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Health, Safety & Security Review

VOLUME 7 | ISSUE 1 2021

Middle East



HSE UAE FORUM: SHARING BEST PRACTICES

INSIDE...

Exclusive interview:
Dubai Municipality

The latest in fire detection

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editor's note

We're very excited to be holding our HSE UAE Forum in Dubai in April, the sixth in the event series, after the hiatus due to the pandemic. It is shaping up to be a great event and will field a stellar cast of speakers, some of whom are interviewed for this issue. They will address the most business-critical issues for HSE, See our preview on p8. Also in this issue we cover the latest in fire detection (p28), understanding the challenges and requirements of ISO 45001 (p22), gas detection (p20) and the role of safety showers for decontamination (p24).

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US Mailing Agent: Health, Safety & Security Review Middle East is published six times a year for US\$71 per year by Alain Charles Publishing, University House, 11-13 Lower Grosvenor Place, London SW1W 0EX, UK.

Printed by: Buxton Press

Printed in: March 2021

Arabic Translation: Ezzeddin M. Ali
Email: ezzeddin@movistar.es

Arabic Typesetting: Lunad Publicity, Dubai

All information in this publication was correct at time of going to press.

© Health, Safety & Security Review Middle East • ISSN: 2059-4836

IOSH and WHO develop new course



Image Credit: Adobe Stock

Training

People around the world can access new free online learning to develop their knowledge around preventing transmission of COVID-19 and managing the risks of returning to work and remote working, as a result of a collaboration between the Institution of Occupational Safety and Health (IOSH) and the World Health Organization (WHO).

The two organisations have worked together to develop a new course which has been made available on the OpenWHO online learning platform, to support businesses, workers and safety and health professionals in

managing COVID-related risks.

Bev Messinger, chief executive of IOSH, said, “The COVID-19 pandemic has had a huge impact on the way we work, as well as the way we live. Many organisations have opted for remote working, and although this has been beneficial for employers and workers, it is something which can create significant risks, not least around mental health.

“Organisations are also planning their recovery and have been doing for some time. This includes how they can allow people back into workplaces in a safe way, ensuring that the risks of COVID-19 transmission are

managed. Some organisations, of course, have had to continue operating in workplaces and we have supported them too.

“We are delighted to work together with the World Health Organization to develop these short modules, which will be available globally. They will support people in organisations of all sizes, including small and medium enterprises and start-ups who might otherwise find it challenging to access such training.”

The course is available on OpenWHO’s online learning platform at <https://openwho.org/courses/COVID-19-and-work>

Conservation project

Environment

Etihad Rail, Emirates Nature-WWF, Fujairah Environment Authority and Fujairah Adventures, have signed an agreement to implement an environmental conservation and habitat rehabilitation project in Al Bithnah, Fujairah. It covers local community support and development, environmental protection and biodiversity conservation, and the preservation of the UAE’s natural heritage.

HH Sheikh Mohammed bin Hamad bin Mohammed Al Sharqi, Crown Prince of Fujairah, stressed the importance of preserving biological ecosystems and safeguarding the natural heritage of the UAE, through collaboration between the government, private sectors and local communities, in addition to the implementation of local and national environmental protection legislation.

Laila Mostafa Abdullatif, director general at Emirates Nature-WWF, said, “Generating societal benefits lies at the heart of this initiative.”

Fire Protection Association stresses the importance of competence

Fire safety

The UK’s Fire Protection Association (FPA) has launched a ‘Know Your Building’ campaign, which aims to help improve understanding of fire-related risks amongst building owners, and those responsible for fire safety, enabling them to take steps towards becoming more resilient. See <https://www.thefpa.co.uk/know-your-building>.

The Association has published a mini paper, ‘Are you confident over competence’

which outlines the importance of competency in protecting buildings, businesses and their occupants from fire, and highlights six key pillars which underpin good practice.

“As outlined in our first paper in this ‘Know Your Building’ series, a comprehensive fire strategy and sound business continuity plan are needed in order for organisations to have a truly resilient approach to fire safety,” Clarie Wright, head of Training at the Association said. “However, another essential element is to

ensure that those entrusted with managing fire safety, assessing fire risk and maintaining or installing equipment are competent to perform their roles. This concept of competency lies at the heart of any successful building fire protection strategy.”

The paper can be downloaded at <https://www.thefpa.co.uk/news/fire-safety-advice-and-guidance/are-you-confident-over-competence>

Next-generation UAE coastal protection solution

Coastal protection

ATLAS Telecom and Plextek have partnered on the next generation E-Passport programme to deliver a highly innovative marine tracker solution serving the evolving needs of the Critical Infrastructure and Coastal Protection Authority (CICPA). ATLAS Telecom has recently awarded Plextek an initial US\$6.1mn (£4.4mn) contract for the programme's first phase.

CICPA's vital role in ensuring effective UAE coastal protection requires the efficient use of cutting-edge technologies. E-Passport advances the surveillance and reconnaissance operations for increased coastal security and safety, aided by autonomous notification of impending threats and behaviour pattern anomalies.

The ATLAS-Plextek partnership includes the design and high-volume manufacture of a critical element of the end-to-end E-Passport solution; consisting of an advanced military-grade hybrid TETRA-LTE GPS smart tracker device that



Image Credit: Adobe Stock

The intelligence-driven marine unit has been designed to ensure highly resilient and secure communications with seamless operation.

provides life-saving features for rescue teams during emergencies.

The intelligence-driven marine unit has been designed to ensure highly resilient and secure communications with seamless operation, while also facilitating a high level of tamper resistance, power efficiency, and a robust marine enclosure, enabling full environmental protection under extreme conditions.

Samer Jammoul, managing director at ATLAS Telecom, said,

“We have chosen Plextek as a strategic partner for their strong track record in delivering highly resilient communications, and IoT technology solutions for mission-critical applications, as well as for their commitment to ATLAS Telecom in UAE and the entire region. This partnership is essential as we embark upon subsequent programme phases, as part of our long-standing commitment and support to CICPA on E-Passport Programme.”

Fire protection system market to cross US\$70bn by 2027

Fire protection system market

The market valuation for fire protection systems will cross US\$70bn by 2027, according to a new report by Global Market Insights.

The growing demand for wireless fire protection systems, owing to connected fire alarm systems that send alerts in real-time to smartphones and smartwatches, thereby reducing property damage, is driving the market growth.

The rise in the development of smart buildings and homes is also propelling market growth as governments are implementing guidelines and regulations for installing fire protection systems.

The fire protection systems market players are emphasising strategic acquisitions, product launches, and partnerships to fortify their position. For instance, in June 2018, Johnson Controls launched a fire protection system in the Middle East, Autocal.

Smiths Detection's BioFlash detects airborne COVID-19

Security screening

Smiths Detection, a specialist in threat detection and security screening technologies, has reported that its BioFlash Biological Identifier is capable of detecting SARS-CoV-2 in the air following tests conducted by the United States Army Medical Research Institute of Infectious Diseases (USAMRIID).

The tests were performed using live SARS-CoV-2 virus in a Biosafety Level 3 containment area at Fort Detrick, Maryland.

The SARS-CoV-2 CANARY biosensor used in the BioFlash device demonstrated that it can quickly detect and identify the presence of low levels of aerosolised SARS-CoV-2.

The BioFlash Biological Identifier is powered by CANARY technology (a cell-based biosensor) and is combined with proprietary aerosol-collection techniques to provide rapid, sensitive and specific identification of biological-threat agents including viruses, toxins and bacteria.

Roland Carter, president, Smiths

Detection, said, “BioFlash is an effective and trusted environmental monitoring tool. These test results provide valuable data in understanding the spread of COVID-19 and help protect people in indoor environments such as hospitals, schools and commercial buildings.”

USAMRIID confirmed that Smiths Detection's BioFlash can detect down to an estimated 6,000 airborne infectious particles of the SARS-CoV-2 virus within a controlled environment.

SPARK awarded four ISO certificates

Certification

King Salman Energy Park (SPARK) has announced that it has been awarded four Bureau Veritas ISO certificates.

Bureau Veritas, a world leader in testing, inspection and certification, awarded the energy development ISO 9001, ISO 14001, ISO 45001 and ISO 55001 certificates, reflecting SPARK's successfully integrated management system approach to risks including quality, health and safety, and environmental management across their operation.

Saif Al Wahtani, president and CEO at King Salman Energy Park, commented: "We at SPARK are extremely proud of achieving ISO certification, showcasing to our customers, investors and partners that our services operate at the highest quality standards. SPARK and its employees are committed to continuous improvement, ensuring that we are dedicated to developing and improving the processes and systems required to maintain our ISO accreditation."



SPARK, set to complete development in 2035, has achieved four ISO certifications from Bureau Veritas.

King Salman Energy Park occupies 50 sq km between Dammam and Al-Ahsa in the Eastern Province of Saudi Arabia. SPARK is currently under development, set to become a fully-integrated industrial city by its completion in 2035.

The premises will offer infrastructure for global investors in oil and gas, refining, petrochemical industries, electric power, and water production and treatment, comprised of five focal

areas: upstream, downstream, petrochemicals, conventional power, and water & wastewater.

SPARK's various certifications reflect appropriate fulfillment of a number of specifications: ISO 9001 for the premises' successful quality management system; ISO 45001 for its successful health and safety management system; ISO 14001 for its environmental management systems; and ISO 55001 for its asset management systems.

Oman Air's five-star health and safety

HSE

Oman Air has been awarded a five-star COVID-19 airline safety rating from Skytrax.

Abdulaziz Al-Raisi, Oman Air's CEO, commented, "We continue to take all necessary precautions to ensure the safety of guests and employees at all times. Earning 5-star certification highlights the importance we place on health and safety, and our responsibility to make flying as safe as possible."

The COVID-19 safety audit, completed in January, evaluated long haul and regional flights to examine safety precautions taken.

Entry to Muscat International, Oman Air's base, is monitored by temperature checks. Barriers maintain distance between guests and staff, and floor signage reminds guests and staff to keep a safe distance. In the air, food and beverages are delivered in bento-style boxes to reduce contact, carry-on items are limited to briefcases, handbags and baby items, and printed material has been suspended. All headsets, headrest covers, pillow covers and blankets are fully sanitised.

Image Credit: SPARK

Study identifies technology challenges for Middle East organisations

Security

According to a survey by Protiviti and ISACA on top technology risks, cybersecurity, privacy, data and resilience emerged as the top technology challenges for organisations.

The survey covered more than 7,400 IT audit leaders and professionals globally, including organisations from the Middle East who highlighted cyber breach, disaster recovery, and user access to be their main concerns.

Sanjay Rajagopalan, managing director, leader of Internal Audit & Financial Advisory

for the MENA region, said, "As in previous years, cybersecurity remains the number one challenge in the Middle East and other regions, with other key concerns including disaster recovery, security incident management, confidentiality, privacy, compliance and governance."

Another key finding of the report was that organisations with a higher level of digital maturity see the top risks as being more important – and are more likely to identify and assess technology risks more dynamically

and more regularly. They also incorporate more advanced technologies and make greater use of data and technology to support enhanced customer engagement and operational performance, as well as the digitalisation of products and services.

Only 5% of organisations surveyed are considered digital leaders when ranked using the ISACA/Protiviti Digital Maturity Scale. They have a track record of disrupting traditional business models, and continually improve digital aspects of strategic plans.

→ events calendar 2021

April			
6-7	HSE UAE Forum	DUBAI	www.hse-forum.com/dubai
June			
14-16	Middle East Energy	DUBAI	www.middleeastenergy.com
22-23	HSE Oman Forum (Virtual)	VIRTUAL	register@hssreview.me
July			
12-14	Safety & Health Expo	LONDON	www.safety-health-expo.co.uk
October			
12-14	A+A	DUSSELDORF	www.aplusa-online.com
November			
1-3	IFSEC FIREX EGYPT	CAIRO	www.ifsecandfirexegypt.com
15-18	ADIPEC	ABU DHABI	www.adipec.com

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Addressing the latest regulatory updates and best practices

The HSE UAE Forum 2021, the region's premier meeting point for HSE professionals, is all set to host its sixth edition on 6-7 April 2021 at Habtoor Grand Hotel, Dubai.

“This platform helps us in communicating Dubai Municipality's health and safety vision.”

Eng. Raed Marzooqi, head of Safety Engineering, Dubai Municipality.

Bringing together 100+ key stakeholders to help deliver a best-in-class HSE mechanism fit for the current environment, the HSE UAE Forum 2021 will address the latest regulatory developments and best practices to optimise the HSE function in the region.

The forum will feature industry experts including health and safety professionals, government regulators, policy makers and solution vendors including specialists such as Dr. Naseem Rafee, director Health & Safety and Eng. Raed Marzooqi, head of Safety Engineering from Dubai Municipality; Dr. Maisoon Ali Al Shaali, head of Environmental Section at Ministry of Health & Prevention UAE; Salem Salmeen Alnuaimi, head of Safety at National Crisis & Emergency Management Authority; Habiba Al Marashi, chairperson at Emirates Environmental Group; Dr. Waddah Ghanem, chairman at Energy Institute ME as well as senior executives from leading international and regional companies.

Focusing on topics that will address the most business-critical aspects of HSE that are crucial for major sectors such as oil & gas, construction, utilities, logistics & transportation, manufacturing, and entertainment, the forum



Image Credit: Alain Charles Publishing

will present six key sessions:

- ❖ Exclusive regulatory updates to optimise organisational HSE performance;
- ❖ Best practices on post COVID-19;
- ❖ Sustainability to reduce carbon footprint for businesses;
- ❖ Digital transformation to improve workplace safety;
- ❖ Working in hazardous environments; and
- ❖ Transformative technologies that are impacting HSE projects.

The forum will feature vendors and solution providers such as Enablon, Vinner, Socotec, Anthem Safety & Protective Wear, Sanilives and Lloyd's Register.

“We have been associated with the forum every year, and this platform helps us in communicating Dubai Municipality's health and safety vision and educating stakeholders on new HSE best practices. We look forward to participating as

the forum helps us to understand and also hear from the industry, helping us improve our health and safety governance,” said Eng. Raed Marzooqi, head of Safety Engineering at Dubai Municipality.

“The HSE UAE Forum is one of the key events in the HSE domain, offering a platform for leaders from diverse sectors and service providers coming under one roof to discuss best practices in health and safety. It is a good opportunity for safety professionals and organisations to become aware of new technologies and HSE challenges and solutions via this event,” said Dr Mohammed Aref, OSH Expert at the Ministry of Human Resources & Emiratisation. ❖

Find out more information at <https://hse-forum.com/dubai/conference-brochure>, or contact Harshita Dakoju, +9714 4489260; +971 50 4222363; harshita.dakoju@alaincharles.com.

The HSE UAE Forum 2021 is the latest in the acclaimed event series.

Enforcing the highest HSE standards

Eng. Raed Al Marzooqi, head of safety engineering, and Dr. Naseem Rafee, head of crisis management, Dubai Municipality, spoke to HSSRME to explain Dubai Municipality's role in enforcing and raising awareness of correct health and safety procedures.

What is the role of Dubai Municipality in preventing and investigating accidents, and ensuring good health and safety standards in Dubai?

The Dubai Municipality health and safety department is responsible for ensuring that the strategic goal of public health and safety in the Emirate of Dubai is realised and, accordingly, has structured its health and safety governance based on main four pillars: legislation, inspection, awareness and accident investigation.

By establishing comprehensive health and safety legislations and technical guides, the Dubai Municipality helps business and people to understand their roles and requirements relating to health and safety at their place of work. This is further confirmed by health and safety inspections of work places that verifies compliance of legal requirements by employers. Premises are advised to take adequate actions on the improvement, and when



Image Credit: Alain Charles Publishing

“All occupational and public safety accidents reported to the Dubai Municipality are investigated by our specialised investigation team.”

Eng. Raed Al Marzooqi will be returning to the HSE UAE Forum this year.

repeated failures are noticed the respective premises are penalised, similar to best practices in other leading countries.

Additionally, all occupational and public safety accidents reported to the Dubai Municipality (which are under our jurisdiction) are investigated by our specialised investigation team. The outcome of the investigation is communicated to industries through various awareness techniques and, wherever it is necessary, the respective law is proposed or technical guidelines revised or prepared.

What are the most common accidents and causes of accidents in Dubai, and how can they be prevented?

Based on the recent analysis of data, it was concluded that

activities such as working at height, machine operation, etc were among the most common accidents. We therefore conducted and planned studies on these concerns, such as one study which focused on machine accidents in manufacturing industries. For this, we screened the past three years of machine accidents in manufacturing industries, conducted surveys and interviews in these industries relating to this and also based our findings on data results and further statistical analysis.

We concluded that there is an urgent need for further enhancement of machine legislation to set up more stringent requirements in order to control machine accidents, along with a need to enhance inspections. We have already

started working on this, along with the promotion of an awareness campaign to reduce complacency in working on machines.

How important is full reporting and investigation of accidents and ensuring that companies comply with reporting requirements?

It is a legal requirement to report fatalities, injuries and dangerous occurrences to the Dubai Municipality and the police within three days, which companies can do by dialling 999 for the police or 800900 for the Dubai Municipality. All reported accidents are investigated by the Dubai Municipality's accident investigation team which seeks to uncover the root causes of the accident. If they judge that this was a failure to comply with the legal requirements, the report is presented in court for legal proceedings as needed.

How is Dubai Municipality raising awareness around health and safety?

The Dubai Municipality conducts public and work place awareness campaigns to increase understanding on incidents and related control measures. Mostly our awareness campaigns are based on a preventive strategy to prevent accidents.

We have also conducted a home safety campaign for the local community and heat stress campaigns for industries and local communities, along with many others.

Additionally, the Dubai Municipality conducts conferences and participates in international conferences including Intersec, to raise

awareness of recent issues.

For stakeholders, the Dubai Municipality releases frequent messages and circulars on health and safety issues and also has futuristic plans on raising awareness for health and safety issues through smart ideas.

What measures has Dubai Municipality been taking to prevent the spread of COVID-19?

The Dubai Municipality is currently pioneering a number of measures to fight the infection:

- ❖ Control of sanitisers through a smart registration system, the "Muntaji" app.
- ❖ Enhanced inspection of shopping malls, hotels, industries and other public places to ensure adherence to COVID-19 guidelines through several stages of the lockdown, partial reopening, and as the return to work commences.
- ❖ Leading sanitisation processes of the areas throughout the Emirate of Dubai.
- ❖ Issuing guidelines, circulars and protocols to practice health and safety requirements in the COVID-19 situation.
- ❖ Raising awareness through posters, videos and the use of social media on key requirements (such as practicing social distancing, sanitisation and the use of masks) and on COVID-19 precautions at places of work, driving and social settings.
- ❖ Contacting people through digital platforms and facilities such as Microsoft teams, when working from home, etc.
- ❖ Providing public services through smart apps and online.

What contribution can new technologies play in enhancing health and safety?

Dubai is doing everything possible to become one of the leading smart cities in the world and, accordingly, the Dubai Municipality is supporting this through the adoption of a number of technologies. For instance, we are aiming to use the support of drones for inspection and investigation where human reach is impracticable or could be risky; make use of new technology to conduct remote inspections to support those held physically; plan for the installation of IOTs to monitor indoor air quality; and raise awareness through smart systems and body language videos.

How important are systems and processes in ensuring good health and safety standards?

The Dubai Municipality has always encouraged companies to adopt effective occupational health and safety management systems (OHSMS) such as ISO 45001: 2018 at their work place to help them prevent accidents or

illness. In addition, the UAE also published the NCEMA 6000 guidelines which provide guidance on OHSMS which can be used to help develop work-related health and safety systems and procedures.

Aside from this, the Dubai Municipality has prepared technical guidelines on specific subjects based on the activities and incidents in the emirates, with reference to international best practices. These can further help industries to develop their systems and procedures or to adopt the same practices in their work as per their work activities, thus ensuring good health and safety standards.

The Dubai Municipality is always keen to develop, improve and communicate technical guidelines (based on best practices), codes of practices (COP), circulars, etc to help businesses strengthen their systems and procedures.

How do you view the role of the HSE UAE Forum, and what do you think will be the benefits of participating?

We have been participants at the HSE UAE Forum almost every year. This platform helps us in communicating the Dubai Municipality's health and safety vision and educating stakeholders in terms of new health and safety issues and related improvements.

We look forward to this forum, as we do the others, as it is very informative, develops understanding on health and safety and provides the opportunity to hear from various other stakeholders, which helps us to improve our governance in health and safety. It also ties in with our awareness-raising efforts overall. ❖

"We have been participants in the HSE UAE Forum almost every year...it is very informative, develops understanding on health and safety and provides the opportunity to hear from other stakeholders."

Reducing human error and the importance of PSM

At the HSE UAE Forum 2021, Dr. Waddah S Ghanem Al Hashmi, honorary chairman of the Energy Institute Middle East, will be presenting on Process Safety Management (PSM) and human factors. He sat down with HSSRME to provide a brief introduction to these subjects and divulged his thoughts on the future of the energy transition.

“Most incidents are rooted in some form of human error, whether this is a lapse of judgement, a lack of training or pressure; there are many reasons”

Dr. Waddah boasts a formidable CV, fostered by decades of experience working in the energy industry, with a focus on Health, Safety and Environment (HSE). Since the completion of his Environmental Engineering degree at the University of Wales College, Dr Waddah has attained a further two diplomas, an MSc, an executive MBA and a doctorate. He has supplemented his studies with the publication of various research and practitioner journals and conference papers as well as seven books. In his professional career he has held many positions, including vice chairman of the board of directors of Dubai Carbon from 2010-2019 and several positions within the ENOC Group. He was appointed senior director for Sustainability, Operational and Business Excellence in 2018, and recently took on the post of senior director – Logistics and Marine Assurance. He is also the honorary chairman of the Energy Institute in the Middle East and sits on the Council of the Board of Trustees for the Energy Institute in London.



Image Credit: Energy Institute

Human factors

Beginning with human factors, Dr Waddah outlined that the knowledge base on this subject, primarily in the last two decades, had been constructed from years of dedicated ergonomic experts studying workplace incidents and case study reviews.

He said, “This research found that most incidents are rooted in

some form of human error, whether this is a lapse of judgement, a lack of training or pressure; there are many reasons. Human factors, and the study of this subject, fall into four categories to reduce incidents. These are; (i) reducing human error by understanding the route causes of incidents, addressing the design and process

ABOVE: Dr Waddah will be speaking at the HSE UAE Forum. 2021.

equipment and how people interact; (ii) addressing human factors in design itself, which is more about human-machine interface and how human beings react with the systems they are using; (iii) human factors in organisational performance, which is the consideration of factors that impact on human performance (such as stress or fatigue); and finally (iv), human factors in general, such as enhancing human performance and how you address that. This can be the engagement of training, stress management, leadership, improving competencies so people do not make as many errors.”

Process Safety Management

Dr. Waddah then discussed the Energy Institute’s (EI) framework for PSM, created to provide a common understanding of requirements for all employees of an organisation at every level. Incorporating the knowledge and expertise of EI Technical Partners, representing energy and oil and gas sectors around the world, the framework is split into four focus areas (leadership, risk assessment, risk management, and review and improvement) with 20+ elements for each area, including expectations and guidelines.

“The EI PSM outlines the elements and provides a set of expectations to meet the element requirements. The guidelines that we produce help with meeting these expectations; there are guidelines on how to manage change effectively or how to do contract management selection, for example. For each expectation we are also trying to develop publications that can help engineers manage PSM.”

“James Reason gave the Swiss cheese analogy where you have a trajectory of an accident and then you have separate barriers (the slices of cheese). The holes in the cheese equate to the inefficiencies in the barriers and, if you have enough, and they line up, you can get an accident. The idea of the elements is to ensure all these barriers are in place, and that is why the PSM system should be applied holistically and all the elements need to be applied.”

New technology enhancing PSM

Dr. Waddah added that, in recent years, there has been a variety of technological advances that have helped develop process safety, with three areas in particular standing out.

He said, “There has been a lot of progress in hardware and systems, which means we are inherently building plants and equipment more effectively in the manufacturing and design stages. Imagine you are designing a plant, you can use similar technology to Google earth street view to get a 3D image and create an entirely simulated plant with which you can ‘virtually’ go inside the plant and assess it before it has been built.”

“The second part is in regards to running a plant and making key decisions. There is now much more information and data available, and the faster you can acquire this and analyse it the more intelligent your systems will become. More effective diagnostics means you can run a plant much more efficiently and safer by getting feedback and information into the operating systems. This is a combination of advances in the hardware, with improved ways of transferring data through telemetry, for

example, and the software, where there are now more sophisticated algorithms available to acquire, process and then use the data to drive decision making.

“Finally, there is the level of communication. Traditionally, if an employee was working on a remote site and noticed something going wrong, they would have to contact the operator and wait while more people came out to assess it. Now they can simply video the problem and transmit it remotely, in real time, to their colleagues to resolve the issue much quicker. There are also advancements in technologies such as cameras which allow you to, in a process plant for example, identify the quality of flare, how much gas, what the heat intensity is and how much smoke is produced. You could also use them to identify any fugitive emissions leaking from valves.”

The energy transition

Turning to one of the most prominent topics of 2020, when asked whether the energy industry was doing enough to move towards net zero emissions Dr Waddah responded, “Yes and no. It was only in the last decade or so when this became a real focus. Before this, moving towards zero emissions was not part of the equation. The drive towards investment into further production was driven by demand, and we simply needed to supply that

demand. But now, renewables like wind and solar have come in and it is possible to produce energy and reduce emissions. So, I think there will be a transition towards net zero emissions because the supply and demand dynamics are fundamentally being changed as people have been given an alternative.

“This inevitable change is not going to happen because oil will run out. As the former oil minister of Saudi Arabia, his late excellency Zaki Yamani, said, ‘the Stone Age didn’t stop because we ran out of stones.’ It’s just that demand turned to copper and bronze – there was a sophistication. I see alternative energy as a natural progression of human beings to a certain level of sophistication. Over time, there will be less and less reliance on oil.”

However, Dr. Waddah was keen to point out that he believed this would take time and that there are many factors to consider. He said, “Different places in the world will change at different rates. In industrialised, wealthy, more developed countries, for example, it will happen faster. But in the developing countries, because they often have a high population and a growing, but often un-serviced, demand for energy the transition will take longer. In the Gulf states, they want to be sustainable, and they will move that way, but when you have this much oil you also want to use it to develop your economy. So, there will be a transition, but it will be a measured transition as countries continue to support their economies by exporting oil products to where they are needed while, at the same time, they move towards a sustainable future at home.” ♦

“ I see alternative energy as a natural progression of human beings to a certain level of sophistication.”

Behind the award-winning HSE at Global Village

Sutharson Sathaiah, senior manager of HSE and Risk at Global Village in Dubai, spoke with Health, Safety & Security Review Middle East on overcoming the challenges that the global pandemic posed to running a world renowned tourist, leisure, shopping and entertainment site, ahead of his presentation at the HSE UAE Forum 2021 on 'Building a Successful HSE Strategy'.

“Following this comprehensive re-evaluation and overhaul of our health, safety, and environmental operations, we succeeded in setting a leading example for others to follow in the travel, tourism and leisure sectors.”

ABOVE: Sutharson Sathaiah, senior manager of HSE and Risk at Global Village.



Image Credit: Global Village

For more than 14 years Sathaiah has worked in HSE management and compliance with organisations such as Dubai South, Emaar Properties and Al Shirawi Group of Companies and is now plying his trade at Global Village where he holds the position of senior manager of HSE & Risk. This extensive experience has been invaluable over the last year to

keep customers and employees safe in the face of the Covid-19 virus

In November, Global Village received the HSE Initiative of the Year award at the Construction and FM Awards 2020. Could you tell us what this was for and what it means for the company?

Sathaiah: To receive the HSE

Initiative of the Year for 2020 on such a recognised platform was a proud moment for the Global Village family, especially considering the challenges of last year and the competition in the category.

Ultimately, we were chosen as the winner because of our success in raising benchmarks in response to the ongoing pandemic. Guided by our principles of providing the highest possible health and safety standards, before opening this season, we undertook a thorough risk assessment and analysis in order to plan for all eventualities in and around the park operations. Our team also brought together voices from around the world, including IAAPA, British Safety Council and Ripley Entertainment, to share perspectives and best practice with local experts from Dubai Municipality's "Dubai Assured" certification team and Dubai Holding, with Global Village leading a discussion around "Increased safety, more fun".

Following this comprehensive re-evaluation and overhaul of our

health, safety, and environmental operations, we succeeded in setting a leading example for others to follow in the travel, tourism, and leisure sectors.

We installed more than 1,600 hand sanitiser stations across the park and implemented technology across our scope of operations, such as thermal cameras at every entrance and contactless payments solutions for every merchant. At the same time, we upheld our social distancing protocol, bringing together standard signage and creative elements that appealed to different age groups, to ensure everyone followed the protocol. Cleaning schedules were also increased, including high-frequency disinfection of all touch points, while the Global Village App and website ensured guests could pay for tickets, attractions, and parking online.

Many of these measures that were instrumental in our award win are ensuring guest safety, comfort, and satisfaction to this day. From our perspective, this means that guests from across the region are aware of our commitment to surpassing health and safety standards while providing experiences synonymous with our destination.

Did Global Village encourage remote working during the pandemic?

Sathaiah: The Global Village family did spend a fair period of time working from home during the pandemic, where our resilience and agility have proven effective in continuing our planning from a distance. It was a period that allowed us to see things from a different perspective and opened up a new

level of creativity in thinking outside the box. Once we had all safety precautions in place at our offices, we came back while applying strict precautionary measures and the on-ground work started for the season launch. This enabled us to successfully launch our season and offer a world of wonder to our guests.

What would you say are the key steps to building a successful HSE strategy?

Sathaiah: First and foremost, successful HSE begins with all internal teams being aligned on roles, responsibilities, and objectives. Key elements of any HSE campaign include every individual and team, including all stakeholders, believing in the project, as well as clearly understanding requirements that need to be met.

Secondly, working closely with leading international and local authorities is another essential step. Especially in the world of health and safety, new and improved standards are regularly being introduced. Therefore, it is important to seek guidance and collaborate with organisations who specialise in this field. By doing so, areas requiring attention will always be identified, and their approval will instill confidence in others that every aspect aligns with the highest possible HSE standards.

Thirdly, another key step is to constantly communicate with stakeholders, so they are aware of measures being taken to ensure their health and safety and provide the very best experiences possible. It is important to appreciate that once a strategy has been implemented, it needs to be maintained. Informing your

stakeholders at every stage will show them that you care and encourage them to comply.

These steps would not be possible to apply unless the HSE strategy has been incorporated in the overall organisation's strategy.

“First and foremost, successful HSE begins with all internal teams being aligned on roles, responsibilities, and objectives.”

What are the advantages to HSE of becoming a data and technology-driven company?

Sathaiah: Firstly, there are several HSE advantages that come with becoming a data and technology driven company. From our perspective, technological advances in the name of guest convenience and safety play a big role in building trust, transparency, and seamless operations and experiences. At Global Village we operate our back-of-house with latest technologies, including artificial intelligence, that enable us to seamlessly manage our park and monitor its operations to spot and track necessary actions.

Further, this past October, we launched our exclusive digital wallet in partnership with emaratech, a leading Emirati company that specialises in high-end information technology services. Powered by emaratech, the 'GV Pay by noqodi' mobile application has certainly made an appreciable difference. Guests are now completing transactions easily and more conveniently than ever before, benefitting from

improved digital guest experiences and seamless contactless payments.

This season has also seen guests purchase entry tickets, pay for premium parking, and acquire Wonderpass cards through a dedicated Whatsapp chatbot for added convenience. We also upgraded our website and developed a brand new mobile application that both encourage online ticket purchase and help facilitate their visit.

At Global Village, we have incorporated smart solutions in our operations in order to facilitate our site-management and help us with better management of facilities. Examples of these would be our FM monitoring programmes, inspections and permits are done through an online portal that align every stakeholder with the updates and ensure better tracking of actions. We also have a robust system that enable us to interact with our partners and different stakeholders, ensuring clear communication and live tracking of tasks.

Has Global Village undertaken any steps to decrease their carbon footprint?

Sathaiah: Sustainability is a key pillar of our strategy and our operations teams work hard to ensure that we are making positive strides in this area. Our operations apply multiple control measures in line with world class practices to ensure a reduction of our carbon footprint, including ones that reduce electricity consumption, applying effective recycling procedures, as well as enhancing the landscape in the site every season and adding more greenery areas. ❖

Sustainability, an 'essential aspect of business development'

Mrs Habiba Al Marashi, chairperson of Emirates Environmental Group (EEG), spoke with Health, Safety & Security Review Middle East to discuss why she believes sustainability is now an essential component of any business model, proved by its importance in the fight against COVID-19.

“Over the last 30 years, EEG has partnered with different entities and successfully been able to inspire and drive positive action through its interactive and enlightening programmes.”

Few people are more qualified to speak on the issue of climate change than Mrs Al Marashi. Currently the chairperson of the EEG, founding member and vice chair of the Emirates Green Building Council and president of the Arabia CSR Network Mrs Al Marashi has also previously held a number of titles in the energy sector including former board member of the UNGC and former president of the UNGC GCC Network. It is therefore with great anticipation that attendees are looking ahead to the HSE UAE Forum 2021 where Mrs Al Marashi will be present on 'Accelerating the Transition to Sustainability'. Ahead of this event, HSSRME took the opportunity to interview Mrs Al Marashi and discuss some of the key issues facing the energy sector in the face of COVID-19 and the looming energy transition.

Could you tell us about EEG and its role in implementing effective sustainable strategies?

Mrs Al Marashi: EEG is a professional working group devoted to protecting the environment through the means of education, action programmes



and community involvement. EEG aims at supporting the UAE government's vision to progress towards sustainability, by holding numerous educational programmes, recycling campaigns, and corporate initiatives, so as to effectively engage with all members of the community in their respective niches. Over the last 30 years,

EEG has partnered with different entities and successfully been able to inspire and drive positive action through its interactive and enlightening programmes. As a UNEP accredited organisation, each of our programmes targets a set of UN SDGs, and this allows us to continue serving our role as a leading environmental advocate.

Mrs Al Marashi will speak at the HSE UAE Forum 2021.

Why do you believe education is so pivotal in the fight against climate change?

Mrs Al Marashi: Educating and inspiring the future generation about environmental preservation is crucial for sustainable development. Throughout the years, EEG's educational programmes have equipped young minds with knowledge on sustainability and foster their responsibility, observance, and awareness. These qualities in turn empower the youth, the backbone of the community and the leaders of tomorrow, to adapt effective environmentally friendly strategies to be incorporated into the global landscape of the future. EEG engages with enthusiastic students across the MENA Region and provides them with meaningful platforms to learn, connect and express their stance for the betterment of the environment. EEG's educational programmes provide a motivating push for proactive individuals, who hold an important role in bringing transformation to sustain our planet and fight climate change. Education is the light that can guide our youth from the dark, devastating world of unsustainable practices, into the well-lit future of ecological balance and sustainability.

How do you believe the UAE can strike a balance and move along the energy transition while still maintaining its hydrocarbon assets?

Mrs Al Marashi: The UAE has set numerous examples for the global community over the years such as transforming its desert landscape into a modern hub. Although the country has a large

oil reserve, the government has never ceased to prioritise the use of renewable energy. The UAE is making a gradual transition towards diversifying its sources of energy such as solar, hydroelectric and nuclear power, as opposed to fossil fuels. The UAE can also continue trading oil to sustain its national economy, but cautiously. I have full faith in the UAE's leadership to implement strategies that are fit in this regard, as it moves towards achieving Agenda 2071.

How have sustainable best practices in place in the UAE helped control Covid?

Mrs Al Marashi: The UAE has undertaken numerous sustainable practices as part of its efforts to effectively control the spread of the COVID-19 pandemic. The government and municipal bodies have dedicated resources towards research about the environment and specific aspects relating to COVID. The government has prudently allocated resources for healthcare and sanitation, along with the provision of free vaccines for the UAE public. Food security is another issue that the government has been emphasising on, and the importance of growing sustainable crops has been rising in the UAE. All in all, the steps being undertaken by the country has helped control the spread of the pandemic.

What lessons can we learn from the pandemic that will help us in regards to our green targets?

Mrs Al Marashi: The pandemic has reminded us that our reckless and unsustainable practices carry devastating consequences. Global dialogues pertaining to achieving a sustainable and green recovery from the pandemic have been influencing a large share of

stakeholders, and more and more companies, governments, and community members are shifting from conventional profit-driven capitalism to one that incorporates all three pillars of sustainability – the social, economic, and environmental aspects. Efforts need to be taken towards environmental protection, curbing social inequalities, bridging the gap to opportunities between the Global North and South, and promoting economic development whilst simultaneously allowing for ecological progress.

Do you have any advice for implementing sustainable changes to a businesses?

Mrs Al Marashi: I believe that businesses often tend to view sustainability as a mere corporate social responsibility rather than a necessary pillar of their company objectives. Sustainability is an essential aspect of business development in contemporary times, just like a revenue model or organisational structure, and changing that perspective is the first step towards achieving sustainable change. In addition, my advice would be to have a dedicated environmental person in place, along with comprehensive environmental management systems and environmental impact assessments, so that the work structure and functions of the business are following through

“Educating and inspiring the future generation about environmental preservation is crucial for sustainable development.”

with the policies in place. I would also advice companies to utilise government provided green subsidies and caps to motivate themselves to achieve a zero-carbon footprint. Of course, companies need to dedicate resources and time towards whatever sustainable approach that they take which suits their profile the best.

Could you discuss an EEG community outreach programme you are most proud of?

Mrs Al Marashi: EEG has a diversified range of programmes, each one uniquely targeting a specific set of SDGs. Of all the projects that we have implemented, the one that truly stands out is our annual ‘For Our Emirates We Plant’ campaign. This programme combines waste management with incentivised afforestation of indigenous trees, and therefore allows for a collective mitigation of thousands of metric tonnes of CO₂ emissions. Every year, through our recycling campaigns with preset targets for the amount of waste collected, various community members, including academic institutions, corporations, government entities, and members of the civil society, collect recyclable waste. For every target achieved, we allow the entity to plant a tree in their name. Through community partnerships and understanding with the government and municipal agencies, we are able to seek permission and plant these trees in a nature reserves and other public places. Over the years, this campaign has grown incredibly, and sees participants take more steps towards environmental protection. We succeeded in planting 2,100,789 trees since 2007 until the end of 2020. ❖

Eye protection for infection control



Image Credit: Adobe Stock

It is established that the SARS-COV-2 virus causing COVID-19 can enter the body via the eyes, through liquid particles in the air from an infected person, or by touching a contaminated surface and then the eyes.

Safety eyewear such as goggles, safety glasses or face shields provides varying levels of protection against the virus.

Leading safety eyewear supplier Bollé Safety outlines the main types of safety eyewear as follows:

Face shields have the advantage of being a great physical barrier for both the eyes and the rest of the face. An anti-fog coating (AF) will ensure the wearer has good vision over time. Products with side protection are recommended as they improve the physical barrier.

Safety glasses and OTG (Over the Glasses) – Although there is no scientific evidence that glasses/spectacles offer protection against COVID-19, safety glasses and OTG do create a physical barrier between the wearer's eye and its environment. The first rule of thumb is to choose

glasses/OTG that fit the wearer's face and reduce the gap between the glasses and the skin. Safety glasses and OTG do not provide the same level of splash and droplet protection as goggles and face shields.

Sealed or indirect vented goggles offer the best protection for infection control and are recommended for people working in healthcare settings. An anti-fog coating (AF) is necessary to ensure better vision. As for safety glasses, they must fit appropriately. When worn with other PPE such as respiratory masks, it is important that the goggles used do not interfere with the right usage of the other PPE.

Bollé Safety stresses that eye protection alone is not effective for prevention of COVID-19 infection, and full PPE should therefore always be worn. However, eye protection is an important factor in limiting the spread of the virus during face to face contact, as well as a mechanical barrier to prevent eye rubbing, the company says. ♦

For further information see www.bolle-safety.com



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Enhancing safety with smart PPE

The global smart PPE technology market is growing significantly, and certain applications have been boosted by the COVID-19 pandemic.

“Growing utilisation of Industry 4.0 technologies in developing PPE will be a game-changer for this market.”



Image Credit: Adobe Stock

The global smart PPE technology market size is projected to reach US\$ 7.7bn by 2027, exhibiting a CAGR of 15.9% from 2020-2027, according to a Fortune Business Insights report on the smart PPE technology market. Growing utilisation of Industry 4.0 technologies in developing personal protective equipment (PPE) will be a game-changer for this market, finds the report.

With an aim to enhance the safety of workers labouring in hazardous environments, manufacturers are rapidly

adopting smart PPE technologies, powered by Industry 4.0 tools such as artificial intelligence (AI) and the internet of things (IoT). For example, wearable sensors based on industrial IoT can help managers identify risky worker behaviour such as entry into dangerous work environments. An example in this context is the Daqri Smart Helmet that uses augmented reality (AR) to improve safety of workers by providing real-time information of the surroundings. Another example is Honeywell’s Safety Suite software that allows

manufacturers to make a comprehensive assessment of the safety standards across facilities.

Ansell, a global leader in safety solutions, announced a partnership with ProGlove, a leading provider of industrial wearables, in late 2019, to develop hand protection solutions utilising technology to ensure the right PPE compliance in the workplace.

This will provide workers with digital assistance for choosing the right protective equipment while providing assurance for managers that tasks are being properly

ABOVE: The pandemic has seen a surge in the demand for smart PPE technologies.

executed using proper safety equipment.

“ProGlove’s IIoT wearables are a natural extension of the workers’ tools, giving them a decisive edge by strengthening their role in the digitised industry 4.0,” said Neil Salmon, president of Industrial Business at Ansell. “This partnership will allow for the creation of innovative protection solutions, offering real-time data collection capabilities for precise and immediate information, enabling compliance to safety recommendations.”

Another leader in smart PPE is uvex. uvex techware’s digital product system encompasses new products such as the lightweight uvex i-works techware, a smart safety spectacle that allows information to be visualised on the inner surface of the lens while being worn, so giving users access to sensor data at any time.

The uvex pheos techware smart helmet uses meta sensors to evaluate situations, significantly enhancing its protective function and helping to ensure that PPE is worn. Integrated acceleration sensors can detect collisions, free falling and unexpected immobility, while other sensors, such as those for temperature, moisture and ambient brightness can be adapted to customers’ requirements.

uvex 1 techware safety shoes use smart insoles that can detect and evaluate hazardous situations, such as the risk of slipping, alerting the wearer and enabling stress-free avoidance. While uvex phynomic techware integrates NFC chips into safety gloves, so that users can access information at any time via their mobile end device. The company has created a Digital Business

Innovation division for the continuing development of uvex techware, working with technology partners and key clients in this rapidly-advancing field.

Meanwhile US-based Kenzen has developed an innovative wearable device to reduce workplace injuries caused by heat stress by providing continual temperature monitoring of workers. The cloud-connected PPE device continually monitors individualised physiological data such as heart rate, over-exertion, and core body temperature to provide real-time actionable alerts to prevent heat-related injuries. The device, which is worn on the arm, is waterproof, designed for intrinsic safety and ruggedised for industrial use. Data captured by the system can be used to help companies identify heat risk and proactively manage outcomes by adapting worksites accordingly to improve worker safety while maximising productivity.

Middle East success

Experiencing strong success in the Middle East is RealWear, a specialist in hands-free wearable computing for industry, which reports triple (3X) y-o-y growth as a result of customer demand.

The company has announced a broad global expansion to support customers, including opening a new customer experience centre in Dubai Internet City to meet growing demand for its products and services in the Middle East, and new offices in other major markets. The pandemic meant engineers were no longer able to travel to factories and facilities to support onsite technicians in person, so the RealWear wearable



Honeywell’s intelligent wearables use augmented reality technology that provides on-the-job assistance to enable field workers to be more productive and safe.

device was used for virtual, remote collaboration for troubleshooting equipment and performing quality checks, audits, inspections, plant tours, and product and factory acceptance tests (FAT).

RealWear, which already has a thriving business in the GCC region, has opened its initial physical presence in the Middle East including an onsite demonstration facility in Dubai’s Internet City, which will provide customers and partners in the region the opportunity to get ‘hands on’ with RealWear’s flagship head-mounted wearable, the HMT-1. This initial physical presence is timely, not only to meet increased customer demand,

but also as Middle East businesses adapt to new ways of working to drive worker safety and productivity, the company says.

When Saudi Aramco began using RealWear’s intrinsically safe product, HMT-1Z1, it recorded a 70% increase in safety compliance on top of a 10% improvement in workforce productivity, according to the company.

Smart PPE has come into its own in the COVID-19 pandemic, in for example, measuring body temperature and enforcing social distancing.

ProGlove has launched a smart glove that sends alerts when workers come into close proximity with each other.

While Abu Dhabi National Oil Company (ADNOC) has used smart helmets to measure the temperature of its people, in particular for screening its contractors for possible COVID cases. The technology has been very helpful in screening large groups, according to the company’s VP Digital, Khaled Al Blooshi. ♦

“When Saudi Aramco began using RealWear’s intrinsically safe product, HMT-1Z1, it recorded a 70% increase in safety compliance.”

Gas detection solutions for the Middle East

Reliable gas detection is a must in the potentially hazardous oil and gas industry. Nowhere is this more so than in the high pressure, high temperature sour gas-rich environment of the Middle East, where hydrogen sulphide (H₂S) is an ever-present danger.

“Crowcon’s new high temperature (HT) sensor has been designed to improve on electrochemical sensor technology, even in tough environmental conditions such as those of the Middle East.”

Reliable and resilient solutions that can detect H₂S at high temperatures are in demand in the harsh Middle East oil and gas environment.

Such solutions were called for by Abu Dhabi National Oil Company (ADNOC) and its partner Total, who commissioned Haven Fire and Safety, a distributor of Crowcon Detection Systems, to provide a complete fire and gas system for the Ruwais Diyab unconventional gas concession in Abu Dhabi, which spans more than 6,000 km. The system called for sensors to detect H₂S.

“The climate of the region makes it among the most challenging environments for any kind of electronic equipment, including gas detectors,” Crowcon commented. At Ruwais Diyab, temperatures can range from 10°C to 65°C with wide fluctuations in relative humidity (RH).

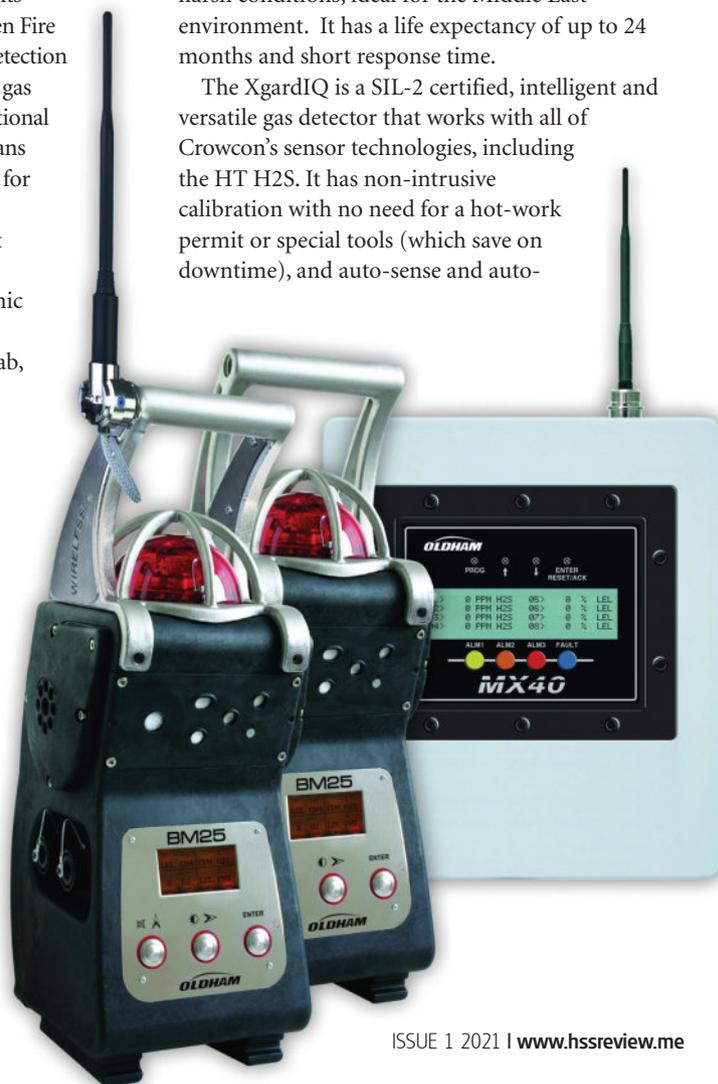
Haven and Crowcon proposed the installation of 27 XgardIQ HT H₂S detectors within Haven’s fire and gas system, and an order was duly placed.

Crowcon’s new high temperature (HT) H₂S sensor for the XgardIQ has been designed to improve on electrochemical sensor technology, even in tough environmental conditions such as those of the Middle East. The new sensor includes innovative adaptations to prevent evaporation, including a more hygroscopic electrolyte, which avoids the drying-out problem seen

in conventional electrochemical sensors, and reduced pore size to restrict water entry. Unlike traditional models, it can operate reliably in temperatures of up to 70°C at 0-95%rh, even in harsh conditions, ideal for the Middle East environment. It has a life expectancy of up to 24 months and short response time.

The XgardIQ is a SIL-2 certified, intelligent and versatile gas detector that works with all of Crowcon’s sensor technologies, including the HT H₂S. It has non-intrusive calibration with no need for a hot-work permit or special tools (which save on downtime), and auto-sense and auto-

RIGHT: Teledyne Gas & Flame will supply a range of its gas sensing technologies to ADNOC.



configure functions.

Also providing gas detection for a gas development project in the UAE are Teledyne Gas & Flame Detection and its partner in the UAE, Al Masood Oil Industry Supplies and Services Co, who announced in December that they had been awarded a significant contract involving the adoption of wireless gas detection technologies as part of the Hail and Ghasha sour gas development project being coordinated by ADNOC. This sizeable project will see the construction of artificial islands for drilling wells, the support of production facilities, and an offshore operations and maintenance base.

Teledyne Gas & Flame Detection will supply, install and commission a range of its latest technologies in gas sensing, including its wireless MCX-32 integrated alarm and control system, wireless Site Sentinel Site alarm and control system, CX SmartWireless gas detection sensors, BM-25 wireless multi-gas area monitors, and NEMA 7-rated wireless X-40 alarm and control system.

Aside from the capabilities of its solutions, the appointment of Teledyne Gas & Flame Detection to the project centred on the company's dedication to safety, backed by more than 100 years of gas detection experience, the company said.

In July, Teledyne Gas & Flame Detection launched the MultiTox MOS Detector for the oil and gas, petrochemical and refining industries.

By utilising the latest solid-state Metal Oxide Semiconductor (MOS) technology, inside a rugged and durable detector head, it enables H₂S to be



Honeywell will be the first international company to produce gas detectors in Saudi Arabia.

Image Credit: Honeywell

detected easily, without the risk of poisoning, while providing sensor life of up to 10 years and an extended five years warranty as standard.

This, combined with the Telecapteur Asset Management Software, being developed in partnership with ADNOC, enables automatic visualisation of crucial information, including instant access to historical calibration data, enabling quick and accurate analysis instead of relying on slower paper-based processes.

Furthermore the company stated that the software simplifies calibration by reducing the number of operators required from two to one, decreasing OPEX spend and ensuring the assets remain fully operational for longer.

Advancing local capabilities

Meanwhile, the region's gas detector manufacturing capabilities are being given a boost with Honeywell's announcement that it plans to open a facility for the production

of gas detection devices in Saudi Arabia. This is in line with the company's commitment to the In-Kingdom Total Value Add (IKTVA) programme, which aims to achieve 70% localisation of production and jobs by 2021 and act as a major enabler of Saudi Vision 2030. The new "Made in the Kingdom" Honeywell factory will create production jobs for Saudi nationals that enhance workforce skills and capabilities.

Through the new factory, Honeywell becomes the first international company producing gas detectors in the kingdom, the company said, enabling local availability of the equipment,

“The Honeywell facility will produce 10,000 portable gas detectors and 800 fixed gas detectors annually when it reaches full production in 2022.”

shorter lead times, and on-the-ground customer support. The devices will provide a reliable and cost-effective way to ensure the safety, compliance and productivity of workers who are operating in hazardous environments in Saudi Arabia.

“Our advanced gas detection systems help keep workers safe and enable them to rapidly respond to gas leaks and site incidents,” said John Waldron, president and CEO, Honeywell Safety and Productivity Solutions (SPS).

Located at the extension of Dhahran Techno Valley, the Honeywell facility will produce 10,000 portable gas detectors and 800 fixed gas detectors annually when it reaches full production in 2022. The production line includes the multigas Honeywell BW series, its next generation multigas platform, in addition to fixed detectors including the Searchpoint Optima Plus Point infrared hydrocarbon gas detector and XNX Universal Transmitter. ♦

Demystifying ISO 45001

A Lloyds Register webinar held in association with the HSE UAE Forum took place on 22 February, entitled 'Why companies struggle to get ISO 45001 accredited'.

“Lloyds Register can help your organisation in the migration to ISO 45001 through training and development programmes.”

The webinar delved into the major challenges that companies face in achieving the international standard and how it emphasises organisational safety while mitigating risks.

Ali Madi, training and improvement services manager, ME at Lloyds Register shared expert insights on understanding the requirements of ISO 45001 to proactively prepare for a smooth accreditation. Lloyds Register, one of the world's leading providers of professional services for engineering and technology, helps in improving safety and optimising critical infrastructure.

“ISO 45001, designed for organisational safety and risk management, adds value to employees and organisations by offering benefits of a healthier workplace, helping to identify and mitigate health and safety risks, reinforcing the commitment towards valuing the employees, increasing operational efficiencies, as well as effectively meeting industry standards,” explained Madi.

He went on to provide a comprehensive overview of the major requirements of the ISO 45001 international standard, which follows the same high-level structure approach that is being



Image Credit: Lloyds Register

applied to other ISO management standards.

These cover areas such as planning, support in terms of creating awareness regarding organisational safety, operations including the hierarchy of controls to be followed for risk management, performance evaluation as well as improvement or corrective action.

The presentation highlighted the major obstacles in achieving ISO 45001, to guide organisations to achieve the certification and improve workplace health and safety. These encompass the main areas that can help organisations assess the difficulties in implementing the migration towards ISO 45001.

“Top non-conformities identified by LR auditors, are with respect to consultation and

participation of workers, actions to address risks and opportunities, operational planning and control, emergency preparedness and response, monitoring, measuring, analysis and performance evaluation,” remarked Madi.

ISO 45001 certification is important for the occupational health and safety of an organisation, irrespective of its size, type or nature. By September 2021, the international standard in Occupational Health and Safety Management systems, OHSAS 18001 will be replaced by ISO 45001.

“Lloyds Register can help your organisation in the migration to ISO 45001 through training and development programmes, including remote, on-site and blended models as well as through self-assessment tools for gap analysis in the system, by evaluating the current OH&S system vis-à-vis the ISO 45001,” said Madi.

“This presentation has provided comprehensive information on the path to achieving the accreditation, the pitfalls to avoid and the importance of self assessment tools,” commented Soumen Chakraborty, conference producer, UAE HSE Forum. ♦

ABOVE: Ali Madi, Lloyds Register.

Using light as a sustainable disinfectant

Susann Sonnenberg, lighting & sustainability lead at Drees & Sommer Middle East, urges building developers, owners and operators to consider the implementation of sanitisation lighting to lower the risk of infection.

“Understanding the relationship between light and health is more important than ever.”

ABOVE: The use of light as a disinfectant should be considered by building owners and operators.

During these challenging times, preventing the spread of germs has become a vital part of building development strategies.

By implementing safe and health-promoting light sources, companies can lower the risk of infection in their facilities, providing a safe environment for employees and visitors.

Sunlight can function as a natural disinfection mechanism. Unfortunately, sunlight's disinfectant processes are not fast enough to stop the spread of a virus such as COVID-19.

However, short wavelengths of the ultraviolet light (UV-C) can be deployed to reduce the impact of germs by producing unique technologies of sanitation systems which are safe for humans.

Understanding the relationship between light and health is more important than ever, and organisations that take an integrated approach to smart lighting will not only be able to provide safe and sustainable sanitisation, but can also reduce their light pollution, improve their energy efficiency and lower their operating cost. It is equally important to ensure the safe handling of lighting where it is

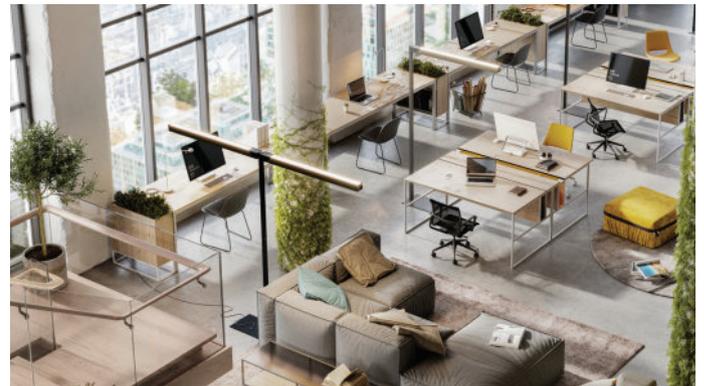


Image Credit: Drees & Sommer

already used as a sustainable disinfectant – for example in UV-C sanitisation – as it can be harmful if performed incorrectly.

Light disinfection has been tested and implemented within the healthcare sector for a long time. It has shown significantly better results than traditional methods, and is proven to reduce 99.999% of bacteria and 90% of environmental pathogens. As we endure the continuous impact of the pandemic, this concept may need to be adopted by other sectors as well.

Lights that filter air and that can be integrated with a building's air conditioning to ventilate and disinfect air are available in the Middle East and are well-suited for offices and other public spaces. Also available in the

market, are lighting systems that can detect temperatures in a space or facility, which allow building owners and operators to run multiple building technologies efficiently on one system.

To ensure safe and sustainable operations and to be well prepared for any future health crises that may arise, this is the time to consider the implementation of effective and sustainable sanitisation lighting, whether you are a building developer, property owner or a hotel and retail operator. ✦

Drees & Sommer advise building owners and operators on protective lighting protocols and develop tailored solutions that are in line with the latest scientific results. www.dreeso.com

Effective decontamination with safety showers and eyewashes

Janet Waine, managing director of Aqua Safety Showers International, the independently-owned manufacturer of emergency safety showers and eye wash equipment, discusses the role of the company's products and its activities in the Middle East.

“A risk assessment is an important first step that will help determine what kind of equipment is needed.”

Emergency safety showers and eyewashes are a must-have in situations where emergency decontamination may be required. When working in hazardous environments or an environment where there is potential to come into contact with harmful substances, health and safety standards require the installation of an effective drenching device, whether this is for the eyes, face or whole body.

“These should be installed within 10 seconds of where an incident could happen, whether it be a chemical spill in an area where chemicals are being mixed or delivered, or where you have a forklift truck delivering battery acid, for example,” explains Waine. “Wherever there are any chemicals or harmful substances that can hurt an employee in that vicinity, there must be some sort of decontamination product. Hopefully it will never be needed, but it has to be there.”

Aqua Safety Showers International, which has more than 50 years of experience serving the water, chemical, oil and gas industries, provides a full range of standard and bespoke safety units to suit any requirement and environment. These range from the tank



Image Credit: Aqua Safety Showers

ABOVE: The TS1500CN tank shower with water chiller.

shower, which guarantees over 15 minutes of tepid water without the need of a mains water supply, and is ideal for outdoor, hot climates, to the portable self-contained safety shower ideal for mobile or temporary use, and portable self-contained eyewashes for the eyes and face. A risk assessment is an important first step that will help determine what kind of equipment is needed, Waine stresses.

In the Middle East, the company's main market is the oil and gas sector.

"Because of the extreme heat, we mainly supply tank showers, with a 1,500 litre header tank situated on a stainless steel frame," Waine says. "In the Middle East the addition of a water chiller would normally be specified, which will ensure the water in the header tank is controlled at around 20° C. If that is not included, even though the tank is insulated the water can get very hot, and water over 25°C in a hot environment poses legionella and other risks. So we would mainly supply the header tank if there is no water supply, or water pressure is inadequate, but if there is a good water supply, we can supply our stainless steel self-draining showers which are connected to the mains water. The pipework is all 316 stainless, so won't corrode and stands the test of time, and when it is used or tested, it won't retain any water, so posing no legionella problems or possibility of scalding."

Good maintenance is essential, she adds. "If an incident occurs requiring the use of the shower, but there's no water in the header tank or it is blocked, that's when you have problems." Testing for continual operation and



Heavy duty eye wash.

Image Credit: Aqua Safety Showers

functionality of safety showers out in the field or on site is vital, as is educating those who may need to use them.

In the Middle East, Aqua Safety Showers has distributors actively selling its products, and is an approved supplier for Saudi Aramco and Kuwait Oil Company. It is now in the process of becoming registered with ADNOC, and Waine hopes this will open a lot more doors, given ADNOC's size and high levels of project activity. The company is now looking to raise awareness in the region of the Aqua brand. "We're known in the Middle East and have many contacts. We're now building up awareness of the Aqua brand as one of the main suppliers of emergency safety showers."

The company's operations have been relatively unaffected by the pandemic, although there has

been a slowdown in orders. During this time the company took the opportunity to develop a misting shower, connected up to a solution which kills the COVID virus.

R&D is a strong focus for the company, which is in the process of developing a solar-powered chiller for Middle East, with a view to chilling water to the required level without the need of a power source.

Aqua Safety Showers International prides itself on its customer service, and its

"We're now building up awareness of the Aqua brand as one of the main suppliers of emergency safety showers."

flexibility in accommodating specific customer requirements, thanks to its manufacturing capabilities. These have been enhanced with the opening of a new facility in 2020 which triples manufacturing capacity, to handle the increase in orders both across the UK and globally.

"We try to ensure the customer gets what they want, with the best quality at a competitive price," says Waine. The high number of repeat orders the company receives is testament to this.

"We're building up the Aqua brand to be associated with a good, long-lasting product," she concludes, adding that the company has launched a new website which provides extensive information and guidance. ♦

For further information see <https://aqua-safety.com>

Process safety fundamentals

A report by the International Association of Oil & Gas Producers (IOGP) outlines 10 process safety fundamentals to help companies eliminate fatal and high severity process safety events.

“Many of the operations performed in oil and gas facilities are complex and/or have the potential to release hazardous materials if they are not performed correctly.”



Image credit: Adobe Stock

The oil and gas industry is by its nature potentially hazardous. Typical hazards include flammable liquids and vapours, combustibles, toxic chemicals, asphyxiants, corrosives, pyrophorics, and high pressure/temperature. Many of the operations or activities performed in oil and gas facilities are complex and/or have the potential to release hazardous materials if they are not performed correctly.

Data reported by IOGP members over a 10-year period shows that 128 people lost their

lives in 56 process safety events. IOGP's Process Safety Fundamentals (PSFs) have been developed to support those working in front-line operations, maintenance, and on wells teams in the oil and gas industry to eliminate fatal or high severity events. 91% of fatal process safety incidents can be linked to the 10 IOGP PSFs, the Association says.

IOGP's 10 process safety fundamentals are as follows:

- We respect hazards
- We apply procedures
- We sustain barriers
- We stay within operating limits

- We maintain safe isolation
- We walk the line
- We control ignition sources
- We recognise change
- We stop if the unexpected occurs
- We watch for weak signals

IOGP's PSFs have received endorsement from operating and contractor companies as well as regulators around the world. ♦

The report, which includes extensive guidance on the implementation of the PSFs, can be downloaded free of charge at <https://www.iogp.org/bookstore/product/process-safety-fundamentals/>

ABOVE: The oil and gas industry is by its nature hazardous.

Hughes Safety Showers introduces GRP ladder platform

Decontamination

Hughes Safety Showers, leaders in emergency safety shower, eye/face wash and decontamination equipment manufacturing, has introduced a new ladder platform. Designed to be attached to a Hughes emergency tank shower, this new ladder platform enables easy access to the tank for maintenance and inspection purposes. The platform offers increased safety for workers and removes the need to hire costly scaffolding when the tank

shower requires inspection or servicing. With slip resistant steps, the added security of caged ladders and manufactured in high visibility yellow corrosion-resistant GRP, the daunting task of maintaining tank showers has never felt safer.

Contact Hughes Safety Showers to discuss retrofitting to your existing tank showers or add to your next purchase.

E: sales@hughes-safety.com
www.hughes-safety.com



Image Credit: Hughes Safety Showers

The GRP ladder platform for emergency tank showers.

New partnership

Cyber security

Bulwark Technologies has partnered with Skurio, a specialist in digital risk protection technology, to bring a data-centric approach to cybersecurity to businesses across the Middle East and Africa.

The Skurio Digital Risk Protection platform is a fully automated solution that searches the surface, deep and Dark Web for breaches of critical business data and potential cyber-threats to an organisation. The solution offers protection to customers from risks and threats to revenue, reputation, and regulatory compliance, to keep them safe and minimise damage and costs from a breach.

Brady Corporation provides scalable and adaptable Lockout/Tagout implementation

Process safety

Brady Corporation has helped Ontex, a leading international personal hygiene group, to implement efficient Lockout/Tagout procedures that deliver optimal maintenance safety and speed for a wide range of machinery in Buggenhout, Belgium.

Ontex wanted to achieve a high level of safety and efficiency for machine maintenance interventions. Together with a specialised distributor, Brady offered its expert safety procedure writing service, LINK360 safety procedure software and the devices and padlocks to implement Lockout/Tagout in the workplace. In total, around 350 procedures were offered to Ontex



Brady offered its expert safety procedure writing service, LINK360 safety procedure software and the devices and padlocks to implement Lockout/Tagout in the workplace.

stakeholders via the LINK360 software that allows for easy approval, copying, editing, communicating and scaling machine specific safety procedures.

Based on customer-approved lockout procedures, the distributor and Brady established a comprehensive lock and key-plan

to fit specific Ontex requirements. This included carefully laid out key hierarchies with master and grandmaster keys at several management levels for the various types of suggested locks.

With distributor partner support, Brady also provided the actual lockout devices and SafeKey padlocks to implement the

lockout-procedures in the Ontex workplace. Every SafeKey lock was customised with a serial number engraving and they were delivered in lock boxes per set of 10. Ontex Buggenhout can now efficiently communicate the use of optimal lockout-tools in step-by-step machine-specific lockout procedures, illustrated with photos taken on-site. Easy compliance with the approved procedures increases maintenance safety, speed and efficiency. Management can easily edit, approve and communicate changes from a central, digital location. Every digitally approved procedure can then be printed and attached to relevant machines, or can be accessed directly by employees via tablet or smartphone.

Image Credit: Brady Corporation

Soteria Dimension introduced to international market

Apollo Fire Detectors has introduced Soteria Dimension, its range of flush mounted, EN54-7 approved fire detectors, to the international market.

With an innovative flush-mounted design and chamberless technology, Soteria Dimension incorporates unique optical sensors that streamline the design and enable flush mounting, making it ideal for interiors requiring a detector to blend seamlessly into its environment.

Using a combination of infrared LEDs and photodiodes, the sensors detect smoke particles, while chamberless technology eliminates dust and insect ingress to reduce false alarms.



Image Credit: Apollo Fire Detectors

The Soteria Dimension optical fire detector.

The Soteria Dimension Optical Detector blends seamlessly into its environment, making it ideal for interiors requiring a premium aesthetic, while the Soteria Dimension Specialist Optical Detector is designed with an anti-vandal and anti-ligature design metal faceplate to protect the most vulnerable in care and custody.

Panasonic fire alarm system launched in the UAE

Panasonic Life Solutions Middle East & Africa (PLSMEA) has launched its user-oriented fire alarm system (FAS) in the UAE, through Al-Futtaim Engineering and Technologies (AFE).

Designed under European standards, and offering a smart and scalable solution for a wide range of industries and facility sizes, Panasonic's fire alarm systems, EBL512 G3 and EBL128, are embedded with smart flexible detector algorithms that auto-evaluate surroundings and select alarm operation modes appropriately. They are capable of sensing unwanted alarm triggers such as dust and insects, using an improved detector chamber with an extremely fine mesh net to reduce cases of false alerts.

The FAS control panel is accessible from anywhere over the web as it supports TCP/IP worldwide connectivity. It also supports map image handling, enabling the user to position the fire alarm system on a user-specified map.

"The launch of FAS further expands our solutions portfolio, and we are pleased to have partnered with AFE to bring it to customers in the region," said Eiji Ito, deputy managing director, PLSMEA.



Image Credit: PLSMEA

The Panasonic fire alarm system has come to the UAE.

Johnson Controls launches microprocessor-based fire detectors

Johnson Controls has introduced the new 700 Series Conventional Fire Detectors, the company's first microprocessor-based conventional fire detectors that precisely monitor and respond to building fire conditions. The inclusion of a microprocessor across the entire range means these conventional detectors offer advanced algorithms, resulting in the same detection performance and false alarm rejection as the company's latest non-Fastlogic, Gen6 detectors.

The five fire detectors in the series (701P, 701PH, 701H, 702H, and 703H) each respond to unique parameters including smoke density, fixed temperature, and rate of rise of temperature, then notify fire detection panels to provide an alarm response for the affected zones. The 700 Series detectors offer a



Image Credit: Johnson Controls

The Johnson Controls 700 Series Conventional Fire Detector.

complete fire detection solution - including drift compensation, ideal for small commercial buildings such as retail outlets and business campuses.

"This product series offers a full-building fire detection solution that requires only one trip to the ceiling to complete installation," said Paul Grainger, product manager, Johnson Controls.

"In addition to reliability and accuracy, this line of fire detectors has been designed to reduce installation and system maintenance costs for our customers, through fast, easy installation and an extended detector service life," he added.

The Johnson Controls 700 Series Conventional Fire Detectors are EN Listed, with UL and ANZ Listed versions coming soon.



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MOBOTIX launches video management system with Milestone

Video surveillance

MOBOTIX AG is cooperating with Milestone, a leading global provider of video management systems, to launch a new software solution called MOBOTIX HUB.

The new MOBOTIX Video Management System MOBOTIX HUB will be available in different versions, from an entry-level solution for smaller applications to enterprise solutions with an unlimited number of cameras, failover and an even larger portfolio of analytics and integrations.

MOBOTIX HUB is the next step in the evolving MOBOTIX strategy focusing on cyber-secure, high-end video solutions and will extend the current MOBOTIX solution portfolio including MOBOTIX Management Centre and MOBOTIX CLOUD.

“With this solution, we can increase and develop even more opportunities for our partners and customers, thanks to the even more extensive integration options



Image Credit: Adobe Stock

Video technology has evolved beyond a purely security-focused requirement.

and the high scalability,” said MOBOTIX CEO Thomas Lausten.

“Regardless of the requirements, using the appropriate Video Management System will increase not only the performance but also the possibilities of the solution,” emphasises MOBOTIX CTO Hartmut Sprave. “We can serve any key vertical market with our

solutions and they each have very different demands with regards to video security software features and performance. The broad positioning is important for us since we are a solution provider. Only flexibility and versatility allow us to tailor solutions precisely to the individual requirements of our customers.”

Video technology has evolved beyond a purely security-focused requirement. Providing data for optimisation, analysis, marketing and integrating into other systems is now a day-to-day necessity. “As a technology company, we need to keep the pace of the growing and continually changing demands in the marketplace. MOBOTIX HUB is an important part of this strategy but we will also continue to support the integration with other VMS partners in order to ensure the best solutions for our customers based on their preferences,” added Lausten.

New fire safety qualification

Fire safety

NEBOSH has launched a new globally relevant fire safety qualification, which can be completed in just one week.

The NEBOSH Certificate in Fire Safety helps learners develop practical fire safety skills that can be used to protect people, buildings and business.

The syllabus covers a broad range of topics including the principles of fire and explosion, how to identify fire hazards in the workplace and the controls that can be put in place to reduce risk. The qualification is suitable for low to medium risk workplaces.

Dee Arp, NEBOSH chief operating officer, said, “The qualification’s content and assessment aim to help learners gain practical skills and knowledge. The two-part assessment consists of an open book examination and fire risk assessment practical. Both allow learners to practice what they have learnt so they can immediately make a positive contribution to fire safety in their workplace.”

Eagle Eye Networks, Sitasys unveil alarm handling for operation centres

Security

Eagle Eye Networks, a specialist in cloud video surveillance, and Sitasys, a leading cloud alarm management platform, have now integrated the Eagle Eye Cloud VMS and its analytics functionality into the evalink alarm monitoring platform, allowing service operations centres to more efficiently and effectively manage an unlimited number of cameras without additional human resources.

This development builds on the existing

partnership between Sitasys and Eagle Eye Networks to create an enhanced security monitoring platform by implementing a cloud-to-cloud integration of video surveillance and alarm monitoring. This integration allows users to immediately connect Eagle Eye Networks VMS into the revolutionary cloud-based evalink alarm management platform from Sitasys.

Sitasys used Eagle Eye Networks RESTful API platform and big data video framework

to rapidly develop and deliver a unique cyber-secured integration between its alarm management evalink platform and the Eagle Eye Networks cloud-based video surveillance platform. The integrated system allows users to connect video analytics with smart workflows to automate operational processes. In addition, the user can index, search, retrieve, and analyse video based on alarms from the Sitasys system. The integration and verification process saves time and money.

Uvex unveils self-sanitising glove uvex phynomic silv-air

Health safety

The uvex phynomic silv-air glove has been developed to provide people with another counter measure to help stop the spread of microbes, germs and bacteria being transmitted through touch.

Designed with world-leading antimicrobial Swiss technology company, HeiQ Materials AG, this product has been engineered using HeiQ Viroblock, a sustainable antimicrobial silver-chloride and

vesicle technology which inhibits the growth and persistence of bacteria and enveloped viruses on textile surfaces.

How does it work?

HeiQ Viroblock combines HeiQ's patented and registered silver technology (well known for its antibacterial properties) with HeiQ's patent pending vesicle technology. The latter acts like an accelerator to breakdown the

outer membrane of an enveloped virus, allowing the silver-ions to attack the core. Viroblock actively kills bacteria upon contact with the glove, minimising the transmission to other surfaces. In addition to the proven antibacterial studies undertaken by HeiQ Materials AG, the uvex phynomic silv-air has also been confirmed at independent test institutes in accordance with ISO 18184:2019-06 (for viruses) and ISO 20743:2016 (for bacteria).

Where can it be used?

Multiple touch items

Couriers/logistics, catering and hospitality, care homes, public transport, retail check-outs

Touch screen compatible

Risk minimised when using devices where high transmission rates may occur

Hypoallergenic

Light, breathable, comfortable fabric with high dexterity

Tenable launches exposure platform

Cybersecurity

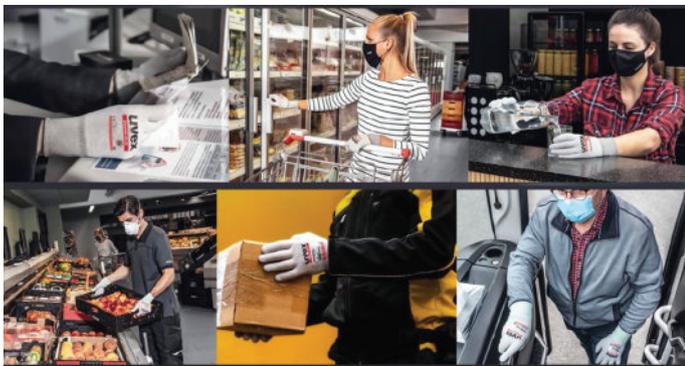
Tenable, Inc. the cyber exposure company, has launched Tenable.ep, an all-in-one, risk-based vulnerability management platform designed to scale as dynamic compute requirements change.

Tenable.ep combines the company's Tenable.io Vulnerability Management, Tenable.io Web Application Scanning, Tenable.io Container Security and Tenable Lumin into one platform, enabling customers to see all of their assets and vulnerabilities in a single dashboard alongside key threat, exploit and prioritisation metrics.

Moreover, Tenable.ep's single, flexible asset-based licensing model frees organisations to dynamically allocate licenses across all asset types, according to their unique attack surface, and modify as their environment changes.

The ability to quickly spin up and connect modern assets to the corporate environment is critical to digital transformation and work-from-home initiatives.

Image Credit: Uvex



Self-sanitising glove uvex phynomic silv-air – another counter measure to help stop the spread of microbes, germs and bacteria being transmitted through touch.

Blues Wireless, Safecast introduce Airnote - the air quality monitor

Health safety

Safecast, a specialist in open environmental data, and Blues Wireless, a developer of IoT cloud cellular solutions, has announced Airnote, an air quality monitoring device with unprecedented simplicity and cost-effectiveness.

By removing complexity and barriers to use, Airnote enables the mass deployment of air quality sensors at a cost of nearly half that of other products on the market.

All of the air quality measurements

collected by Airnote are sent directly to the Safecast platform and published into the public domain as part of their global environmental dataset.

Airnote is a fully integrated zero-setup solar-powered device that easily attaches to the outside of any sunny window. At regular intervals, Airnote automatically uploads air quality data using cellular networks in more than 130 countries, no registration or network setup required. Airnote includes a

pre-paid/pre-activated data plan that will run for the entire lifetime of the device.

These capabilities are enabled by the Blues Wireless Notecard, a small data pump that manufacturers embed within their products to greatly simplify the task of securely moving data to and from the cloud over cellular networks.

Airnote provides information on a display or users can scan its QR code and view charts and graphs online.



استخدام معدات الحماية الشخصية على النحو الصحيح يمكن أن يمنع تلف السمع

إلى مستويات أعلى بكثير من خفض الضوضاء، حيث حقق 10 في المائة منهم نسبة انخفاض تصل إلى 10 ديسيبل. كما قامت الدراسة بقياس شكل قنوات أذن الأشخاص الخاضعين للدراسة، ووجدت أن 61 في المائة منهم فقط لديهم شكل «طبيعي».

وتمتلك نسبة الـ 39 في المائة المتبقية قنوات منحنية أو ملتوية أو كبيرة أو ضيقة، مما يبرز الحاجة إلى معدات الوقاية الشخصية المجهزة بشكل صحيح والتي ستجهز كل فرد - على حدة - بشكل أفضل.

ولتجنب تلف السمع في مكان العمل في المستقبل، لم يوص سلبيم فقط باتباع برنامج مناسب للحفاظ على السمع مع معدات حماية سمعية مناسبة، بل نصح كذلك بأن يكون الاختبار المناسب والتدريب المنتظم إلزامياً.

وتوازن ارتفاع الصوت والتسرب الصوتي وتسرب الهواء أو اختبار التوافق الكمي الخاص بـ «3M» لقياس فعالية معدات حماية السمع عند استخدامها. ولكن يحدث - غالباً - أن المعدات لا تعمل بشكل صحيح بسبب نقص فهم العمال.

وقد استهدفت دراسة حالة تم إجراؤها في شركة إنشآت في المملكة المتحدة تكليف عدد 80 مشغلاً بتحقيق انخفاض مستوى الضوضاء/الصوت بـ 10 ديسيبل على الأقل. في البداية، كان هناك انتشار واسع لخفض الضوضاء، حيث تمكن فقط نسبة 6 في المائة من تحقيق انخفاض في الضوضاء قدره 10 ديسيبل.

وبعد التدريب، وصل الأشخاص الخاضعون للاختبار

إذا تم استنفاد جميع الطرق الأخرى للتحكم في الضوضاء، يجب إدخال معدات الحماية الشخصية وارتداؤها في جميع الأوقات.

وقال سليم: «من الناحية العملية، تعتبر أنسب وأفضل الطرق التي يمكن أن تحقق النتيجة المرجوة للحد من الضوضاء إلى مستوى آمن، هي مزيج من كل تلك الأساليب المختلفة».

اختيار معدات الوقاية

الشخصية المناسبة

يتوفر في السوق - اليوم - مجموعة واسعة من معدات الوقاية الشخصية المتاحة، بداية من سدادات الأذن المدلفنة البسيطة إلى سماعات الاتصالات الإلكترونية، والتي يمكن أن تجعل اختيار الأداة المناسبة أمراً صعباً. لذلك، تأكد من مراعاة الاستدامة للبيئة ولمرتديها، والتوافق مع معدات الوقاية الشخصية الأخرى، والراحة أثناء الاستخدام. ومن الضروري - أيضاً - ألا يتم تقليل السمع كثيراً، لأن هذا يمكن أن يقلل من الوعي بالموقف. إذ يعتبر النطاق بين 70 - 75 ديسيبل هو «البقعة المثالية» التي يجب أن تستهدفها.

ومعدات الحماية، التي تعتمد على مستوى السمع، تسمح بالتواصل مع الزملاء على بعد 2 إلى 3 أمتار. ولكن هناك - أيضاً - معدات راديو ثنائية الاتجاه مدمجة ستحمي من تلف السمع، مع السماح أيضاً بالاتصال لمسافة تصل إلى كيلومتر واحد.

وبالإضافة إلى الحصول على أنسب معدات السمع الوقائية، فإن توفير اختبار الملاءمة والتدريب هي خطوات حيوية لمنع الضرر الناجم عن الضوضاء. ويمكن استخدام تقنيات مختلفة مثل MIRE، وقياس السمع

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المعدات الصناعية يمكن أن يصدر عنها مستويات ضارة من الضوضاء

منع تلف السمع الناجم عن الضوضاء

قدم محمد سليم من برنامج «3M» خلال ندوة عبر الإنترنت، عرضاً تقديمياً عن آثار تلف السمع الناجم عن الضوضاء، وكيف يمكن منع ذلك من خلال تدابير السلامة المعتادة. فوفقاً لمنظمة الصحة العالمية، يعاني 466 مليون شخص من ضعف السمع في جميع أنحاء العالم، مما يتطلب تكلفة سنوية تبلغ 750 مليار دولار أمريكي. وتشير التقديرات إلى أن تدابير الصحة العامة، مثل استخدام معدات الحماية الشخصية المناسبة، يمكن أن تقلل من فقدان السمع بنسبة تصل إلى 50 في المائة.

المخاطر في مكان العمل، وذلك من خلال طرح بعض الأسئلة البسيطة، مثل: هل يشتكي العمال غالباً من الضوضاء؟ هل هناك مجموعات يُحتمل تأثرها بالضوضاء أو حساسة في منطقة العمل؟ هل يوجد مخطط عمل جديد أو معدات يمكن أن تولد المزيد من الضوضاء؟ وبالإضافة إلى ذلك، تعتبر أيضاً المراقبة الروتينية لإنشاء مخطط للضوضاء وأسبابه بالموقع والتحقيق في الحوادث، طرقاً أساسية لتقييم المخاطر.

فإذا كان هناك مستوى مفرطاً وخطيراً للضوضاء، يجب في هذه الحالة - استخدام التسلسل الهرمي للتحكم في الضوضاء لتقليل المخاطر، ويُفضل التخلص من الضوضاء أو استبدالها، لكن هذا ليس ممكناً دائماً. وإذا لم يكن الأمر كذلك، يجب استكشاف طرق هندسية؛ مثل إقامة غلاف عزل صوتي أو حواجز عزل مواد تقلل الضوضاء. أما الخطوة التالية، فهي إجراء إداري: مثل تقسيم العمال أو تغيير الجداول التي ستقلل من التعرض للخطر. وأخيراً،

ويمكن أن يصل مستوى الضوضاء، الناتج عن عمليات اللحام إلى 90-100 ديسيبل، وكذلك قد تصل درجة ضوضاء مطرقة الرافعة إلى 130 ديسيبل، ومستوى ضوضاء محرك الطائرة إلى 140 ديسيبل على مسافة 10 أمتار. ولا شك أن التعرض لأصوات تصل إلى هذه المستويات سيؤدي إلى فقدان السمع الناجم عن الضوضاء والذي يمكن أن يؤدي إلى مجموعة كاملة من الآثار الجانبية. وبخلاف صعوبة السمع، أشار سليم إلى أن التعب والقلق وارتفاع ضغط الدم وطنين الأذن وحتى الخرف المبكر (وفقاً لبحث سابق أجري في جامعة جونز هوبكنز) يمكن أن يكون سببها فقدان السمع. ولذلك من المهم للغاية اتخاذ تدابير فعالة لمنع الضرر المحتمل لحاسة السمع.

تنفيذ برنامج الحفاظ على السمع

تتمثل الخطوة الأولى في برنامج «3M» في تقييم

بدأ سليم حديثه بالتشديد على أهمية الحفاظ على السمع، خاصة في ظل زيادة سن التقاعد، حيث استهل حديثه قائلاً: «نحن مضطرون للعمل لفترة أطول وصولاً لسن التقاعد. ومن المهم أن نحافظ على سمعنا ليس فقط لنكون قادرين على العمل حتى سن التقاعد الممتد، ولكن أيضاً للاستمتاع بتلك اللحظات الخاصة التي نقضيها مع أحبائنا».

تعتبر الأذن البشرية التي يمكنها التقاط ترددات صوتية بين 20 هرتز إلى 20 كيلو هرتز، أكثر حساسية في نطاق من 2 كيلو هرتز إلى 4 كيلو هرتز، ويبدأ الضرر بمستويات الضوضاء خارج هذا النطاق. وبالإضافة إلى ذلك يمكن أن يحدث الضرر بسبب الضوضاء الشديدة. وقد يؤدي التعرض، لفترات طويلة للضوضاء التي تزيد عن 70 ديسيبل (المحادثة العادية 50-60 ديسيبل في المتوسط)، إلى الإضرار بالسمع، وغالباً ما تتجاوز البيئات الصناعية هذا النطاق.

فني هذا العمود ...



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نشرة الصحة والسلامة والأمن - الشرق الأوسط Health, Safety & Security Middle East تنشرها أربع مرات

في السنة لقاء 99 دولاراً في العام، دار آلان تشارلز للنشر

Alain Charles Publishing, University House, 11 -13 Lower Grosvenor Place, London SW1W 0EX, UK.

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كافة المعلومات في هذه المطبوعة كانت صحيحة عند وقت الطباعة.

Health, Safety & Security Review Middle East. ISSN :2059 - 4836

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