Shelf, the most easily accessed fields have been exhausted. With new fields in deeper waters, under higher temperatures and pressures, as well as longer pipelines, logistics are becoming increasingly difficult, which not only challenges the integrity of assets, but means workers are faced with a more dangerous environment in which to operate.

While there has been significant investment in new infrastructure, around half of



Photo: James Jones Jr

offshore platforms are beyond their original design life with many assets commissioned in the early 1970s now forecast to continue operating to 2030 and beyond. Investment in new assets and the extension of the life of existing plants present both safety and commercial challenges.

There is no doubt about the health effects of breathing air contaminated with H<sub>2</sub>S and although most people can smell very low concentrations of H<sub>2</sub>S, it is dangerous to assume that odour would provide adequate warning. In a perfect world, the safest exposure to H<sub>2</sub>S would be none at all.

#### Preparing the next generation

It's vital that anyone working in an area where concentrations of hydrogen sulphide may be present should have the very best training. Just seconds of exposure at low concentrations can be

lethal, shutting down the system that regulates breathing.

There should also be a contingency plan to ensure all staff have been shown how to use hydrogen sulphide safety equipment correctly in all hazardous areas. Gas detection equipment should be present wherever hydrogen sulphide might exist, as well as respiratory protection for normal and emergency use.

Training should include recognising the characteristics, sources and hazards of hydrogen sulphide and knowing how to react in response to H<sub>2</sub>S warnings in the workplace. It should also include rescue techniques and first-aid procedures in light of H<sub>2</sub>S exposure – especially with regards to confined space entry procedures.

Workers should have a plan ready at the time, because if the

H<sub>2</sub>S sensor alarm goes off, they need to know how to react immediately. Having a plan and equipment at the ready ultimately saves time and money, which otherwise could be lost due to inactivity if the platform has to be abandoned.

#### Changing face of offshore

Advancements in gas detection methods over the years and new technology means hydrogen sulphide safety is easier to get to grips with than ever before for today's offshore operators.

Innovations, such as wireless gas detectors and autocalibration methods, have changed the face of oil field H<sub>2</sub>S safety within the last decade.

Training also helps workers recognise the dangers of H<sub>2</sub>S and today we are not just better at educating workers, but they are also better equipped.

The oil and gas industry as a whole is making tremendous efforts to raise awareness of H<sub>2</sub>S in order to have incident-free and environmentally-safe operations now and in the future. ♦

### About Dräger Marine and Offshore

Dräger Marine and Offshore works alongside its industry partners to pioneer safety solutions for the future. It offers training at any location and works closely on training solutions with its partners in the North Sea and beyond.

The company delivers the H<sub>2</sub>S basic safety training course, accredited by the Offshore Petroleum Industry Training Organisation (OPITO), at its dedicated Training Academy and Service Centre in Aberdeen, UK. Its half-day course provides petroleum industry workers with the knowledge and skills required to work in environments where the presence of this potentially lethal gas poses a risk.

To find out more about Dräger's work in the oil and gas sector, please visit: [www.draeger.com/oilgasuk](http://www.draeger.com/oilgasuk)



Photo: Dräger

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## Extreme clothing for extreme environments

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Germany's uvex has launched the extreme clothing line designed to protect users from heat, electric arcs and chemicals. The suit has elastic inserts in the back and knee areas, reducing strain and improving efficiency. Combined with a heat and flame-resistant polo shirt, the suit offers a high level of protection. The uvex extreme high-visibility protective clothing has a dirt-repellent coating, which ensures optimum visibility, even after frequent washing. The coating prevents dirt penetrating into the fibres. The clothing collection covers a broad range of applications – right from protection against heat, flame, electric arc, welding and chemicals, to weather and machinery protection and high-visibility, as well as electrostatic discharge and hazard analysis and critical control points (HACCP).



## Passive fire protection from Jotun

[WWW.JOTUN.COM](http://WWW.JOTUN.COM)

Jotun has introduced its fire-resistant coating system Jotachar JF750. The solution offers unique mesh-free passive fire protection (PFP). Jotachar JF750 is an epoxy coating system for structural steel designed for all jet fire scenarios. The absence of any mesh reinforcement in the Jotachar system means that the required Jotachar thickness for any fire scenario can be applied in a single day. By comparison, just six millimetre is typical for traditional mesh-containing products. Independent tests show that for a typical 6,000 sqm project, Jotachar can cut material costs by more than 20 per cent and application time by 60 per cent. Jotachar removes the risk of installation errors inherent in mesh-containing systems, significantly reducing project complexity and improving profitability for the installer.



## Ansell's chemical-resistant gloves

[WWW.ANSELL.BE](http://WWW.ANSELL.BE)

PPE solutions provider Ansell has introduced a pair of gloves that protect hands against exposure to oils, fuels, solvents and esters in medium and heavy-duty applications. The chemical resistant AlphaTec glove incorporates Aquadri Moisture Management Technology, which absorbs 10 times more moisture than a traditional liner. The AlphaTec 58-330 and 58-335 nitrile gloves prevent skin exposure to chemical hazards, while maximising worker comfort through a unique technology that absorbs moisture accumulated from prolonged glove use. During the glove's manufacturing process, a cotton flocking is applied to a wet gel on the inside of the glove, creating an open celled-foam structure that is remarkably light and absorbent. It absorbs up to 10 times more perspiration than a traditional glove lining.



## Solid footing in tough conditions

[WWW.DICKIES.ME](http://WWW.DICKIES.ME)

Dickies produces a range of protective footwear that provide protection to workers in harsh conditions. The company stated that its Fury Super Safety Hiker's ankle support is made of high-performance fabric, which provides resistance to tears, scuffs and abrasions. The leather upper allows the foot to breathe in the hottest of conditions. The sole is also equipped to protect the user from extreme heat and slippery surfaces. In addition, the insole features specialised shock absorbers, which can also be removed, thereby reducing impact on the heel.



## Re-engineered Jet Fire Pro suit by AIS

[WWW.AISGROUP.COM](http://WWW.AISGROUP.COM)

UK-based Advanced Industrial Solutions (AIS) has launched the Jet Fire Pro – a 35mm fire protection jacket designed to protect workers from fires and designed especially for use in the oil and gas sector. The re-engineered suit is currently the thinnest and lightest fire protection jacket available on the market, claims the manufacturer. The new and improved Jet Fire Pro, which has insulated pipes, valves, actuators and associated equipment, can withstand temperatures of up to 1,250°C for up to 90 minutes. The suit is designed to provide safety from hydrocarbon jet fires. The thinner jacket fits well, is easy to maintain and transport, and is significantly cost-friendly. With an operating capacity ranging from -60°C to 1,250°C, the Jet Fire Pro has a special weather layer, which has super hydrophobic values to repel water.

# The occupational advantage

Ahmed El Hadidi, chair of the Institution of Occupational Safety and Health's (IOSH) UAE Branch, speaks to *Health, Safety & Security Review ME* about the Institution's activities and its growing presence in the Middle East.



Photo: IOSH

ABOVE: IOSH UAE Branch chair Ahmed El Hadidi speaking during the organisation's most recent Middle East conference.

**R**apid economic growth in the Middle East in recent years has brought with it a greater consideration of safety and health in the workplace. From the oil fields of Qatar to the mega-construction projects of UAE, forward-thinking businesses are driving improvements across the board in how working people are cared for.

And this positive trend can be illustrated in the rise in membership of one organisation in particular. Founded some seven decades ago in

1945, the Institution of Occupational Safety and Health (IOSH) is the largest health and safety professional membership body worldwide, and the only chartered body for health and safety professionals.

IOSH has an expanding international presence, and nowhere has this been more marked than in the Middle East – an indication of the increasing focus on HSE in the region.

When the Institution first set up its Middle East branch in 2006, it had 200 members. In the nine years since that

number has grown nine times to 1,800 – demonstrating a real appetite among organisations in the region to embed a culture of care within their structure.

The branch has now split into three – Oman, Qatar and the UAE – with the latter being one of the Institution's largest branches outside the UK.

Ahmed El Hadidi, chair of the UAE Branch, is delighted by the growth in membership and the increasing desire for health and safety within organisations in different sectors.

“IOSH is keeping a steady growth

within the Middle East, not only in terms of members joining, but also in increasing the awareness of OHS within the region,” El Hadidi says. “The members come from a cross section of industries; the majority come from a construction background, yet there is a presence of most sectors in the region. Meanwhile the ties with governmental bodies are expanding to reach more entities.”

**Spreading awareness**

IOSH’s regional branches play an important role in raising the level of professionalism in the health and safety industry in the region and spreading an awareness of the importance of driving up safety standards in the workplace. They have worked to establish close ties with government bodies and other relevant organisations to promote safe and healthy practices in workplaces.

The UAE branch, for example, has developed close relationships with the Abu Dhabi Environment, Health and Safety Center, while the Oman network is working to establish closer ties with the Oman Society of Contractors and ICE (the Institution of Civil Engineers). The UAE branch also has a strong focus on campaigning with universities and schools to raise awareness of the importance of health and safety from an early age.

El Hadidi says, “The branch has worked with a university on some projects and we aim to increase that collaboration with other universities as well as reaching schools – this is still under development as we need to design the campaigns properly to achieve the goals set.”

As well as the three branches, there are also a growing number

of members elsewhere in the region, notably in Saudi Arabia. These members come together every year for the Institution’s Middle East conference, which has been running for six years. This has developed into one of the Institution’s flagship events, attracting delegates from the region and beyond.

**70 years of IOSH**

Founded in 1945, UK-based IOSH is the largest health and safety professional membership body worldwide, and the only chartered body for health and safety professionals. The Institution sees itself as the voice of the profession, campaigning on key issues affecting workplace safety; benchmarking and setting standards; and supporting, developing and connecting its members with resources, guidance, events and training.

Through its various categories of membership, the Institution’s 44,000 worldwide members cover a diverse spectrum of roles and interests – from students to safety managers, government regulators to CEOs – but are united by a common interest in promoting a safe and healthy world of work.

“IOSH has a comprehensive approach to improving health and safety awareness,” comments El Hadidi. “IOSH’s strength is not only about the resources it provides, but mostly the people within its network. They collectively have an enormous wide range of experience and they are keen to share it.”

Branches are effectively groups of members who get together and apply to IOSH to become a network, so they can request support and resources to achieve some local objectives, drawing on the Institution’s expertise and

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wider network. For example, through global campaigns such as 'No Time to Lose' (which focuses on preventing occupational cancers, the biggest workplace killers), branches can use IOSH's information resources and data, tailoring them to suit and support the campaign as they see fit.

El Hadidi adds, "As a branch chair, my role is to try to convey and facilitate the resources IOSH provides to its members and build ties with different entities across the UAE.

"Our committee works hard to organise events where members would have a forum of discussion and networking, but also a tool to attract non-members to join IOSH. It is not an easy task – especially when combined with the focus on promoting occupational health and safety (OHS) and trying to support awareness campaigns to different levels within a community."

## "OHS challenges in the Middle East are centred on the diversity of nationalities"

El Hadidi admits that IOSH does face challenges in the Middle East when it comes to spreading the word about OHS.

"The OHS challenges in the Middle East are centred on the diversity of nationalities and background when it comes to OHS awareness and knowledge," he notes. "Integrating that with a better understanding of the management teams' roles within any organisation would contribute tremendously to a better OHS performance, and thus an effective leadership."

### The critical role of leadership

The critical role that leadership plays in the implementation of health and safety policies is an increasing focus of IOSH globally, as businesses look to invest in health and safety for 'results, resilience and reputation'.

Both the international conference and the Middle East conference have had a strong focus on leadership issues, something that El Hadidi believes is "key".

"Leadership is the key to success," he says. "The foundation of a good leader is employee

engagement and managerial commitment. Since we can acknowledge the diversity of nationality, engagement is essential to bridge any cultural gaps and provides a platform for communication and collaboration."

While chartered membership is recognised as the hallmark of professional excellence for the health and safety practitioner, the CEO or manager looking to promote a culture of care in their organisation and keep abreast of the latest developments will also find IOSH has much to offer.

The Institution's courses on Leading Safely and Managing Safely give business leaders and managers the guidance, tools and knowledge they need to take ownership of health and safety in their organisation and embed a positive safety culture. IOSH stresses the business benefits of doing so, such as increased productivity, an enhanced reputation and a stronger brand.

More than 160,000 people take one of IOSH's courses every year. The courses (Leading Safely, Managing Safely, and Working Safely) can be adapted to local requirements, subject to the approval of IOSH, and delivered in different languages as required. IOSH also accredits courses offered by universities, colleges and training providers throughout the world.

While there have been certain well-publicised incidents, the progress being made throughout the region in improving standards of health and safety is encouraging. IOSH statistics show that the number of working days lost to an incident in the Middle East dropped from 26.2 in 2012 to 13.6 in 2013.

## IOSH in numbers

**44,000+**

Number of IOSH members worldwide

**13,000+**

Number of IOSH Facebook followers

**1,800+**

Number of IOSH members in the GCC states

**100+**

Number of countries with IOSH members

**70**

Number of years since IOSH established

**25**

Number of UK branches

**10**

Number of international branches

**3**

Number of branches in the Middle East







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Photo: United States Navy

Energy companies know that a solid safety record is as good for business as any free flowing oil well.

**“The reality is that health and safety performance is fundamental to business survival.”**

*ABOVE: A technical blowout was behind the explosion that caused the Deepwater Horizon tragedy in the US Gulf of Mexico.*

In such a hazardous working environment, health and safety always comes first in the oil and gas sector. At least that’s the idea.

Unfortunately, no one can prepare for all eventualities and, invariably, accidents do happen. Sometimes these have catastrophic and deadly consequences. Perhaps the most infamous incident of recent times is the Deepwater Horizon tragedy in the US Gulf of Mexico. Here, a technical blowout triggered an explosion, killing 11 workers and injuring 16 others, and resulting in a major oil spill that operator BP struggled for weeks to get under control.

But no region is immune. In the Middle East, the world’s biggest oil and gas producing region, the stakes are just as high.

Yes, there have also been

serious mishaps too – refinery fires, explosions and lives lost – but given the amount of gas and liquids that are produced every single year (every day, even) such accidents are a rarity.

Among the better known incidents are the series of fires at Kuwait’s refineries through the years, though these have been well spaced.

In 2000, three workers were killed and dozens injured at the Mina Al-Ahmadi refinery following a blast at the site. More worryingly, perhaps, the country’s refineries have seen a succession of smaller blazes in recent years.

Luckily there were no casualties reported in 2013 after the Mina Al-Ahmadi fire team activated the refinery’s emergency response plan, although some workers were injured in a separate incident the following year.

And this year, Kuwait National Petroleum Corporation (KNPC) said it had also contained another small fire at one of the Al-Ahmadi cracker units, and at another site, a delayed coker unit at its Mina Abdulla refinery.

**The need for vigilance**

Still, given the volumes of oil and gas products that flow out of the Gulf and the Middle East regional generally, each and every day, the overall safety record is impressive.

The reality is that health and safety performance is as fundamental to business survival as getting the oil and gas out of the ground is in the first place.

In May, an Abu Dhabi process safety conference attracted nearly 1,000 delegates, underlining the strong interest in this behind-the-scenes industry niche.

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And, announcing his company's latest results the same month, Edward LaFehr, chief operating officer of Abu Dhabi National Energy Company (TAQA), cited a "continued strong safety performance" alongside key benchmarks like operating performance and costs.

As BP discovered in the Gulf of Mexico, it's only when things go wrong that the true significance of health and safety becomes apparent.

As a result, a whole industry has been forced to evolve to meet the needs of operators and other service companies, looking for safety solutions, training and know how.

As well as developing new and innovative health and safety products and technology for the industry, this also means delivering expert courses in anything from fire safety to first aid. There are numerous specialist safety courses available too, such as helicopter underwater escape and other offshore trainings unique to the environment.

Dedicated facilities are now available to the industry to help such as the Gulf Technical and Safety Training Centre in Mussafah, Abu Dhabi. The largest such institute in the Middle East, founded in 1993, it is a key strategic training partner to the major oil companies both within the UAE and outside. It also has purpose-built branches in other key energy locations such as Egypt and Saudi Arabia.

Some of the facilities available in the Abu Dhabi complex include simulators, a large fire testing area, swimming pools and a platform for fast rescue boat training. And, for that real-life oil field experience, it also boasts a 1,700 feet deep training well for drilling, workover, wireline, coiled tubing operations, and completion operations.

### Prevention better than cure

While emergency response plans, helicopter escapes and offshore trainings are all vital to prepare oil workers for all eventualities, the



Photo: United States Navy

emphasis is always on prevention.

Again, these training institutions make an important contribution – but one that goes largely unrecognised – to the smooth and safe functioning of the overall energy supply chain.

As do the many private corporations that partner with the oil operators to underpin safety on all levels across all sites. This applies to all strands of the industry, upstream and downstream, where equipment and technology is routinely and robustly tested without fail. In the field, all of these components and products are bolted together and must deliver reliably, without fail, for years, under real world conditions.

Well known experts here include Intertek, which offers testing, inspection and certification services to the industry, as well as consulting, technical, engineering and related services. At Houston's Offshore Technology Conference in May it unveiled a new suite of services including functional safety and expanded hazard areas training.

The company, which works across

the refining, petrochemical, power, and oil and gas industries, both in the Middle East and in all other territories, knows what it's talking about. Its US-based Asset Integrity Management (AIM) in-service inspection group clocked up four million work hours this year without any lost-time accident or injury.

"Safety is our job," said Gerhard Abel, Intertek's US AIM director. "Everything we do revolves around assets being safe in operation, safe to people living in the vicinity and people working in those assets, safe to the environment, and our customers count on assets being safe and reliable for continued operation. Continuously performing in a safe manner ourselves to reach these goals is our first priority and non-negotiable."

As for all industry players, vigilance is the watchword. Together, with open communication and adherence to strict standards and any relevant external oversight organisations, everyone knows that prevention is always better than cure. ❖

*ABOVE: Training centres featuring facilities such as fire testing areas and rescue boat platforms are becoming ever more commonplace throughout the region.*



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## → Upcoming industry events

### September 2015

6-7	<b>Middle East Health &amp; Safety Forum</b>	Dubai, UAE	<a href="http://www.hse-forum.com">www.hse-forum.com</a>
7-9	<b>Algeria Fire, Safety &amp; Security Expo</b>	Algiers, Algeria	<a href="http://www.new-fields.com">www.new-fields.com</a>
8-9	<b>ITS and Road Safety Forum Qatar</b>	Doha, Qatar	<a href="http://www.itsroadsafetyqatar.com">www.itsroadsafetyqatar.com</a>
8-10	<b>Security Middle East Show</b>	Beirut, Lebanon	<a href="http://www.smesbeirut.com">www.smesbeirut.com</a>
14-16	<b>OFSEC</b>	Muscat, Oman	<a href="http://www.muscat-expo.com/ofsec">www.muscat-expo.com/ofsec</a>
17-20	<b>ISAF</b>	Istanbul, Turkey	<a href="http://www.isaffuari.com">www.isaffuari.com</a>
29 Sep - 1 Oct	<b>Safety &amp; Security Asia</b>	Singapore	<a href="http://www.safetysecurityasia.com.sg">www.safetysecurityasia.com.sg</a>

### October 2015

5-7	<b>Safetyex</b>	New Delhi, India	<a href="http://www.safetyex.in">www.safetyex.in</a>
5-7	<b>NCT CBRNe Middle East</b>	Amman, Jordan	<a href="http://www.cbrnemiddleeast.com">www.cbrnemiddleeast.com</a>
14-15	<b>Defence Security Days</b>	Paris, France	<a href="http://www.asddays.com">www.asddays.com</a>
25-27	<b>Middle East Health and Safety Expo &amp; Conference</b>	Muscat, Oman	<a href="http://www.mehse.com">www.mehse.com</a>
25-29	<b>BOHS Worker Health Protection Conference</b>	Abu Dhabi, UAE	<a href="http://www.bohs.org">www.bohs.org</a>
27-30	<b>A+A</b>	Düsseldorf, Germany	<a href="http://www.aplusa-online.com">www.aplusa-online.com</a>

### November 2015

3	<b>OSCC</b>	Abu Dhabi, UAE	<a href="http://www.opito.com">www.opito.com</a>
9-10	<b>Total Security Summit</b>	Chicago, USA	<a href="http://www.forumevents.com">www.forumevents.com</a>
9-12	<b>ADIPEC</b>	Abu Dhabi, UAE	<a href="http://www.adipecc.com">www.adipecc.com</a>

*Readers should verify dates and location with sponsoring organisations, as this information is sometimes subject to change.*

## OSCC 2015: The economics of safety during times of lower oil prices

### EVENT NEWS

The sixth OPITO Safety & Competence Conference (OSCC 2015) takes place on 3 November 2015 at the Dusit Thani Hotel, Abu Dhabi.

Around 500 delegates from 30 countries and 20 exhibitors are expected, with industry, government and training provider executives from the oil and gas supply chain participating in keynote sessions and panel debates. Discussions this year will focus

on how the industry can maintain competence and keep its people safe in a lower oil price environment.

International training standards body, OPITO, devised the event in its drive for common global standards across the oil and gas industry to improve safety and competence.

David Doig, group chief executive for OPITO, said, "As training and development budgets come under threat following the sharp decline in oil prices, we will look at how to

avoid the long-term damage of short-term measures, along with the need for greater competence levels to enhance production operations.

"We are thrilled to have secured our strongest line-up of speakers to date. All have inspirational stories to tell and have experienced a number of challenges [during their careers].

"There is a lot to be gained and applied from sharing experiences with those from outside our sector, and the OSCC has a track record of

providing speakers from other sectors to share and learn about new thinking in relation to safety," Doig added.

OSCC speakers will include:

- Andrew Garner, business mentor and advisor to the UK's Cabinet Office.
- Kevin Gaskell, explorer and entrepreneur, previously CEO of Porsche and BMW.
- Kevin Myers, deputy chief executive of the UK Government's Health and Safety Executive (HSE).

# Muscat prepares for inaugural OFSEC

**O**FSEC 2015, which will be held from 14-16 September 2015 at the Oman International Exhibition Centre, Muscat, is Oman's only exhibition covering the fire, safety and security industries. Recent and ongoing development in Oman and across the Middle East has made the region one of the most vibrant safety and security markets in the world, with an annual growth rate of 10 per cent since 2012, according to research by UK security giant G4S.

The inaugural edition of OFSEC is set to bring together decision makers, such as government officials and the heads of companies, along with around 100 local and international exhibitors from 26 countries.

Exhibitors will be showcasing the latest technologies, products and services to meet the needs of governments, businesses and commercial entities from across a range of industry sectors, including construction, oil and gas, manufacturing, transport and aviation.

OFSEC has collaborated with government bodies, leading industry associations, research partners and specialists to ensure that the exhibition caters to the entire fire, safety and security sectors.

Exhibitors will be organised under the headings of commercial security, crisis and risk management, critical infrastructure, emergency and rescue, fire and protection, hazard and disaster management, information security,

**“OFSEC 2015 will provide industry professionals with a forum to share ideas and identify solutions.”**

*BELOW: OFSEC will provide a platform for solutions in fire protection and prevention*

health and safety, smart home/office/city, training and consultation, transport safety and security, and unmanned aerial vehicles (UAVs).

The event will be co-located with the Middle East Cyber Security Conference, which has been scheduled for 15-16 September 2015 at the Hotel Golden Tulip Seeb.

Organisers, Muscat Expo LLC, says OFSEC will lay the foundations for the future fire, safety and security industries in Oman, acting as a gateway for current and future market trends, and providing industry professionals with a forum to share ideas and identify solutions.

OFSEC is being organised in co-operation with Muscat Municipality and Public Authority for Small and Medium Enterprises (Riyada) and supported by Advantage Austria, Firestop Contractors International Association, Foundation for Police Research, German Industry and Commerce Office (AHK), the Institution of Occupational Health and Safety (IOSH), the International Institute of Risk and Safety Management (IIRSM), International Security Research Association (ISRA), Middle East Facility Management Association (MEFMA), Oman American Business Council and the World Safety Organization (WSO). ❖

To find out more information visit: [www.muscat-expo.com/ofsec](http://www.muscat-expo.com/ofsec)



Photo: USAG – Humphreys/Flickr

# A+A equals workplace safety

Industrial safety has never been more relevant, with the 34th International Congress on Health and Safety in Düsseldorf, Germany, highlighting the key aspects of workplace safety for employees.

**“People are the most important, and, at the same time, the most fragile elements within a company.”**

Joachim Schäfer, managing director of Messe Düsseldorf

Safety and well-being in the workplace have always been of utmost concern to any employee. Owing to a growing workforce, diverse business interests and increased job recognition, employee health and safety have become core focuses for many companies.

In helping the industry to achieve its health and safety targets, trade shows are playing an ever more important role, and A+A, which will be conducted at Messe Düsseldorf from 27-30 October 2015, will be at the forefront of these developments.

A+A began as an event for ‘Safety and Medicine at Work’ back in 1954. It has since grown into an international symposium for industry professionals to discuss pressing workplace health and safety issues.

Joachim Schäfer, managing director of Messe Düsseldorf, said, “People are the most important, and, at the same time, the most fragile elements within a company. Therefore, safety at work and maintaining the health of the workforce are important topics, and, in light of the changes taking place within the working world, are more current than ever.

“Demographic change is resulting in ageing workforces and, consequently, labour shortages are already evident now in several industries. In light of these challenges, it is in a company’s own interest to maintain safety and healthy working conditions beyond existing legal requirements, and they will immediately profit from related investments.”

According to the organisers, there has been a strong response to the show, and exhibitors have already booked up 65,000 sqm of space. The organisers have said they expect nearly 1,800 exhibitors this year, and have added another hall to the existing set-up at Düsseldorf.



## Employee health is wealth

At the upcoming A+A show, visitors can expect a wealth of information from industry sub-sectors such as corporate safety, personal protection and corporate health. While these are conventional areas of focus, they have changed over time. For instance, today’s managers take seriously the general well-being of their employees, and invest in corporate health promotion and preventative measures such as

ABOVE RIGHT: The event will take place in Düsseldorf, Germany.

RIGHT: The four-day event will feature its very own fashion show, an innovation park and a host of fire safety and security demonstrations.



Photo: Messe Düsseldorf





Photo: Messe Düsseldorf

annual health check-ups, pointed out A+A 2015 Messe Düsseldorf director Birgit Horn. At the show, visitors will find products and services for corporate health management that cover nutrition, exercise and drug-abuse prevention. In Hall 10, Horn added, one can even find solutions to ensure an employee's comfort in a workplace in the form of ergonomic products, air-conditioning and acoustics.

#### Industry-specific safety

While the above factors are more or less generic, the show will also have areas that showcase solutions that are industry-specific. Construction, engineering, manufacturing, mining, oil and gas and logistics are among a few that require special attention in terms of ensuring safety in a related workplace. In Hall 6, visitors can witness simulated conditions and experts will provide solutions. German organisation

Werkfeuerwehrverband (WFVD – the Industrial Fire Protection Association of Germany) is expected to present industrial safety and fire protection. Handling chemicals, fighting fires within an office, dealing with severe smoke build-up in the event of a fire, protecting oneself against harmful chemicals and equipping a site with an appropriate alarm system will all be discussed.

In the same hall, a special show called "Safe Rescue Operations from Highs and Lows" will be held in cooperation with the Federal Agency for Technical Relief (THW) and the German Life Saving Association (DLRG). It will look to highlight rescue operations from heights, depths and related personal protective equipment (PPE).

#### A thriving market

A study by Transparency Market Research stated that the global PPE market is set to be valued at

US\$55.5bn by 2020, reflecting the growing need for safety apparatus. The demand for products such as goggles, gloves, boots and helmets has led to companies such as 3M, Ansell, Alpha Protech, Honeywell and JAL Group expanding their manufacturing capabilities. In addition to increased production capabilities, great emphasis is also being put on R&D to pave the way for innovations that could potentially be life-saving, say experts.

The show presents an opportunity for companies, buyers, distributors, decision-makers, scientists, researchers and innovators to understand the latest trends, industry preferences and what the consumers really need.

#### Fashionably professional

In a bid to make the four-day event more fun-filled, yet interactive, attendees can enjoy an A+A Fashion Show, which

**The global PPE market is set to be valued at US\$55.5bn by 2020, reflecting the growing need for safety apparatus.**

will have workwear being displayed throughout the day by models. While workwear could essentially save peoples' lives, manufacturers have realised that it is practical to make clothes that are wearable and even fashionable. The fashion show will be held in Hall 11.

#### Special shows at A+A 2015

Other highlights include Workplace Design, which will focus on the ergonomic arrangement of workplaces and work processes in production facilities and offices, while Innovation Park Safety & Security will present innovative concepts and services for specified themes through posters and mini exhibitions. The themes include Safe Handling of Hazardous Substances; Personal Protective Equipment, and Disaster Management at Work.

#### South Korea as partner country

The partner country of A+A 2015 is South Korea, which is considered a leader by experts in the field of occupational hazard prevention, and has been involved in numerous projects supported by the International Labour Organisation (ILO). In addition, South Korea has a workforce exceeding 24mn, making it a lucrative market from a supplier's point of view. ♦

# Safety matters

Ahead of the Middle East Health & Safety Forum, set to take place in Dubai in early September, event director Riad Mannan talks to forum participants about the value of implementing a positive safety culture within an organisation.



**Riad Mannan,**  
event director,  
Middle East Health  
& Safety Forum

*The Middle East Health & Safety Forum will feature a number of panel discussions covering topics ranging from HSE leadership to the latest regulations and compliance issues.*

**W**ith workplace health and safety becoming a key priority for GCC governments, all organisations across all sectors are now being advised to have the right strategies in place and ensure best practices.

While there are variations across the region in terms of policies, regulations, company strategies and implementations, it is generally accepted that the trend is positive.

Speaking ahead of the Middle East Health & Safety Forum, which takes place in Dubai in September, the new chair of IOSH UAE, Ahmed El Hadidi, notes that, “Despite the variations, we can say that there is progress on awareness and implementation. The maturity level depends on each country, but, in general, there is a positive trend towards a conscious attitude in considering the employees and workers H&S.”

From oil and gas through to construction, industrial, manufacturing and the marine sector, safe working practices are key

to all segments of the regional economy. Great strides have indeed been made in recent years to ensure better HSE conditions for workers and the public, but it is essential that modern health, safety and environmental management be incorporated and integrated into businesses like never before.

However, barriers remain to achieving best practice, not least around securing buy-in from organisational leaders. As Saleh Ali Saleh, HSE director of shared services at TECOM Investments, puts it, “In some organisations the top management has to be convinced of the benefits of HSE from an economic point of view.”

Better communications between leaders, senior management, supervisors and the workforce can lead to better HSE practices, but it has to come from the top and hence intertwining business strategy and safety strategy has become more critical. According to Saleh, “Leaders should not consider the HSE department as something of a

luxury for the company or adding extra costs”.

Another continuous challenge is the age-old issue of embedding and maintaining a strong HSE culture into the workplace community. At the outset, defining what a positive safety culture is and is not can be troublesome, particularly given the different backgrounds of the GCC workforce. HSE professionals have to understand the different safety behaviours and competencies of staff, often coming from different parts of the world.

Communication is key to embedding a positive safety culture, but, as Ismail M. Ahmed, superintendent of safety and occupational hygiene at BAPCO, puts it, “One of the key challenges is maintaining that positive HSE culture once attained. Overcoming such a challenge is not straightforward – it mainly requires breaking the communication barriers, not only between the HSE legislators and the employers, but also between all levels of

Photo: ndoeljindoel

## Middle East Health & Safety Forum Programme

management and employees within the organisational structure.”

But by having strong safety credentials and practices, organisations can use HSE as a tool to differentiate themselves from the competition. El Hadidi notes, “Good health and safety performance should be a tool to strengthen the reputation, resilience and the overall performance of any company.”

Linking tangible HSE benefits and gaining buy-in from the leadership, Mohammad Abdulrazaq Alawadhi, general manager – HSEQ and business excellence at DryDocks World, remarks, “Convincing company leaders of the benefits of having a positive HSE culture can in itself lead to more commitment and support by a company’s leadership team.”

Having a holistic approach to safety, whilst aligning it with the corporate structure, is another challenge that many organisations face. Issues around silo mentality, efficient communications and effective trust all come in to play. These challenges can be overcome and experts are optimistic about the future of HSE in the region.

These issues will be covered in the Middle East Health & Safety Forum, which will take place on 6-7 September

in Dubai, and will feature four panel discussions highlighting HSE leadership, implementation of safety strategies in complex work environments, the latest regulations and compliance issues and how to foster better behavioural-based safety practices. Following the discussions, there will be 12 hands-on practical workshop options led by Dubai and Abu Dhabi Municipalities. Supported by IOSH, IIRSM, CIEH, FCIA and the EPSC, the forum will bring together HSE professionals from across the region and provide a platform for discussing the key issues highlighted above.

Dr. Ali Salem Al Qaiwani, director of client relations from the UAE Ministry of Labour will address the Middle East Health & Safety Forum and talk about HSE best practice.

Supported by the UAE Ministry of Labour, IOSH, IIRSM, CIEH, FCIA and the EPSC, the forum will provide a platform for discussion and debate on critical HSE issues through four strategic panel discussions and 12 interactive workshops for practical hands-on activities and learning.

For more information on the Middle East Health & Safety Forum, please visit: [www.hse-forum.com](http://www.hse-forum.com) ❖

**Day One – Morning Workshop Options:**  
**(A) Developing Business Critical Safety Processes**  
**or**  
**(B) Embedding a World-Class Safety Culture**  
**or**  
**(C) Emergency Response Planning**

**Day One – Afternoon Workshop Options:**  
**(D) Moving Corporate HSE from Reactive to Proactive**  
**or**  
**(E) Incident Reporting and Investigation**  
**or**  
**(F) Perceptions of Fire Safety Culture**

**Day Two – Morning Workshop Options:**  
**(G) Creating Data-Based Safety Training Systems**  
**or**  
**(H) Improving Occupational Health and Safety Regimes**  
**or**  
**(I) Assessing the Employer’s Duty of Care Responsibilities**

**Day Two – Afternoon Workshop Options:**  
**(J) Measuring and Evaluating Safety Culture**  
**or**  
**(K) Food Safety and Legislation**  
**or**  
**(L) Fall Protection Products and Compliance with International Standards**

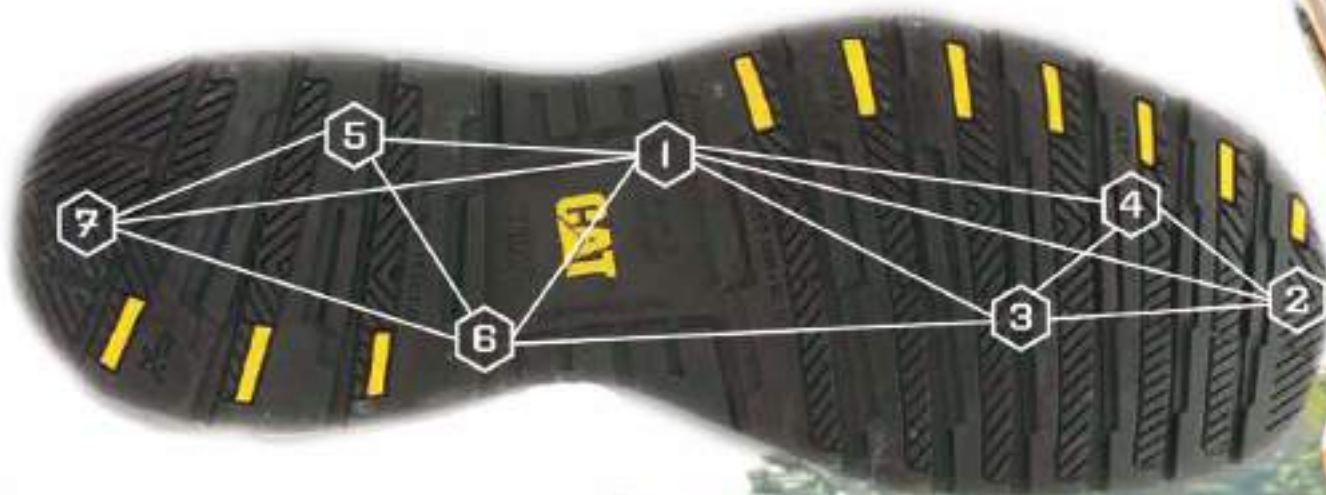
## Speakers confirmed for the Middle East Health & Safety Forum

- Dr. Ali Salem Al Qaiwani, Director of Clients Relations, Ministry of Labour, UAE
- Raed Mohammed Al-Marzouqi, Head of Occupational Health & Safety, Dubai Municipality
- Firas T. Al Yousef, HSE Section Head-System Analysis & Auditing, Abu Dhabi City Municipality
- Dr. Humaid Al-Kindi, Manager-Emergency Management, Environment Quality, Environmental Agency Abu Dhabi
- Saleh Ali Saleh, Corporate HSE Director, TECOM Investments
- Ahmed El Hadidi, Chair, IOSH UAE & Regional H&S Manager, Crown Europe
- Dr. Clarence Rodrigues, Associate Professor of Mechanical Engineering Acting HSE Advisor, Petroleum Institute
- Mohammad Abdulrazaq Alawadhi, General Manager – HSEQ & Business Excellence – HSEQ Division, DryDocks World
- Andrea Tithcott, Head of Regulatory Law, Al Tamimi & Co.
- Ismail M. Ahmed, Superintendent Safety & Occupational Hygiene, BAPCO
- Rejoy Shamsudeen, Corporate Q-HSE Manager, MB Petroleum Services
- Sofien Hamiln, Country Manager Middle East India, ATG Gloves
- Said Husain Al-Gahtani, Senior Manager, EHSS, Saudi Basic Industry Corporation (SABIC)
- Mona Osman, Head Unit – Health & Safety, Dubai Corporation for Ambulance Services (DCAS)
- Karim A. Pachyannakis, Corporate HSEQ Manager, Al Mansoori Specialized Engineering
- Benjamin Legg, HSE Director, Mace International
- Christian Hopper, International Client Advisor, Chartered Institute of Environmental Health
- Tim Bissett, Technical Manager, Latchways
- Brian Mercer, Director, Project Management, Theon Ltd
- Matt Cox, Chairman, International Institute of Risk and Safety Management (IIRSM ME)
- Waddah Al Hashmi, Chief EHSQ Compliance Officer, Emirates National Oil Company
- Elaine Harbour, Health & Safety Executive, British Embassy UAE
- Michael Anderson, Head of HSE, Abu Dhabi Terminals

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# Lighting the way to safer construction

Andrew Kimitri, CEO of *Fhoss Technology*, discusses the development of high-visibility clothing and the role it is playing in making construction sites safer throughout the Middle East.

*Transport for London, operators of the London Underground, has bought into powered light safety wear technology.*

Photo: Fhoss

The boom being experienced by the construction industry in many parts of the Middle East has seen an increase in issues surrounding standard high-visibility clothing, as many firms ask how the industry can benefit from wearable technology for personal protection and to keep their workers safe.

In 2014, it was reported that as much as US\$114bn worth of construction project contract awards were made<sup>1</sup>, which is good news all-round for businesses operating in the region, as well as for GDP as a whole. However, the increase in construction projects has inevitably brought about a series of knock-on effects.

A few of the issues faced by the construction industry have been well documented in the media, with construction workers suffering the ill effects of working in the region's soaring daytime temperatures. The UAE's response to ban labour work between the hours of midday and 3pm during summer months seems a sensible approach.

For companies that choose to avoid the midday sun and allow work to take place during the hours of darkness, or indeed any company that has employees who frequently work in areas of low light, there is an option that could transform the way they protect their staff.

## Evolution of the high-vis jacket

Since the appearance of high-visibility clothing back in the 1960s, the yellow jacket has slowly evolved and with the introduction of European and international standards, the overall design

and effectiveness of the high-vis vest has improved over the years.

The main issue with the traditional high-vis vest, however, is that it requires an additional light source or 'ambient light', for the garment to light up. This can be problematic in many areas of construction spaces where such light is not always available.

**"The overall feedback has been outstanding and users have commented on how safe they feel when wearing the garments."**

Given that the high-vis vest has been around for so long, its functionality has remained relatively unchanged, and it is clear that the vest needs to evolve so that workers in outdoor spaces – especially those who work in the hours of darkness – can be seen at all times.

## Thinking creatively about site lighting

Powered light safety wear is a new technology that allows garments to light up without the need for an additional light source. The technology works through the presence of a battery-operated electroluminescent core, which actively emits light. This, combined with prismatic high-visibility reflective tape, provides a garment that, when worn in complete darkness, can be seen up to 1.5 miles (2.41 km) away (Source: Network Rail, UK).

Some of the major players in highways, construction, aviation and railway throughout the UK, including the London Underground, Network Rail and Balfour Beatty, have already bought into the technology and have been reaping the benefits.

In 2014, Garry Pratt, senior project manager at Transport for London and his team carried out extensive trials of Fhoss products on the Jubilee Line of the London Underground.

"The results and overall feedback have been outstanding and users have commented on how safe they feel when wearing the garments," comments Pratt. "Not only do the men on the ground stand out more, but they are able to spot their colleagues from a good distance away."

In recent months, Fhoss has been working with companies in the Middle East to develop a product suitable specifically for workers in hot and humid temperatures. Made from breathable mesh fabric, the Fhoss FiLumin is a lightweight and self-illuminating safety vest that keeps workers lit up in all weather conditions, as well as in areas of total darkness.

It is clear that investing in up-to-date, high-visibility workwear is something that companies in the region should take seriously. I feel very strongly that the future of high-visibility clothing in the construction industry worldwide has to lie in powered light safety wear and it is my personal goal that by 2025 this technology will be commonplace at construction sites across the Middle East. ❖

<sup>1</sup> <http://www.bruceshaw.com/knowledgecentre/chapters/middle-east>

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# Beyond the flames



Photo: Scott Safety

Firefighting can be an unpredictable challenge, even more so in hazardous industrial environments. Here, we look at the advantages offered to firefighters working in such conditions through the application of thermal imaging technology.

In all firefighting situations, there are many circumstances where a risk of firefighter injury is a major concern and, in some cases, a reality.

Thankfully, the introduction of advanced thermal imaging technology for emergency situations has led to far better situational awareness for the camera users than ever before. Not only can a firefighter using the technology to navigate in zero visibility environments, but modern advanced cameras can provide users with the ability to understand fire behaviour enabling them to predict and prevent serious hazardous situations and avoid injury to themselves and the team.

### Choosing the right camera

Understanding the capabilities of new thermal cameras will ensure the user

chooses the right one for the job, providing the user with the confidence to use it correctly. It is important to seek out manufacturers capable of providing hot thermal camera training. However, where this kind of training will bring you up to speed as far as technology capabilities are concerned, to become an advanced user there is the requirement to continue on the path of self-education, continuously practicing and applying new understandings of thermal camera technology.

Advancements in thermal imaging engine technology have enabled huge progress in perfecting the more basic functions of an infrared camera, defined by how the camera produces an image and how users can interpret what they see on the display.

### Making the most of its capabilities

The colours in the thermal image correspond to temperature boundaries associated with the colour scale. For example, if the scale is from black to white, then the hotter an object is, the whiter it would appear on the camera display. In many products, especially for firefighting applications, colours such as red or yellow have been introduced to provide instant visual representation of high temperatures.

Thermal cameras should display a thermal layer reference guide that enables the ability to quickly identify key temperature ranges in the scene being viewed. This function further

enhances the colourisation feature by allowing the user to relate the colours in the scene to key temperatures.

In order to provide the best possible image quality, thermal cameras need to constantly make minute adjustments to their settings. These adjustments are most notable when the overall environment dramatically changes, such as when a fire becomes present. When this occurs, thermal cameras automatically switch operating modes.

Importantly, advanced cameras have three modes. With automatic mode switching, the thermal image being viewed is guaranteed to be of the best possible quality for the type of scene being viewed, providing the best scene information, no matter what the surrounding environment.

Using a camera's direct temperature measurement by positioning the centre crosshair at the area of interest, enables the user to detect temperature differentiations in the scene, which could be a trapped victim, an escape route, or the seat of the fire.

Since its introduction, direct temperature measurement has revolutionised the thermal imaging market, changing the way thermal imaging has been integrated as a part of hazmat firefighting.

As a standard feature on almost all thermal imaging cameras it has become an essential tool when using thermal imaging in firefighting. On offer nowadays is the next evolutionary step in temperature measurement. ❖

ABOVE: Firefighters can use thermal camera technology to navigate in zero visibility environments and predict fire behaviour.



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## New ONVIF compliant camera launched by 360 Vision



IP camera options are easily configured in an intuitive sub menu.

### VIDEO TECHNOLOGY

CCTV design and manufacturing company 360 Vision Technology, in conjunction with systems control company Meyertech, has developed fast and easy set-up and deep control for 360 Vision's range of ONVIF compliant surveillance cameras.

For installations using the enterprise-class FUSION-Eclipse Video Management Software

(VMS), through to the simple (4-camera) Nano VMS, using 360 Vision ONVIF compliant cameras, offers simple two-click integration into any Meyertech control solution.

David Wood, CRM and business development executive for Meyertech, explained, "Users of our FUSION-Eclipse VMS software simply select the 'Discovery' tool and then add the desired 360 Vision camera from

the list of devices available in a drop down menu. The camera is then ready for use in the system in just a couple of clicks.

"Furthermore, the usual IP camera options, such as frame rate and video resolution, are easily configured in an intuitive sub menu, and features such as IR and white lights, wipers, and pre-set tours on 360 Vision's Predator cameras can be selected directly."

In this way, any 360 Vision camera can be integrated into a Meyertech-controlled CCTV system in minutes, claimed the company. The partnership continues to ensure that 360 Vision cameras are as simple as possible to integrate into existing systems or add to new installations – minimising installation time and maximising system performance, it added.

## British firm Advanced lands emergency communications innovation award

### EMERGENCY COMMUNICATIONS

UK-based company Advanced has received a Fire and Life Safety Innovation Award at the 2015 ESX Show in Baltimore, USA.

The provider of fire safety systems bagged the accolade at the awards for its PerfectSync emergency communications system, which automatically synchronizes audio, voice and strobe signals across Advanced's Axis AX fire alarm networks dynamically, as conditions

change. The company said that this synchronization of audio and visual signals across multiple notification zones, floors and areas, without the need for special wiring or programming, prevents confusion in an emergency situation and helps to meet intelligibility standards.

Commenting on news of the award, Advanced CEO Mike Troiano called the system "a technologically advanced, easy to

use audio and visual communications system that improves life safety for all of the occupants of a building in an emergency situation".

PerfectSync uses high-performance, distributed, digital amplifiers that come standard with an integral backup amplifier and power source, while supporting up to 16 messages, which can be programmed from a library or created manually.

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## Customising plans for air evacuations



Stephen Huddlestone, who heads up Air Charter Service's AEP division.

### AVIATION

Air Charter Service (ACS), which has provided emergency air support since its inception in 1990, has created a full-time dedicated department offering customised Air Evacuation Plans (AEPs) for clients operating in high-risk regions.

Stephen Huddlestone, head of the AEP division, commented, "Many of our clients, including oil and gas companies and governments, have personnel in high-risk environments who may need to get out urgently. A prime example was during the Arab Spring uprisings in 2011, when we evacuated more than 15,000 people from Egypt, Tunisia and Libya.

"We have a proven history of providing evacuation flights and have had to put these plans

together in the past, but we felt that now was the right time to create a dedicated department and produce a product that gives our customers the chance to be ahead of the game."

Huddlestone said that when an evacuation becomes inevitable, it is essential that aircraft are available to transport personnel. In such situations, he noted, many companies plan to put all of their staff on the next scheduled service out of the region from the closest airport, despite facing the reality that with many international companies having thousands of employees in these countries there are simply not enough seats for everyone.

"On top of this, these situations often put airports out of action. Once these companies realise that chartering is the only

option, the best-suited aircraft are often booked or not available, due to the high demand at such times," he added.

According to Huddlestone, the key purpose of an AEP is to have solutions in place in advance, to ensure clients retain maximum control, and to provide personnel with a duty of care.

"The worst time to plan for a crisis is during one," he said. "We provide a detailed report covering all potential eventualities; look at all possible alternate airports and routes, even if in a neighbouring country; provide continuous market analysis and monitor the availability of the most suited operators in the region; and put in place a credit agreement, so as not to hold up any evacuation based on money transfers.

"There is a huge list of potential complications, but we cover these eventualities, continuously monitoring and adapting the plan in line with an event's development."

Huddlestone concluded, "The global reach of ACS has proven invaluable, as our worldwide offices have local market knowledge, hold credit agreements with airlines and speak the local languages. We don't just have a local agent or someone working from home in these locations, as some companies do, we have established presences and longstanding relationships. With experience assisting governments, NGOs, individuals and multinational corporations getting people and aid in and personnel out, we know what we're doing."

## Centre Point Logistics carries out safety workshop in Dubai

### TRAINING

Dubai-based company Centre Point Logistics has held a workshop on safety for members of its high-level and middle management.

Led by safety management expert Er Kannan, the 'Global Best Practices in Safety Management in Open Yard/Supply Chain Industry' training event was intended to emphasise the importance of safety procedures in minimising occupational hazards.

Addressing attendees at the Hotel Courtyard by Marriott Dubai, Kannan stressed the importance of the 'people-environment-equipment-process-organisation' (PEEPO) model in developing safe procedures and effective risk management throughout the logistics industry.

"The UAE is uniquely positioned as a logistics and supply chain hub in the Middle East," remarked Centre Point executive director Saleh Abdullah Lootah. "Due to country's burgeoning logistics industry, Centre Point Logistics has taken advanced measures to ensure world-class safety standards across its operations, and to promote the wellbeing of its stakeholders, partners and employees."

The UAE's logistics market has increased in value to US\$27bn in 2015, compared to US\$23.4bn in 2013, representing an overall increase of 15 per cent over two years, according to Frost & Sullivan.



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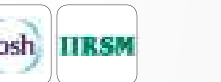
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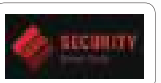
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## Sri Lankan manufacturer ATG releases cut resistant, breathable glove

### PERSONAL PROTECTIVE EQUIPMENT

Safety glove manufacturer ATG has released a new version of its MaxiCut cut resistant glove. The MaxiCut Ultra combines high levels of cut protection with comfort, flexibility and dexterity for dry environments, the company said.

The new model was designed and developed as a 360° breathable glove, the Sri Lankan manufacturer added, with the use of ATG's patented AirTech micro-foam nitrile coating making the new model "the most breathable cut resistant glove on the market".

AirTech works to keep the palms of the

hand cool, as well as the back, while the use of the company's DURAtch technology keeps the thin and flexible coating tough.

The level 5 cut resistant glove is reinforced in the inherently weak area between the thumb and forefinger, and has rounded fingertips for improved sensitivity,

as well as a micro-cup finish to optimise grip in dry environments.

ATG said the MaxiCut Ultra is suitable for use a number of applications, including in construction, manufacturing, logistics and warehousing, and has been certified as 'skin safe' by the Oeko-Tex Association.



The MaxiCut Ultra has been designed to be suitable for use in number of applications.



The HORNET EM 1LED has been designed to be compact, simple and safe to use in confined spaces.

## 'First portable LED light with dual-purpose EM function'

### LIGHTING

Atexor has launched what it claimed was the first portable LED light with dual-purpose EM function, the SLAM® HORNET EM 1LED.

Tested and certified for ATEX and IECEx areas, each one is rated with T4 temperature class, making it safe to use in the most demanding maintenance and service projects, the firm said.

Each unit has a back-up battery, providing power to a new dual-purpose EM function, completely changing portable lighting for hazardous spaces, the company said. The advanced electronics in the rechargeable battery control unit help the EM function generate strong light when the main power supply is lost. The EM function provides an additional safety feature by flashing at 15-second intervals when there is a power outage,

serving as an effective visual alarm and letting workers know they need to get out.

The unit has a significantly longer lifetime and cheaper service cycle thanks to the high-powered LED module, claims the company, and with Atexor's SafeEye® technology, despite high lumens output, the soft, gentle light allows one to look in any direction, even directly at the light.

Used as a terminal light or linked in chains, the HORNET EM 1 LED can be connected to 110V or 230V mains power or to a transformer, like the SLAM® TRANS 200EX or 400EX, to supply safe 24V and 42V extra low voltage input in hazardous confined spaces.

Atexor is owned by Teknopower, a leading lighting company with partners operating in more than 20 countries.



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هناك إعداد خطة وتوفير معدات جاهزة يوفر الوقت والمال وهو ما قد يتم فقدانه بسبب تعطيل العمل إذا كان لابد من ترك المنصة.

### تغيير وجه الصناعة البحرية

إن التقدم في طرق الكشف عن الغاز على مدى السنوات مع التكنولوجيا الجديدة، معناه أن عملية السلامة من مخاطر غاز كبريتيد الهيدروجين أصبحت اليوم سهلة المنال عن ذي قبل بالنسبة لشغلي المنصات البحرية. فقد غيرت الابتكارات: مثل أجهزة الكشف عن الغاز اللاسلكية وطرق المعايرة التلقائية، وجه السلامة من غاز كبريتيد الهيدروجين في حقل النفط خلال العقد الأخير. كما أن التدريب يساعد العمال أيضا على التعرف على مخاطر غاز كبريتيد الهيدروجين، وقد أصبحنا اليوم على مستوى أفضل ليس فقط في تعليم العمال بل وفي تزويدهم بالمعدات بشكل أفضل.

صناعة النفط والغاز ككل تبذل جهدا هائلا في رفع مستوى الوعي بغاز كبريتيد الهيدروجين لتحتضن بعمليات تشغيل خالية من الحوادث وسليمة بيئيا في الوقت الحاضر والمستقبل.

### معلومات عن دراجر مارين أند أوفشور

تعمل شركة دراجر مارين أند أوفشور جنبا إلى جنب مع شركائها الصناعيين لريادة حلول السلامة للمستقبل. فهي توفر التدريب في أي مكان، وتعمل عن كثب على تجريب حلول مع شركائها في منطقة بحر الشمال وخارجها. وتقدم الشركة دورة تدريبية عن السلامة الأساسية الخاصة بغاز كبريتيد الهيدروجين معتمدة من منظمة تدريب صناعة النفط البحرية (أوبشو) ولديها أكاديمية تدريب متخصصة ومركز خدمة في أبردين، المملكة المتحدة، وتقدم دورتها (التي يتم تقديمها في نصف يوم) لعمال الصناعة البترولية المعرفة والمهارات المطلوبة للعمل في بيئات يشكل فيها وجود هذا الغاز القاتل خطرا جسيما.

لمعرفة المزيد من المعلومات عن عمل شركة دراجر في قطاع النفط والغاز، يرجى زيارة الموقع الإلكتروني: [www.draeger.com/oilgasuk](http://www.draeger.com/oilgasuk)

أن يكون قد تلقى أفضل تدريب. فالمعرض يوضع ثوان لتركيزات منخفضة قد يكون أمرا مهما حين يتم إيقاف الجهاز الذي يقوم بتنظيم عملية التنفس. كما ينبغي أيضا أن توجد خطة طارئة لضمان معرفة جميع العاملين بطريقة استخدام معدات السلامة الخاصة بكبريتيد الهيدروجين بشكل صحيح في جميع الأماكن الخطرة. وينبغي أن توجد معدات الكشف عن الغاز في أي مكان قد يوجد به غاز كبريتيد الهيدروجين، بالإضافة إلى توفر معدات حماية الجهاز التنفسي للاستخدام في الحالات العادية والطارئة.

كذلك يجب أن يشمل التدريب تعلم كيفية التعرف على خصائص ومصادر ومخاطر غاز كبريتيد الهيدروجين، والتعرف على طريقة الاستجابة للتحذيرات الخاصة بغاز كبريتيد الهيدروجين في مكان العمل. كما ينبغي أن يشمل التدريب أساليب الإنقاذ وإجراءات الإسعافات الأولية في ضوء التعرض لغاز كبريتيد الهيدروجين، خاصة فيما يتعلق بإجراءات دخول الأماكن المغلقة.

أيضا يجب أن تكون لدى العاملين خطة جاهزة في أي وقت، لأنه إذا انطلق إنذار مستشعر غاز كبريتيد الهيدروجين، فهم بحاجة إلى معرفة طريقة التعامل معه على الفور. في نهاية الأمر،

الأصول فحسب، بل تعني أيضا أن العمال سيواجهون بيئات أكثر خطورة في عملهم.

وعلى الرغم من نمو الاستثمار في البنى التحتية الجديدة، فإن ما يقرب من نصف المنصات البحرية قد تجاوز عمر تصميمها الطبيعي، مع وجود العديد من الأصول التي تم تكليفها بالعمل في أوائل السبعينيات ويتوقع لها الآن أن تستمر في التشغيل حتى عام ٢٠٣٠ وما بعده. علما بأن الاستثمار في أصول جديدة وإطالة عمر المحطات الحالية يجلب تحديات تتعلق بالسلامة وتحديات تجارية على السواء.

وبطبيعة الحال، ليس هناك شك فيما يتعلق بالآثار الصحية الخطيرة لاستنشاق الهواء الملوث بغاز كبريتيد الهيدروجين، وعلى الرغم من أن غالبية الناس يمكنهم شم تركيزات منخفضة جدا من كبريتيد الهيدروجين، فإنه من الخطر الافتراض أن هذه الرائحة قد توفر إنذارا كافيا. ففي عالم مثالي، أسلم مستويات للتعرض لغاز كبريتيد الهيدروجين هي عدم التعرض له على الإطلاق.

### إعداد الجيل القادم

من الضروري لأي شخص يعمل في منطقة قد توجد بها تركيزات من غاز كبريتيد الهيدروجين،

إذا لم يتم التعامل معها بكفاءة، قد تؤدي هشاشة الهيدروجين أو تصدع ضغط الكبريتيد إلى تسرب غاز كبريتيد الهيدروجين





## التغلب على مخاطر التعرض لكبريتيد الهيدروجين



تواجه صناعة النفط والغاز مخاطر متزايدة من التعرض لكبريتيد الهيدروجين، خاصة وأن العمليات في منطقة بحر الشمال بدأت تصل إلى مرحلة النضج، وأخذت أعمال الانتهاء في الازدياد. وفيما تبحث الشركات عن تدابير للحد من هذا التهديد، يراقب فيل ساكستون، المدير العام لشركة دراجر مارين أند أوفشور، ما تبذله الشركة لتحسين مستوى الوعي والتدريب.

ضخ ماء البحر في التكوينات الصخرية للحفاظ على الضغط في البئر، قد يؤدي إلى التعرض لكبريتيد الهيدروجين

وقت منيكر مع توفير تدابير الهروب والإخلاء والإنقاذ، وهذا لأن العديد من الأصول ظلت في موقعها لسنوات عدة، وسيأتي تفكيكها بتحديات سلامة جديدة.

كما أن تآكل المعدن، بما في ذلك التآكل الهيدروجيني أو التصدع الناتج عن الإجهاد الهيدروجيني، قد يؤدي إلى إطلاق غاز كبريتيد الهيدروجين إذا لم يتم التعامل معه بشكل فعال. فعند دخول أحد الآبار المتروكة، ربما لسنوات، يكون العمال بحاجة إلى إعداد سيناريو لأسوأ الاحتمالات التي قد تحدث لأنهم سيتعاملون مع كثير من الأمور المجهولة. ومع انخفاض الانتاج في الرصيف القاري للمملكة المتحدة، فقد استغقت أكثر الحقول التي من السهل الوصول إليها. ومع وجود حقول جديدة في المياه العميقة، تمت درجات حرارة وضغوط مرتفعة، بالإضافة إلى خطوط أنابيب أكثر طولاً، تصبح الإمدادات اللوجستية عملية أكثر صعوبة حيث أنها لا تتحدى سلامة

في الشرق الأوسط) لغاز كبريتيد الهيدروجين أثناء عملية ضخ مياه البحر داخل التكوينات الصخرية باعتبارها جزءاً من عملهم للحفاظ على الضغط داخل البئر. هذا الأمر قد يؤدي إلى تكون غاز كبريتيد الهيدروجين مع تحلل المواد العضوية، ويؤدي إلى تولد الغاز في ظل غياب الأوكسجين، ومع ارتفاع المستويات الكبريتية لغاز كبريتيد الهيدروجين في الآبار المستنفدة بشكل كبير، ستشكل الآبار الآخذة في التضب أسواق نمو رئيسية لخدمات التدريب والسلامة الخاصة بغاز كبريتيد الهيدروجين في المستقبل.

وقد ذكر تقرير أعدته قسم الطاقة في إدارة المنشآت الخطرة الخاصة بإتش إس إي أن تفكيك المنشآت البحرية قد يتسارع بداية من عام 2017 ليشمل العديد من المنشآت، وصولاً إلى 5000 بئر و 10000 كم من خطوط الأنابيب. وتعني هذه العملية الصعبة أن عمليات تقييم المخاطر ستكون عنصراً رئيسياً. ويجب إجراء هذه التقييمات في

فمع عملية تفكيك الأصول التي تجري حالياً في منطقة بحر الشمال، يعد كبريتيد الهيدروجين واحداً من المخاطر العالمية الذي له الأولوية القصوى. ولهذا السبب تعتبر المراقبة الفعالة لغاز كبريتيد الهيدروجين، وإعداد برامج التخطيط والتدريب الجيدة للعمال، أمراً بالغ الأهمية لتجنب حدوث إصابات أو وفيات.

فغاز كبريتيد الهيدروجين (H<sub>2</sub>S)، أو الغاز الحمضي كما يشار إليه عادة، هو غاز عديم اللون قابل للاشتعال بشكل عالٍ وسامٍ وقابل للانفجار. وقد يسبب هذا الغاز فقدان حساسة الشم لدى العامل بشكل سريع. كما أن التعرض لمستويات مرتفعة منه قد يؤدي إلى الوفاة بسرعة، ولأنه أقل من الهواء، يستقر غاز كبريتيد الهيدروجين في الأماكن سيئة التهوية أو المتخفية، ويذوب في أي ماء أو زيت متواجد.

وقد يتعرض العاملون في عمليات حفر آبار النفط والغاز الطبيعي (بمن فيهم أولئك العاملون

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منتجات ماين سيفتي  
أبليانسز للسلامة من  
الحريق، مثل جهاز  
التنفس المستقل  
تؤدي عملياً على  
الوجه الاكمل

## تزايد نسبة مبيعات ماين سيفتي أبليانسز للأمن في السوق الناشئة إلى ٩ في المائة

أعلنت شركة ماين سيفتي أبليانسز، المصنعة والمزودة لمعدات الأمن، عن حصيلة نتائجها للربع الثاني من عام ٢٠١٥. وقد أعلنت الشركة عن نسبة ٩ في المائة زيادة في معدل المبيعات بالعملة المحلية في الأسواق الناشئة، والتي تقول إنها مدفوعة بشكل كبير بمبيعات الشحن الهائلة في الشرق الأوسط. وقد زادت معدلات المبيعات بالعملة المحلية من أجهزة التنفس الذاتية (SCBA) بنسبة ٤١

في المائة عالمياً، ونما معدل المبيعات الرئيسية الشاملة بنسبة ١٠ في المائة قائماً على العملة المحلية، وبأداء قوي خاصة في مجال منتجات خدمات الحريق وأنظمة الفحص عن الغاز واللهب (FGFD) - وعلى الرغم من ذلك، جاء بعض من هذه النجاحات تعويضياً بسبب الضعف المستمر في مبيعات الأجهزة المحمولة للكشف عن الغاز، وأجهزة حماية الرؤوس الصناعية، والتي كانت هي الأكثر عرضة في مستويات التوظيف في محور سوق الطاقة.

وقال ويليام إم لامبارت، الرئيس التنفيذي لشركة ماين سيفتي أبليانسز: «نتائجنا للربع سنوية تعكس التنفيذ العالي والمركز من جانب فريق العمل لاستراتيجيتنا على الرغم من الظروف الشديدة للتحدي والتي استمرت في التأثير على مجالات معينة من أعمالنا. وأيضاً على الرغم من أن بعض المنتجات الصادرة من شركة ماين سيفتي أبليانسز، التي تعتبر أكثر انسجاماً مع مستويات التوظيف في كل سوق الطاقة استمرت في طريقها نحو الضعف المتوقع، فإننا أدركنا أن نمو مبيعات أجهزة التنفس الذاتية وأنظمة الفحص عن الغاز واللهب، وخوذات الحريق، يتضاعف في هذا الربع. كما جاءت استثمارات البحث والتطوير في المنتجات الجديدة بموارد قوية (حسبما ذكرت ماين سيفتي أبليانسز) فيما يخص المنتجات المطورة والمطروحة خلال الأعوام الخمسة السابقة، تمثل بذلك نسبة ٤٥ في المائة من ربح المنتجات الأساسية في ربع العام، علواً عن نسبة ٣٢ في المائة في العام الماضي.

## تضاعف حصة هيك فيجن في السوق خلال عامين



هيك فيجن  
تحقق تضاعف في  
سوق الرقابة  
حول العالم بما  
في ذلك الشرق  
الأوسط

عززت هيك فيجن مكانتها كواحدة من أكبر مصنعي كاميرات المراقبة في العالم، ووفقاً للبحث الأخير الذي أجرته شركة أي إن إس إس (IHS) مزودة بملومات السوق، تضاعفت الشركة الصينية حصتها في السوق على مدار العامين

الأخيرين، وشركة هيك فيجن، التي تأسست عام ٢٠٠١ بعدد من الموظفين يقرب من ١٤ ألفاً حول العالم، تستحوذ الآن على نسبة ١٦.٣ في المائة من السوق العالمية، بحيث تتوق في تقرير أي إن إس إس -تصنيف كل شركات أجهزة الدوائر التلفزيونية المغلقة CCTV والمراقبة.

وعلق ميلتيا هو، نائب رئيس الشركة، على ذلك بقوله: «يسعدنا جداً أن نرى هيك فيجن في أعلى منزلة في مجال معدات الدوائر التلفزيونية المغلقة، وفيديوهات المراقبة، وهذا يرجع إلى الابتكار والاستثمار في مجال البحث والتطوير». وقد زادت حصة هيك فيجن في السوق العالمية لكاميرات شبكات الأمن من نسبة ٩.٧ في المائة إلى ١٨.٩ في المائة على مدار العامين الماضيين لتتفوق بذلك على شركة أكسيس كوميونيكيشنز. بينما تتخطى في تصنيف نظام أجهزة شبكة تسجيلات الفيديو (NVR) أول عشر شركات في عام ٢٠١٣ لتتربع على القمة بنسبة ١٥.٧ في المائة في السوق الحالية.

وقد عززت الشركة، بشكل كبير، أسواق أوروبا والشرق الأوسط وأفريقيا، وتحتل حالياً المركز الثاني بنسبة مشاركة في السوق تصل إلى ٩.٢ في المائة. وأضاف هو قائلاً: «نحن نقدر دعم وثقة عملائنا وشركائنا في هيك فيجن، وبالتالي إلى مستقبل مشرق. سنستمر في انهاز كافة الفرص لتلبية احتياجات السوق، والحفاظ على الاستثمار في البحث والتطوير، مقدمين بذلك فوائد وخدمات أكثر لعملائنا».

## مؤتمرات مجال العمال ٢٠١٥

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أكتوبر/تشرين الأول

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٢٠.٢٧	معرض الصحة والسلامة والأمن في محيط العمل A+A	دوسلدورف

نوفمبر/تشرين الثاني

١٢.٩	معرض ومؤتمر أبوظبي الدولي للصناعات النفطية	أبوظبي
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## وصول قيمة قطاع الأمن القومي في المنطقة إلى ٣٤ مليار دولار عام ٢٠٢٠



عمل عدد من مشروعات البنية التحتية الكبرى على زيادة النمو في هذا القطاع

تعددت قيمة سوق الأمن القومي في الشرق الأوسط لتصل إلى ٣٤ مليار دولار أمريكي بحلول عام ٢٠٢٠. فقد تزايدت أمن التقارير، التي أسدرتها فروست وسوليفان، بأن هذا القطاع سوف يشهد، بدعم من التنوع الاقتصادي وتزايد مشروعات البنية التحتية، تضاعفاً في معدلات النمو السنوي بنسبة ١٨,٧ في المائة على مدار الخمس سنوات المقبلة، أي بما يزيد ثلاث مرات عن المعدل المتوسط. وبالإضافة إلى مشروعات البنية التحتية، مثل برنامج الاستثمار في مطارات أبوظبي والمبالغ قيمته العديد من خيارات الدولارات ومجمع محطات المنطقة الوسطى الذي سوف يمتلك السعة للتعامل مع ٢٠ مليون راكب، سنوياً. تأمل المنطقة في استضافة عدد من الأحداث الضخمة، مثل إكسبو دبي ٢٠٢٠ في دولة الإمارات العربية المتحدة، وكأس العالم ٢٠٢٢ في دولة قطر.

وجاء على لسان اللواء الدكتور أحمد ناصر الرئيسي، نائب رئيس مجلس إدارة اللجنة العليا المنظمة لمؤتمر والمعرض الدولي لأمن وسلامة وعمرية السوق المحلية (ISNR)، أنه سوف تدفع الضوابط الإقليمية الضخمة التي سوف تستضيفها المنطقة، قيمة الاستثمار في مجال البنية التحتية إلى ٧٠٠ مليار دولار أمريكي في الفترة بين الوقت الراهن وعام ٢٠٢٠، وتشمل هذه الاستثمارات التشييد السكني والتجاري والبنية التحتية للنقل والخدمات المرفعية العامة التي يجب أن تتم حمايتها جميعها بحلول وأنظمة أمن متقدمة.

علماً بأن نمو قطاع الأمن سيضم عددًا من القطاعات الفرعية، والتي تشمل بدورها الاستجابة لحالات الطوارئ وإدارة الكوارث والحماية من المشكلات الخطيرة في البنية التحتية، وكذلك أمن النقل والقطاع الجيولوجي وأمن الإنترنت.

## أكاديمية النفط والغاز الدولية (أوبيتو) تؤمن اتفاق تدريب مع عُمان

المرحلة الأولى هي تحليل مدى التوافق الحالي للتدريب المهني وغير المهني في سلطنة عُمان. وسوف تقوم المؤسسة التعليمية بتلقي مراكز وكليات التدريب لتحديد معايير التدريب، ومن ثم تقديم توصيات حول كيفية تحسين فرص توفير التدريب المهني للحصول على إطار عمل من المؤهلات يتوافق مع متطلبات المهارات الحالية والمستقبلية، وتحسين كفاءة العمليات وأنشطة الصيانة المرتبطة باستخلاص المواد الهيدروكربونية. وتعمل هذه الهيئة العالمية لمعايير التدريب في مجال النفط والغاز، مع الحكومة ومجتمع الخدمات البترولية العماني (أوبال) والموظفين، من أجل تحسين عملية توصيل التدريب بما يضمن حصول الدولة على قوى عاملة ماهرة وأمنة في مجال النفط والغاز، وهذا سوف تكون له مساهمة إيجابية نحو الاقتصاد العماني من خلال خلق فرص عمل أكبر للعُمانيين. وفقاً لما ذكرته الشركة.

وقال مكيدي دويج، الرئيس التنفيذي لجمعية أوبيتو، من خلال العمل مع الحكومة والموظفين، سوف تساعد حكومة عُمان على تطوير البنية التحتية للتعلم في الدولة، مما يمكن من توفير المؤهلات الصلبة والمعارف عليها في هذا المجال مدعومة بمعايير التدريب الفني ومعايير العمل وعملية التقييم السليمة والمؤهلات والشهادات المعتمدة، وسيضمن هذا الأمر توصيل التدريب بطريقة سليمة من جانب الأشخاص المناسبين، وباستخدام الأجهزة المناسبة في بيئة آمنة ومُدارة على نحو جيد، وبكفاءة يمكن أن يتم قياسها بشكل فعال. وأشار خالد غالب الهايشي، مستشار الموارد البشرية في وزارة النفط والغاز، قائلاً: «بعدنا هو زيادة مستويات الكفاءة والإنتاج لدى قوى العمل المحلية الداخلة على الصناعة من خلال ملامحة التدريب المهني والفني القائم حالياً، مع متطلبات الصناعة ويوصلها إلى المعايير الدولية».

وقال مسلم المنذاري، الرئيس التنفيذي لمجتمع الخدمات البترولية العماني: «إن التعاون مع أوبيتو سوف يؤكد على توافق معايير التدريب، ومع متطلبات التدريب الفني في الصناعة وسيوفر للعُمانيين تدريباً يرتقي إلى المعايير العالمية».

أعلنت أكاديمية النفط والغاز الدولية، المزودة للعمالة في قطاع النفط والغاز - عندما مع وزارة النفط والغاز العمانية لتوفير تدريب للعمالة العمانية، وشيمان بيئة عمل أكثر أماناً. وقالت الأكاديمية أنها تعمل على خطة مرحلية سوف توفر للحكومة العمانية حلولاً جوهرياً في احتياجات العمالة لديها، وطلبات النمو في قطاع النفط والغاز.



ستكون نتيجة برامج تدريب (أوبيتو) في عُمان أن يتلقى مئات العاملين تدريبات تاهيلية في مجالات الصيانة الإلكترونية والميكانيكية، والتحكم في الآلات والرقابة، مما ينتج لهم العمل في قطاع النفط والغاز

# فني هذا العمود ...

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# نقله المصحة والسلامة والأمن

العدد الأول ٢٠١٥

الشرق الأوسط



# توفير السلامة على برج الحفر

فيما تصل العمليات إلى مرحلة النضج، وأخذت أعمال الانتهاء تزداد في صناعة النفط والغاز، تبحث الشركات عن تدابير للحد من هذا التهديد الذي يمثله ازدياد التعرض لكبريتيد الهيدروجين.

