



October 2013

The Catalyst



About JOIFF

Membership of JOIFF, the International Organisation for Industrial Hazard Management is open to any Organisation which is a high hazard industry and/or has nominated personnel as emergency responders/hazard management team members who provide cover to industrial/commercial organisations.

Organisations which do not fully comply with these requirements are welcome to apply for Corporate Membership of JOIFF.

JOIFF provides a forum for discussion amongst peers, accredited training specifically developed for the sectors in which JOIFF members operate and technical advice through the JOIFF Standard and the JOIFF Shared Learning network. JOIFF welcomes enquiries for Membership - contact the JOIFF Secretariat

JOIFF Ltd. Registered in Ireland. Registration number 362542. Address as secretariat.



Message from the JOIFF Chairman

Dear JOIFF Community,

In last quarter's edition of the Catalyst, we discussed how important it is to maintain a mind-set of continual learning. In this edition, we (JOIFF) have added a new section to the Catalyst called "Ask the Experts" to help support this effort on your part as the industry professionals.

JOIFF recognizes that the Industrial Response industry is typically 20-30 years behind its own technology and lessons learned. In my travels globally, I see it all the time. The range of technologies, techniques, organizational constructs, philosophies, equipment, engineering etc. that are applied across our industry demonstrate this fact with undeniable clarity. Some of this is unavoidable, as it simply takes that long for information to be verified and then disseminated into an industry that is very diverse and spread across a global landscape. There are also a range of challenges and obstacles that Response professionals face, including budget constraints, organizational limitations, legal requirements, available support and expertise etc.

However, some of it is VERY avoidable, and there are things we can do within our constraints that allow us to continue to improve and innovate. I see this all the time also ...dedicated professionals who find ways to get things done, and solve problems. That is really part of what JOIFF is all about, and why we have added this new feature to the Catalyst. It is another way to take advantage of the expertise and "lessons learned" available in JOIFF to help address our members issues and concerns.

We receive individual questions on a regular basis that we do not publish to the entire JOIFF community because they are "proprietary". However, the questions asked often reflect common problems, and are always well thought out. Many others could benefit from both the questions asked, and the answers that are provided, so we have decided to start publishing some of these anonymously for the benefit of our JOIFF membership. We trust you will take the time to read them, and ask questions as they may arise. We will insure they stay anonymous, and will provide answers that reflect the best information available today. Together we can work to insure that we are not 30 years behind the current depth of information and lessons learned.

I look forward to our continued learning.

With Highest Regards,

Randal S. Fletcher, (Randy) JOIFF Chairman



New Members

During July, August and September 2013, the JOIFF Management Committee were pleased to welcome the following new Members:

Full Members

Harouge Oil Operations, Tripoli, Libya, represented by Mohamed A Bukra, LP&E Manager, Salah Abdallah, LP&E Coordinator and Paul Haigh, Training Coordinator. Harouge Oil Operations - previously "Veba Oil Operations" - is the joint venture operator on behalf of Libya's National Oil Corporation and Petro-Canada. The Company is engaged in developing and exploiting oil fields located in five contract areas onshore Libya. Harouge's corporate objectives are to engage safely, responsibly, efficiently and profitably in oil field development and exploitation and to implement the latest technologies available in the development and exploitation of Libya's natural resources, to the benefit of the Country and Harouge's owners. A large team of full time and part time emergency responders provide protection for the site.

Phoenix Fire, Explosion Investigation, Training and Consultancy (PFEITC), Rio Claro, Trinidad and Tobago, represented by Krishendath (Krish) Bharath, Managing Director. PFEITC provides site specific training courses in Industrial Emergency Response, Incident Management, Planning and coordinating of major drill activities. PFEITC offers consultancy services in developing and enhancing new and existing emergency response teams, training needs analysis, development of scenario work sheets performance standards and procedures.

Shell Eastern Petroleum (Pte) Ltd., Singapore, represented by Soo Kiang Phang, Chief Fire Officer. SEPC refines crude oil, producing petrol chemical and there are large storage facilities for hydrocarbon products. A large team of Full and Part time Emergency responders provide cover for the site.

TEEX Emergency Services Training Institute, College Station, USA, represented by Dennis St.John, Program Director, Mike Wisby, Associate Director and Gordon Lohmeyer, Executive Associate Director. The Texas A&M Engineering Extension Service (TEEX) is an internationally-recognised leader in broad-based technical training and professional services in search and rescue, hazardous materials, emergency medical services, aircraft rescue, firefighting, and emergency management. Through contracts and agreements with governments and

overseas companies, TEEX provides its specialized training, technical solutions, and assistance to workers worldwide, ranging from the smallest volunteer fire departments in Texas to some of the largest companies in the world. TEEX operates the world's most comprehensive emergency operations training complex, located in College Station, Texas. This 279-acre complex includes the Brayton Fire Training Field, the world's largest live-fueled firefighter training facility; the Emergency Operations Training Center (EOTC), a state-of-the-art simulation-based incident management training facility; and Disaster City®, a mock community simulating various levels of disaster and wreckage.

TOTAL Corporate H.Q, Paris La Defense, France, represented by Eric Pailler, Emergency and fire safety coordinator, Nathalie Renzi, Upstream Safety Engineer and Gilles Kergutuil, Head of Technological Risk Department. TOTAL is a French multinational integrated oil and gas company and one of the largest oil companies in the world. Its businesses cover the entire oil and gas chain, from crude oil and natural gas exploration and production to power generation, transportation, refining, petroleum product marketing, and international crude oil and product trading. Total is also a large-scale chemicals manufacturer.

TOTAL Raffinage France, Feyzin, France, represented by Laurent Mayor, Health, Safety & Fire department Manager. The TOTAL refinery in Feyzin, is situated south of Lyon and it is engaged in refining and associated petrochemical activities. The Emergency Response team comprises Full time and Part time personnel dedicated to prevention and response and general on-site Health & Safety for all the parts of the site.

Corporate Members

National Foam, Exton, Pennsylvania, USA, represented by Bryan Rambo, VP of Foam and Foam System Sales, Melinda Freeman and Walt Bolger, Sales. National Foam manufactures foam concentrate, foam proportioning systems, fixed and portable foam fire fighting equipment, monitors, nozzles and specialized big flow pumping solutions.

We look forward to the involvement of our new and existing Members in the continuing development of JOIFF.

About The Catalyst

The Catalyst is the official newsletter of JOIFF, the International Organisation for Industrial Hazard Management and is published quarterly - in January, April, July and October each year.

Our policy is to bring you high quality articles on relevant technical issues and current and new developments and other happenings in the area of Emergency Services Management. In addition to The Catalyst, information relevant to Emergency Services Management is posted on the JOIFF website.

Readers are encouraged to circulate The Catalyst amongst their colleagues and interested parties. The Editors welcome any comments, you can email comments to fulcrum.consult@iol.ie



ENHANCED FIRE PROTECTION FOR THE PETROCHEM AND OIL & GAS INDUSTRY

By Alan Elder

Fire risk in petrochemical, oil & gas (POG) facilities is severe. With parts of the plant being used to store or transport substantial volumes of flammable liquids, hydrocarbons and gases, the potential for fires here and in surrounding areas is great. Such facilities represent some of the most challenging fire protection applications.

On 11th December 2005, a number of explosions occurred at the Buncefield Oil Storage Depot, Hemel Hempstead, Hertfordshire. The fire burned for several days on an unprecedented scale and devastated the facility and surrounding areas. Investigations into the Buncefield inferno and other disasters, including explosions at the Oklahoma and Louisiana chemical plants earlier this year, have put fire hazards under scrutiny in an effort to highlight the secondary risks present on POG sites. These include backup power supplies, data communications, emergency facilities such as on-site medical centres, and other ancillary buildings. The need for fire protection of these areas is vital as their role within the POG site is significant.

These incidents were substantial tests of business continuity planning. People safety and critical plant infrastructure are essential to the running of POG facilities and therefore need to be well protected for continued safe operation. Down-time impacts significantly on a plant's costs and logistics so a holistic fire protection strategy is vital to maximise operational capacity.

Extensive protection

An efficient fire protection plan is central to achieving early intervention and delivering an effective response that not only protects high priority risks, but also safeguards less obvious hazards. These areas are equally significant since they are host to backup power supplies, server rooms and other ancillary buildings critical to the continued and safe operation of the overall facility. They must be effectively protected against fire risk to secure vital assets and people safety.

Control rooms, data servers and other buildings relating to a plant's operational infrastructure are a critical part of a POG facility and play an essential role in its operation. Due to the huge reliance on electronic data, it is not an option for valuable equipment to become damaged or unavailable for a long period of time due to fire damage. The impact of a plant's down-time generates wider consequences on cost, supply and logistics; plants cannot afford to be offline and therefore control rooms need to run safely and efficiently and be given optimal protection. Therefore, they require a fire suppression system that extinguishes a fire safely and quickly, prevents maximum damage to critical equipment, and protects employees.

Suitable solutions

When considering options for a fire protection system on a POG plant, it is important to identify the different areas of the facility in need of protection. Storage tanks, office space and control

rooms all carry their own risks and require maximum protection in order to minimise downtime of the plant. Different technologies are suitable for various applications. For oil storage tanks, foam systems are an effective fire suppression tool. On contact with a flammable fuel fire, the foam creates a blanket, cooling the fire and preventing contact with oxygen to both extinguish the fire and prevent re-ignition. An effective fire protection measure for office spaces is a sprinkler system. Sprinklers limit the production of smoke and fumes once a fire has started, which is particularly important in occupied spaces where people need to be protected and find means of safe escape. Fire damage is also often dramatically reduced, which helps to minimise disruption and maintain operational continuity.



SAPPHIRE Nozzle discharge

For areas of the POG site where electrical fire risk is high, such as control rooms, server rooms and critical ancillary services, a gaseous fire suppression system is the favoured solution. Unlike water-based systems, clean agent systems using inert gas or halocarbon agents provide the best solution to ensure business continuity and optimum asset and occupant protection since they prevent irreparable damage to servers and downtime of critical plant infrastructure. This means that ancillary buildings such as server and control rooms can return to normal operational capacity much more quickly.

Custom engineered for fast-acting suppression, clean agent gaseous systems either absorb the heat or deprive the fire of oxygen to prevent the fire from taking hold, which then facilitates a much shorter recovery time and reduces damage, costs and downtime. 'Going green' is a constant global focus and there is increasing demand for compliance with more rigorous standards. For this reason, numerous clean agent systems are available with environmentally friendly fire protection agents to reduce the environmental impact of the gases used to suppress the fire.

Tyco Fire Protection Products offers a wide portfolio of gaseous fire suppression systems including Inert Gases, Halocarbons and Carbon Dioxide to be used in a range of applications. Sustainable, safe and fast acting, SAPPHIRE fire suppression systems using 3M™ Novec™ 1230 fire protection fluid are



engineered to deliver protection of the business, its employees and the environment.

Novec 1230 has zero ozone depletion potential and negligible global warming potential, making them safe for the environment, equipment and people. Furthermore, the SAPPHIRE system reacts rapidly, delivering the extinguishant within 10 seconds, making it an ideal solution with proven robust and reliable performance across a global installed base in a variety of applications, including POG.

Enhanced capability

With SAPPHIRE 25-bar already a success, Tyco Fire Protection Products is introducing its new 42-bar suppression system to the range. Designed to work at 42-bar pressure, this solution offers additional flexibility since the higher pressure enables protection of larger or more complex hazards. The 42-bar SAPPHIRE system offers greater flexibility in layout since the containers can be placed further from the hazard area and increases the options to utilize selector valves to cover several areas from a single storage location offering a space-saving, economical and effective solution at POG sites where space can be restricted. Enhanced nozzle coverage assists in lowering installation costs by reducing pipework requirements. The system fully meets EN12094 standards and the requirements of EN15004, and has gained LPCB and VdS approvals. Tyco Fire Protection Products understands the need for protection of both the POG facility and its ancillary buildings. The SAPPHIRE fire suppression system helps to minimise the impact of a fire on a POG site, where the huge potential social, political, economic and environmental repercussions of a major disaster mean that safety concerns are always a prime consideration.



Summary

The volume of potentially explosive or flammable material on site is a very real danger on POG plants; protecting valuable data, vulnerable equipment and plant personnel on such a site is as important as safeguarding high priority risks and ensuring uptime and availability of service. Critical facilities such as control rooms therefore need to be safeguarded with the maximum level of protection against a fire in order to avoid significant asset loss. The benefits of the Tyco Fire Protection Products SAPPHIRE system in terms of speed, effectiveness, minimised downtime and safety to people and the environment make it a reliable solution for fire protection on POG plants.

Editor's note: About the author: Alan Elder is Director of Engineered systems, Tyco Fire Protection Products. He is

Chairman of the British Standards Committee on Gaseous Suppression Extinguishing Systems and Media, UK Delegation Leader to ISO TC21/SC8, an active member of the FIA Extinguishing Council and a member of the LPCB Technical Expert Group.

About Tyco Fire Protection Products: Tyco Fire Protection Products is a strategically aligned business unit of Tyco with globally recognized products sold under leading brands, including ANSUL, AQUAMIST, CHEMGUARD, DBE, EZCare, FIRECLASS, FLAMEVISION, GRINNELL, HYGOOD, KWIKSTRUT, LPG, MCS, NEURUPPIN, PYRO-CHEM, RAPID RESPONSE, SABO FOAM, SHURJOINT, SIMPLEX, SKUM, SPRINKCAD, THORN SECURITY, TOTAL, VIGILANT, WILLIAMS FIRE & HAZARD CONTROL, and ZETTLER. Tyco Fire Protection Products designs and manufactures fire detection and suppression systems, portable extinguishers, extinguishing agents, sprinkler systems, valves, piping products, and fittings, and mechanical building construction solutions for commercial, industrial, institutional, governmental, and residential customers. Heavy emphasis is placed on research and development, resulting in innovations and global approvals. For more information, contact Tyco Tel: +44 (0)161 875 0400 Email: info-UK@tyco-bspd.com or visit www.tfppeMEA.com



SAPPHIRE cylinders



PROTECTIVE FABRICS

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- Heat-stress reducing
- Best performing PBI® and PBO based fabrics



Safety Services Group

New JOIFF Member Organisation Safety Services Group, based in Sharjah in the United Arab Emirates, was established 33 years ago to meet the ever growing demand for high quality safety products and services and is now a market leader in the manufacture, supply, testing, certification of fire and safety products, lifting equipment, appliances, machines gears and accessories. Safety Services Group also supply marine, navigation, telecommunication devices and specialised oil and gas accessories, personnel protective equipment, QHSE trainings and a comprehensive range of other safety related products.

The in-house lifting gear department manufactures steel wire rope slings, from 1.5 mm to 150 mm diameter, including super loops, grommets and cable laid. The webbing and round sling department manufactures four ply slings, at any given width and length with a capacity of up to

1000 tons. The chain department manufactures super quality grade 80 & 100 chain slings with various components that are custom made as per the customer's requirements or needs; all of our slings are manufactured in accordance with British and International standards. Other specialist products include; lashing equipment, shackles, anchors, anchor chain and accessories, cargo, safety and scramble nets, synthetic and mooring ropes and rope ladders.

The Fire Fighting Division supplies and services fire extinguishers and a wide range of other fire protection systems and equipment including, breathing apparatus and other safety related products including an extensive range of Personnel Protective equipment.

The Training Division offers a comprehensive range of training courses including basic and advanced fire fighting, emergency and advanced First Aid,

working at height, confined space entry and rescue, HAZMAT and HAZCOM. Safety Services Group are an internationally approved and recognised for lifting equipment inspection, crane testing, repairs, servicing and Non Destructive Testing (NDT) for both onshore and offshore facilities. They own and operate the largest tensile and tower-based spreader beam testing facility in the Middle East and African region, with a capacity of 1000 Metric Tons; the test bed is located in Dubai.

Safety Services Group are ISO, OSHAS, TUV Nord, Dubai Accreditation Centre (DAC), and UAE Government certified/approved company, are a Full Member of the Lifting Equipment Engineers Association (LEEA) U.K., and International Association of First Aiders (AoFA), Dubai Central Ambulance Approved Centre (Dubai Centre).



ANGUS FIRE

£62 MILLION MANAGEMENT BUYOUT OF ANGUS FIRE BACKED BY LOYDS DEVELOPMENT CAPITAL (LDC)

PRESS RELEASE

The management team at Angus Fire, the world's leading manufacturer of fire fighting products and technology, has completed a £62 million management buyout backed by mid-market private equity investor LDC, as it looks to capitalise on growing global demand for its products within the oil and gas sector, along with National Foam (US) and Eau et Feu (France).

The new Angus group designs and manufactures fire hose, industrial hose, foam concentrates and engineered fire fighting systems. These high spec and often mission critical products are supplied into the oil & gas, aerospace, fire fighting, military, port and utilities sectors. In addition, Angus Fire, through its Flexible Pipelines division, manufactures large diameter industrial hoses for a variety of industrial applications including water transfer for the large and growing US hydro-fracking market. In this important new application, the group offers a solution to the oilfield services sector that combines proven environmental benefits with materially lower total cost of ownership.

For the financial year ending 31 December 2012, the group recorded sales of £95.6 million across the four divisions. The company exports its products to over 100 countries with its largest markets in the Middle East, Asia Pacific and North American regions.

Collectively, the Angus Fire group provides a truly global presence through its three business in three countries: Angus Fire, which has been established for over 100 years, operates a

production facility for foam, hose and engineering products in Bentham, near Lancaster, UK and carries out its engineered fire fighting systems design and project management activities for the oil and gas sector in Thame, Oxfordshire, and combined has over 250 employees. National Foam in the USA, with 84 employees, manufactures foam concentrates in Westchester, Pennsylvania; fire and industrial hoses in Angiers, North Carolina and engineered large capacity fire fighting monitor systems in Exton, Pennsylvania.. Eau et Feu, based in Reims, France, employs 85 in the manufacture of small bore fire hoses and foam concentrates for the domestic fire services, whilst also exporting its products to French-speaking markets in North Africa and Eastern Europe.

The Angus Fire companies are investing in completely new websites for all divisions. Some of these; www.angusfire.co.uk, www.flexiblepipelines.co.uk, &www.angusfireengineering.co.uk are already fully operational.

Paul Williams, CEO of Angus Fire, said: "LDC's investment provides the financial and strategic support to help us capitalise on the increased demand in emerging markets and the buoyant oil and gas sector for our products. We look forward to creating a unified proposition and cementing the business' market-leading position through investment in new plant and equipment and operational improvements to increase our manufacturing capacity and to be able to serve the market demand more effectively."



Media Report About Fire Safety

By Jeanne van Buren

In the October 2012 Catalyst Marsh reported about the pressure that is mounting on industry. The action by the authorities after a major incident the SEVESO III directive and aging installations were listed as the causes for the fact that pressure is mounting on the industry.

An announcement published in the media on September 21st 2013 indicates that insurers are also adding to this pressure now. The Dutch Association of Insurers announced that a change in policy will be effective from January first 2014 when insures will execute their right to recover the costs from the insured when a fire was caused by negligence and/or non-compliance with legislative requirements. This new policy will mainly be applied to high risk activities and is not intended for private dwellings.

Fire safety has become the focus of media ever since a major fire occurred at a SEVESO site in the Netherlands on the 5th of January 2011. Authorities are stricter than ever before when inspecting high risk sites. Sites are confronted with immediate enforcement actions when non-compliance with legislative requirements is observed.

This shift coincides with operators and authorities giving increased attention to the Inspection Testing and Maintenance (ITM) to secure their performance of fire safety systems. However the setup and implementation of ITM for industrial fire systems nearly always requires a tailor made approach. This tailor made approach can be accomplished by using the process and associated flow diagrams described in the 2012 NFPA publication Recommended Practice for Commissioning and Integrated Testing of Fire Protection and Life Safety Systems.

Using cross industry learning the process described in this NFPA Handbook follows the structure of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Guideline 0. The process starts when the initial idea for installing a fire safety system is raised and translated into the plan for installing systems and establishing associated provisions. After the plan for installing the system is described the processes for the design, construction, operational and re- or retro-commissioning phases are construed. This flawlessly crosses over to ITM phase as ITM is logically derived from the work performed in the previous phases. The required qualification of the staff and involved stakeholders are also distinguished in this NFPA handbook as are the record requirements.

All information and results must be on record and should have been documented from the moment the first ideas were put in writing. The results from commissioning the system represent the base values against which all future ITM results must be reviewed.

ITM frequencies after the commissioning phase must be based on either requirements in the applicable standard like NFPA 11

and/or NFPA 25 or the frequencies set by the supplier/installer if these are more stringent than NFPA requirements.

All items and aspects in industrial safety provisions that are critical for the performance of the fire system should be identified. Any item or aspect identified in this process that is not already listed in the applicable standard should or product data sheet of the supplier/installer should be incorporated in the ITM procedure too. The ITM frequency should be such that the reliability and applicability of the item/aspects support an availability and reliability of 99%.

All ITM results should be submitted to a trend analysis to identify the need for increasing the frequency or support a decrease in frequency.

ITM of fire systems is crucial. After all we all rely on these systems providing the anticipated performance when all other lines of defence have failed. For instance: the functionality of breaking disc of a foam pourer on storage tank can be compromised by something as simple as the presence of a product that can polymerise on the breaking disc. This 'problem' should have been identified in the planning/design phase so that the operator could have chosen a pourer design which is less sensitive for this aspect. If this potential problem was overlooked early on in the process it could still be pinpointed in the process for identifying all items/aspects critical for the functionality and availability of the systems. It would then result in an increased inspection frequency of the bursting disc to secure functionality.

As life testing of systems is not always possible during operational conditions it is strongly recommended to use the planning/design phase to spot options for incorporating provisions into design to enable testing of systems with as little disruption to operations and environmental impact as possible. The costs of integrating these provisions in the design are very low compared to the costs for the complete installation and the benefits can be extensive.

I can only briefly touch all the issues that are relevant for establishing and securing good ITM practices for industrial fire safety systems. If you like to know more about this topic or need assistance with incorporating ITM practices on your facility you can contact Marsh Risk Consulting.

Editor's note: Jeanne van Buren is a senior consultant with Marsh Risk Consulting, based in Rotterdam and consults on specific risks related to the power, energy and (petro) chemical industry sectors. This includes identifying potential hazards, evaluating these hazards and quantifying the associated risks and counselling on risk mitigation and control measures. For more information contact Jeanne van Buren at Jeanne.vanburen@marsh.com tel. +31 10 406 0600



Ask the Experts!

Q. Why do I have to wear the same Personal Protective Equipment ensemble for all call-outs that I attend as a Fire Fighter even when the incident is not a fire?

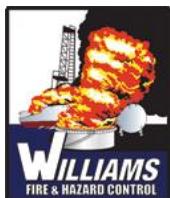
A. Despite evidence from all over the World that less than 10% of call outs that fire fighters attend involves exposure to fires, on most occasions, the Personal Protective Equipment (PPE) chosen for use by fire fighters has been designed to provide protection against exposures to fire including extreme exposures. This could mean that for as much as 90% or more of the work carried out by fire fighters, they are not wearing the appropriate type of PPE for the task in hand.

Contrary to opinion widely held, PPE is not the “the last line of defence” - it should be just one part of an overall Safety Management System for persons in the work place. The purpose of PPE is to allow persons to work in areas where without the PPE, they would not be able to work safely. PPE should allow safe working by the wearer when it has the levels of protection appropriate and applicable to the risks that might be experienced in any particular work exposure. But the PPE should be supplemented by factors such as risk reduction, effective supervision, conditions of safe working, stand-by medical assistance etc. all of which together make up an effective Safety Management System for the work place.

Before choosing the type of items of PPE to use for any particular exposure(s) a PPE Risk Assessment should be carried out to clearly identify possible hazardous exposures in the work place to be entered during the work period. This should allow decisions to be made on type(s) and level(s) of protection required, design of the items of PPE to be used and other features that should be incorporated in the items of PPE to be used on that particular exposure e.g. considerations of fit, comfort, control of body heat and external physical influences etc.

Editors note: The JOIFF Handbook on PPE to protect against Heat and Flame is available for free download from the JOIFF website at www.joiff.com Section 2.1 of this Handbook gives a full explanation of assessing risk for the choice of PPE.

Specifically with regard to possible exposures to heat and flame, the JOIFF specification for multi-functional heat and flame protective work wear is available also for free download from the JOIFF website at www.joiff.com



Tyco opens new 70,000-square-foot Williams Fire & Hazard Control facility in Port Arthur, Texas, USA

PRESS RELEASE:

Port Arthur, Texas – September 25, 2013

– Tyco is celebrating the grand opening of a new state-of-the-art operational facility in Port Arthur, Texas, for its renowned Williams Fire & Hazard Control (WF&HC) solutions team. The 70,000-square-foot building houses WF&HC's world-class training center, industry-leading industrial incident response team, and innovative custom products. Tyco's investment in this facility underscores its ongoing commitment to its customers, its employees and the community.

The Port Arthur facility is home to an elite team of WF&HC industrial emergency firefighters. Core to the site's operations is the engineering, production and testing of WF&HC industry-leading large volume

supply and delivery fire protection equipment, including: DEPENDAPOWER fire water pumps; portable and remote controlled monitor packages for manual firefighting and fixed suppression systems; foam and dual agent response trailers; HYDRO-CHEM dry chemical equipment; and THUNDERSTORM foam fire suppression agents.

A high-tech classroom for year-round continuing education and accredited fire protection curricula offers one of the industry's best industrial fire suppression training programs. Education focuses on response tactics, equipment operations and command logistics, with hands-on training and demonstrations at the flow manifold and water monitor located onsite.

Tyco's Williams Fire & Hazard Control solutions team has a successful history of responding to over 200 flammable liquid, gas, and pressure-fed fires throughout the world. This success inspired a full line of specialized response equipment including specialty foam nozzles, high-flow transportable firewater pumps, foam concentrates, monitor trailers, apparatus and portable foam proportioning systems, dry chemical extinguishing packages, and engineered fire suppression systems. From storage tanks and pipeline emergencies to marine vessels at sea, response personnel and specialized equipment stand ready to overcome industry's worst fire emergencies. For more information, visit www.williamsfire.com.



Dove Energy Yemen

JOIFF accreditation has been awarded to JOIFF Member Dove Energy, Yemen on completion of the construction of its new fire ground at its training centre at Sharyoof, Yemen. The training ground was built to meet JOIFF requirements and JOIFF accredited training has been taking place there for some time in Confined Space Entry, SCBA, H2S awareness etc. Now with JOIFF accreditation of its fire ground, the emergency response teams in Dove Energy are being trained in fire fighting to JOIFF standards.

Amongst other “props” the dedicated fire ground has a fire wall, a hydro-carbon slide, a Christmas Tree well head, a production rig including a pressure vessel, flange etc. Fire ground hydrants provide water pressure from an automatic pump and all rigs have run offs to a collection well for safe Eco-disposal.

The training fire rigs are lit by a mixture of diesel and naphtha with each rig having a dedicated valve with a master cut off safety valve next to the supply tank which is manned at all times that the rigs are operating. There is a multi-level fire house with top, bottom and side entry with internal stairs which can be rigged for SCBA, Confined Space Entry, Gas Testing and Working at Height training.

Fully trained and qualified staff operate all rigs and the safety systems include a written safety and briefing procedure for each exercise.



Ken Hamon Operations Manager, Dove Energy, receiving the JOIFF Certificate of Accreditation for the new Training Ground from Eric Dempsey, Arc Fire Training, on behalf of JOIFF.

From left to right Arif Al Jaber Deputy Operations Manager, Ken Hamon Operations Manager, Eric Dempsey, Arc Fire Training, Ayman Al Shabi Deputy Operations Manager.

There is a covered area with benches and tables for briefings, feedback etc. Due to the high ambient temperatures, Heat Stress training is part of the Dove training programme, with a full hydration policy in place and explained every day to students with constant observation by course staff and exposure time limits in place when weather is very hot.

Instructors have been trained to the level required by the JOIFF standard for accredited Instructors. Trained safety officers are in place at all training to ensure that safe practices are observed. Dove Energy have a resident on site doctor and medical centre and the doctor or a medic and an ambulance is present at all times during training with equipment for defibrillation and resuscitation if needed.

All PPE used in training including SCBA is controlled according to the JOIFF standard including availability of “same day” laundering of clothing.

The class rooms are comfortable and kitted out with all the necessary equipment.

Dove Energy Operations Manager Ken Hamon is to be congratulated on the speed of construction and the control of supply and logistics that allowed the training ground built from start to finish so quickly.

JOIFF Members Notes

New JOIFF Working Group

Following an article published in the July edition of The Catalyst, written by JOIFF member Jeanne van Buren on Inerting the ullage space of storage tanks with nitrogen, in early September, all JOIFF member organisations were invited to nominate persons to participate in a new JOIFF Working Group to develop a Guideline on good practices about this process. Inerting of storage tanks with nitrogen to secure this Line of Defence can pose many challenges. The new Working Group has now been formed and has started its work. Experts in the Working Group include persons from JOIFF member organisations in Ireland, Netherlands, South Africa, Trinidad and Tobago and the United Kingdom.

Annual General Meeting

Arrangements will shortly be advised to JOIFF members as to the date and location of the 2013 Annual General meeting.



Falck – Industrial First Responder Course

In the past year we have seen within the high risk businesses for the oil, gas and chemical sectors, a number of incidents causing unwanted consequences to business continuity. Businesses should learn from these incidents to prevent a reoccurrence of the event. Often there is much discussion over the role of the local authorities regarding the safety guidelines, but in any event a business should strive for the highest level of safety in order to minimize the risks their personnel, the surrounding communities, the environment and to its business continuity. That means that safety becomes of a strategic importance for any business.

The requirement for a business to provide a professional company Fire Brigade will depend on the policy of the "State" and in the instances where the requirement is not valid, the company may well be obliged to make a risk analysis in order to determine the level of emergency response needed by the company to cover any eventual incidents until the local authorities could take over. Setting up an emergency organization for businesses deemed to have higher risk or consequence is very specific to that business and demands knowledge and expertise of the highest standard. Falck can offer a solution for providing a well trained and professional emergency organisation: First Responder.

Falck has developed knowledge and experience in relation to specific risk management evaluations, to determine a tailored emergency response structure. Falck is the organisation that will interpret the laws and regulations for your situation, examine the risks involved, define, implement and evaluate the new emergency response organisation.

An incident can be divided in to Hot, Warm and Cold zones, whereby all non essential personnel are evacuated to beyond the Cold zone, where there are no risks of exposure to the effects of the incident. The Hot zone is the immediate location of the incident where only professional fire brigades may operate with a higher level of training and equipment.

The intermediate "warm zone" has a limited exposure effect for the responders. The task of the First Responder would be to carry out the initial rescue and incident stabilising actions within this intermediate "warm zone" of an incipient incident and to provide valuable knowledge, guidance and expertise to the local authority responders for expanding incident situations. The training programme for the 5 Day Falck Industrial First Responder Course would give the designated responders the necessary awareness and skills to operate safely. The training is designed in accordance with the internationally recognised National Fire Protection Association (NFPA) standards, and also is a JOIFF accredited training course.

The training would also conform to many "State" authority demands. In order to successfully complete the training for a First Responder each participant would have to demonstrate competency against the JOIFF accredited training standards, and will be subsequently awarded a JOIFF accredited certificate of competence.

For more information please contact Falck Risc at +31 181 376 666 or mail: industrie@falck.nl



Safer. Smarter. Tyco.™

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Reasons to choose SAPPHIRE...



...#3 where space is at a premium



In today's competitive business environment, organisations are under continuous pressure to do more with less, which includes making the most of every square metre of valuable, revenue-generating space. SAPPHIRE 25 / 42 bar fire suppression systems are designed to help businesses use space effectively, protecting both your assets and investments responsibly.

To find out how Tyco Fire Protection Products can help protect your business please visit www.tfppeMEA.com
or you can contact your local sales representative on +44 (0)161 259 4000

tyco
Fire Protection Products





At the Emergency Service Show 2013 in Birmingham (UK) in September, TenCate Protective Fabrics exhibited new lines in fabrics and systems for firefighter turnout gear that are more durable, lighter and excel in the reduction of heat stress, and help firefighters to stay cooler.



Gemini XTL

For firefighters, efficient body cooling is extremely important. Improper heat and moisture management can disrupt this process, leading to loss of concentration, fatigue, breathing difficulties and ultimately heat stroke. TenCate Protective Fabrics has addressed these key functionalities. During the Emergency Service Show in

Birmingham, TenCate demonstrated several new and existing protective solutions, such as the TenCate Gemini XTL™ outer shell based on PBI® fibres, and TenCate Millenia™ turnout gear based on PBO fibres.

Best performing outer shell

TenCate Gemini XTL™ protective fabric is made from PBI® fibres and is the best performing PBI®-based outer shell on the market. Compared with other currently available fabrics made from PBI® fibres, it has the strongest tear and tensile strength and better resistance to abrasion – earning its top score for garment durability.

Patented strongest and lightest turnout gear systems

TenCate Millenia™, which is based on PBO fibres, is also offered in a layered system and is the world's strongest and lightest system for firefighter turnout gear. Because of its weight



Gemini XTL

Innovative TenCate fabrics help fire fighters to stay cooler

and the highly breathable thermal moisture barrier that facilitates efficient sweat evaporation, it helps to prevent heat stress.

Not only are the moisture management and breathability of the TenCate systems extremely good, these systems also offer excellent protection against water, chemical or blood splashes and blood-transmitted diseases. This TenCate thermal moisture barrier (ePTFE / PU-BI membrane) is based on a patented 3D technology that helps to realize improved insulation and reduced heat stress

TenCate Protective Fabrics is the world's No. 1 producer of protective fabrics for the manufacturing of safety wear. We supply garment makers with an extensive range of top-quality and technologically advanced fabrics.

The global R&D team of TenCate has great knowledge and experience in high-tech fabrics. Our many innovations have resulted in a wide range of highly regarded and, in many cases, patented fabrics.

Many people around the world are enjoying the protection of our fabrics – from firefighters in New York, Amsterdam and Montreal, to workers in world leading oil & gas companies and utilities, and various NATO armies, and more.



Multi-layer system Millenia 450

Royal Ten Cate (TenCate) is a multinational company that combines textile technology, chemical processes and material technology in the development and production of functional materials with distinctive properties. TenCate products are sold throughout the world.

Systems and materials from TenCate come under four areas of application: safety and protection, space and aerospace, infrastructure and environment, sport and recreation. TenCate occupies leading positions in protective fabrics, composites for aerospace, antiballistics, geosynthetics and synthetic turf. TenCate is listed on the NYSE Euronext (AMX).

TenCate Protective Fabrics

TenCate Protective Fabrics has put TenCate Millenia™ and TenCate Gemini XTL™ through the most stringent and rigorous tests. But see for yourself how good it is: to arrange a demonstration, a wear trial or to request samples, please go to our website at www.tencateprotectivefabrics.com or send an email to protectivefabrics@tencate.com. or contact: Ramon Overdijk, Sales director (Europe, Middle East and Africa), tel. +31 546 548 633 615, r.overdijk@tencate.com



JOIFF TRAINING NOTES

"TRAIN AS IF YOUR LIFE DEPENDS ON IT,

BECAUSE SOMEDAY, IT MIGHT!"

JOIFF accredited training is within a Competency Based Training framework and involves not only course content, as also critical to the effective provision of training are the facilities of the training provider/training establishment and the capabilities of the instructing staff. JOIFF has developed systems of accreditation for training providers and minimum instructional requirements for Instructors.

All students who successfully complete a JOIFF accredited course/programme are issued with a JOIFF Certificate of Competence which has its own unique number. Records of all successful

students and the courses in which they qualify are retained. There is growing recognition worldwide of the JOIFF Certificate of Competence which is coming to be regarded as a passport to the level of employment and rank which an emergency responder's qualifications enables and entitles them to deserve.

For further information about JOIFF accredited on-Site Competency Based Training Programmes, the range of Fire Service NVQs and any other aspect of JOIFF Training, please contact the JOIFF Secretariat.

JOIFF Accredited Course	Dates	Venue / Organiser
Confined Space Entry Training	As required	On your own site. For further information contact arcfiretraining@ntlworld.com
Fire Incident Command Course (5 Days)	11 th – 15 th November	Falck Risc, Rotterdam, Netherlands Email: r.deklerk@falck.nl
Fire Team Leader Course (4½ days)	28 th October – 1 st Nov.	Fire Service College Ltd. Moreton-in-Marsh, UK Email: enquiries@fireservicecollege.ac.uk
Site Incident Controller Training (1 Day)	18 th November	Sembcorp UK Protection Group Headquarters Wilton, UK Email: judith.wong@sembcorp.co.uk
Site Main Controller Training (1 Day)	11 th October	Sembcorp UK Protection Group Headquarters Wilton, UK Email: judith.wong@sembcorp.co.uk

2014

Confined Space Entry Training	As required	On your own site. For further information contact arcfiretraining@ntlworld.com
Fire Incident Command Course (5 Days)	31 st March – 4 th April 07 th – 11 th July 08 th – 12 th September 24 th – 28 th November	Falck Risc, Rotterdam, Netherlands Email: r.deklerk@falck.nl
First Responder Course (5 Days)	10 th – 14 th February 11 th – 17 th June 22 nd – 26 th September 8 th – 12 th December	Falck Risc, Rotterdam, Netherlands Email: r.deklerk@falck.nl
Fire Team Member Course (4½ days)	10 th March – 14 th March	Fire Service College Ltd. Moreton-in-Marsh, UK Email: enquiries@fireservicecollege.ac.uk
Fire Team Leader Course (4½ days)	16 th June – 20 th June	Fire Service College Ltd. Moreton-in-Marsh, UK Email: enquiries@fireservicecollege.ac.uk

These dates have been provided by JOIFF accredited training providers. If the dates are not suitable for you or your own specific training requirements are not listed below, contact the JOIFF Secretariat.

Full course description of Sembcorp JOIFF accredited courses above can be viewed in their Training Brochure on www.sembcorp.co.uk/sembcorpprotection.aspx



Diary of Events 2013/2014

October

- 8 - 10 Fire and Gas Detection Principles, Aylesbury, UK
17 - 19 Commercial Security and Fire Expo, Shanghai, China
22 - 24 Fire Systems Testing and Integrity Assurance, Kuala Lumpur, Malaysia
28 - 29 LNG and LPG Fire fighting workshops, Asturias, Spain
30 - 31 Practical Hands on Storage Tank Fire Fighting, Asturias, Spain

November 2013

- 5 - 8 A + A Dusseldorf, Germany
12 - 14 Fire Systems Testing and Integrity Assurance, Abu Dhabi, UAE
18 - 19 LNG and LPG Fire fighting workshops, Asturias, Spain
26 - 28 Securex Libya, Tripoli, Libya

January 2014

- 19—24 Intersec Fire Systems Testing and Integrity Assurance, Dubai, UAE

March 2014

- 18th - 19th Securex West Africa, Lagos, Nigeria

September 2014

- 23rd - 26th Fire Prevention 2014 Essen, Germany

Please contact the JOIFF Secretariat with details of any event that you think that JOIFF Members might be interested in attending.

Note: The Catalyst is not responsible for the accuracy of dates and / or venues announced.

This is based on information given to the Editors and is published in good faith.

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