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WWW. JOIFF.COM

ABOUT JOIFF

Full Members of JOIFF are organisations which are high hazard industries and/or have nominated personnel as emergency responders/hazard management team members who provide cover to such organisations. Corporate Members of JOIFF are organisations that do not meet the requirements of Full Membership but who provide goods and services to organisations in the High Hazard Industry.

JOIFF's purpose is to prevent and/or mitigate hazardous incidents in Industry through its 3 pillars:

• Shared Learning – improving risk awareness amongst our members

Accredited Training – enhancing operational preparedness in emergency response and crisis management.

• **Technical Advisory Group** – raising the quality of safety standards in the working environment of High Hazard Industry

JOIFF welcomes enquiries for Membership - please contact the JOIFF Secretariat for more information. JOIFF CLG is registered in Ireland. Registration number 362542. Address as secretariat. JOIFF is the registered Business Name of JOIFF CLG

ABOUT THE CATALYST

The Catalyst is the official emagazine of JOIFF, the International Organisation for Industrial Emergency Response and Fire Hazard Management. Our policy is to bring you articles on relevant technical issues, current and new developments and other happenings in the area of Fire and Explosion Hazard Management Planning (FEHMP). The Catalyst is published quarterly in January, April, July and October each year. Readers are encouraged to circulate The Catalyst amongst their colleagues and interested parties. The Editors welcome any comments – please send to fulcrum.consult@iol.ie

In addition to The Catalyst, information relevant to FEHMP is posted on the JOIFF website.

Disclaimer: The views and opinions expressed in The Catalyst are not necessarily the views of JOIFF or of its Secretariat, Fulcrum Consultants, neither of which are in any way responsible or legally liable for any statements, reports or technical anomalies made by authors in The Catalyst.



If you have a request for an article or advertising to be included in the Catalyst, please contact the JOIFF Secretariat, details below.

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CHAIRMANS MESSAGE

Dear JOIFF members and Catalyst readers,

I am seeing a subtle shift within our industry, and one for the good. The barriers between the various regions of the world, and the cross dissemination of expertise and lessons learned is growing at an exceptional rate. I cannot provide you with hard statistics to support this, but from what I see in my many travels and from what I hear from others, we are starting to act much more globally in the high hazard industrial response community. There are of course the limitations and constraints that we all face, but things are shifting in our favor. JOIFF has certified training happening in Russia, the US, the UK, Trinidad, India, Iraq, the UAE, Hungary, Tunisia, Malta, Australia, South Africa, and the Netherlands to name but a few, and the list keeps growing. This is an encouraging manifestation of this trend.

Our upcoming conference in Malta (see article within this edition of The Catalyst) reflects that trend as well. Those that attended the inaugural International FEHM Conference in Malta two years ago or the JOIFF South Africa Regional Summit last year, can testify to the spirit of shared learning, and professional development and respect that is available every minute of the time spent. I trust you are making plans to attend the JOIFF Malta Conference. I am truly excited about the chance to hear from the speakers, the attendees, and the sponsors.

Regarding Shared Learning, it is one of the key resources we provide to our membership and one of the most popular and commented-on aspects of what we do. We have been working to improve in that arena and our Director of Engineering and Technology has recently been trying a more selective and qualitative approach, which has resulted in the circulation of less numbers of Shared Learnings with a more directed emphasis. We have decided that we will do both i.e. send out more volume and you as the recipients can filter through what is useful, while we will target specific ones for more detailed comment.

We have also been working to improve the distribution process to streamline the mechanics of getting the shared learning out to you. We think we have a very workable solution so you should see significant improvements. We trust this will provide the right level of value for you.

I am also aware of the volume of very good publications regarding Fire and Industrial response that are available to you, the readers.

It is our goal that the Catalyst provides a unique perspective that compliments and goes into specific angles of interest for you. Enjoy the read, and as always, your suggestions are a necessary part of how we continue to serve effectively,

Respectfully yours,

Randal S. Fletcher (Randy)

Randal S. Fletcher, JOIFF Chairman



THE CATALYST



Our employees fight fire and so do our products

My name is Magnus. I am working with product development at Fomtec. This picture is from a fire test in Sweden. Follow us if you want to find out more about me, the Fomtec way and all our products.

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SOME INDUSTRIAL INCIDENTS THAT TOOK PLACE DURING THE SECOND QUARTER OF 2018

China: 9 people killed in a fire in a rubbish processing plant in Quingyuan.

Fire rips through a chemical factory, sending huge plumes of black smoke into the air.

Czech Republic: Explosion kills 6 people at refinery north of Prague .

Indonesia: Oil Spill Clean-Up Kills Two

Illegal Oil Well Fire, Death Toll reached 22.

India: Fire at Numaligarh Refinery, One Fire-fighter Dead.

Tugs tackle fatal fire on oil exploration ship.

A blaze at a plastics factory in New Delhi kills 9 people.

Oil rig in Cochin undergoing repairs explodes, killing 5 people and injuring 7.

New Zealand: Fire breaks out at an Auckland

metals factory requiring 21 fire engines and 80 firefghters.

Nepal: Fire at paint factory in Chitwa.

Sri Lanka: Factory in Vavuniya destroyed in fire.

Taiwan : Explosion in Taoyuan oil refinery reported .

USA: Fire reignites at Husky Energy oil refinery in Wisconsin, 11 Injured.

Fire reported out at Cumberland County fuel storage facility.

Clean-Up of Oil from Iowa Train Derailment Begins.

UK : Residents close to a huge warehouse fire in Rochdale are being urged not to clean up ash and debris as it may contain asbestos.

Note from the Editor.

Most reports of incidents that occur, some of which are listed here, are familiar. After all major incidents, recommendations are made but how many of the recommendations are implemented. How many are forgotten over time until another similar incident occurs?

JOIFF shares valuable information with its members aimed to improve the level of knowledge of Emergency Responders and to work to ensure that members benefit from the misfortunes of some to educate against the same mistakes being repeated. Industry needs to ask is it doing enough to educate Industry so that incidents such as these will either not be allowed happen again, or if they do they can be effectively dealt with.



THE CATALYST





OTHERS FOLLOW TRENDS WE SET THEM

TEXPORT* and PBI* stand for internationality, robustness and supreme protection – and for the tireless pursuit of innovative ideas. That's why we've been working together successfully for many years on the development of premium quality protective clothing. Numerous joint TEXPORT* and PBI* projects have proven that when two powerful brands cooperate, the results the partnership produces set new industry standards. This mutual inspiration will continue to be the catalyst that drives qualitative enhancement and innovative development for many years to come.

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NFPA AND EN STANDARDS COMPLEMENT EACH OTHER FOR THE USE OF FOAM CONCENTRATE

by Dr. Jeanne van Buren

Supported by more stringent legislation, new firefighting foam concentrates are getting available on the market giving operators of industrial sites now an array of firefighting foam concentrates to choose from.

In conjunction with that, codes and standards on firefighting foam are also updated to keep up with these new developments.

Many involved in industrial firefighting found the use of chapter 5 for Low-Expansion System Design of the NFPA 11: Standard for Low-, Medium-, and High-Expansion Foam an informative source for all aspects on the use of low expansion firefighting foam for hazards like:

- Outdoor Fixed Roof (Cone) Tanks
- Outdoor Open-Top Floating Roof Tanks
- Outdoor Covered (Internal) Floating Roof Tanks
- Indoor Hazards
- Loading Racks
- Diked Areas Outdoor
- Non-diked Spill Areas
- Supplementary Protection

The introduction of new firefighting foam concentrates as well as new type of industrial installations like new storage tanks are designed (and built) at a very rapid pace which makes it difficult for NFPA 11 to keep up with all these developments within the standard's update cycle.

This does not have to be a problem as NFPA standards are always carefully linked to other documents published by NFPA and controlled documents published by other organizations. But the next version of NFPA 11 could benefit from additional referrals to EN standards as is illustrated in the two examples below.

Example 1

NFPA 11 prescribes minimum application rates for the use of firefighting foam and lists minimum application times for fighting fire of fire scenarios with specific product groups and refers to the foam producer for the correct application rate of specific firefighting foam concentrates.

For hydrocarbon pool fires, NFPA can perhaps consider to add a link in the NFPA 11 standard to the EN1568 standard Foam concentrates -Part 3: Specification for low expansion foam concentrates for surface application to water immiscible liquids. The 2018 version of this EN standard has an additional I^+A category for ranking the performance of foam concentrate. These types of foam concentrates extinguish the pool fire in the test pans in \leq 1.5 minutes with a burn back time of \geq 10 minutes.

Firefighting foam with such high ranking requires a performance based substantiation for the practical application rate and application time of the foam and not the tables listed in chapter 5 of NFPA 11.

Environmental pollution of fires and optimized use of firefighting foam should also be considered in the performance based setup. If an I⁺A foam concentrate has low viscosity, it can be effective (when mixed in the correct ratio) from the moment it is applied as it will mix instantaneously with the water to form the foam premix. Therefore this foam concentrate is the best option for fighting fires in industry from an environmental point of view.

But there are always other factors which have to be considered when addressing sustainable firefighting practices.

Example 2

A participant of the three day JOIFF accredited Tank & Bund Fires training delivered in June 2018 also recommended using NFPA 11 in conjunction with the EN13565 Fixed firefighting systems -Foam systems Part 1: Requirements and test methods for components and Part 2: Design, construction and maintenance, because these standards provides additional information on the use of foam for fires concerning:

- Marine loading and unloading docks
- Aircraft hangars
- Liquefied flammable gasses (LNG/LPG)
- Various types of vertical storage tanks
- Diked and spill fires
- Warehouses storing hazardous materials and nonhazardous products

The two parts of the EN13565 do provide the designer of the fire protection installation with information that complements NFPA standards and codes. In a performance based process the applicability of this information will be reviewed.

The EN1568 and EN13565 do not cover the very important risk analysis which is a requirement for applying the performance based design process. These standards also do not list the required competence of those involved in the design,



construction, commissioning and inspection, testing and maintenance of the fire protection system. Therefore this too has to be addressed in the performance based design process.

Summarised

The design of industrial fire protection systems require a performance based process which is executed by competent personnel using information from various standards. This process should also consider the environmental pollution a fire can cause and how the fire fighting activities can contribute to the reduction of the environmental pollution.

We are now in an era where we can more easily get access to more reliable information which can be used for the design of firefighting installations and the application of firefighting foam, but it is likely that we need more than just one standard or code to design the fire protection system which is required to deliver the anticipated performance when called upon during an incident.

During the design phase Commissioning and Inspection, Testing and Maintenance requirements and the environmental aspects of these activities should also be considered.

In fact, the NFPA 16 Standard for the Installation of Foam-Water

Sprinkler and Foam-Water Spray Systems, states:

- 9.1.1 Systems shall be so arranged that tests and inspections can be made without discharging foam solution to the system piping in order to check operation of all mechanical and electrical components of the system.
- 9.1.2 The system shall be arranged so that tests are performed with as little loss of foam concentrate as possible.

Keeping up with all the developments around industrial fire design is a challenge, which is not only very interesting, but can also be rewarding. Industrial fire design is and will always be a job for personnel with lots of practical experience in an academic setting.

Editor's note: Doctor 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 petrochemical industry sectors. This includes identifying potential hazards, evaluating these hazards and quantifying the associated risks and counselling on risk mitigation and control measures. She also develops and provides training courses in Dutch and English. For more information contact Jeanne van Buren at Jeanne.vanburen@marsh.com or +31104060404

NEWS FROM JOIFF ACCREDITED TRAINING PROVIDERS *You will not refuse to let this robot do your work! By Peter de Roos*

Many of us are pleased that we are taking industrial firefighting to a higher level. For decades we experienced innovations in industry but firefighting practices did miss out on these developments. But we are catching up at a rapid pace. A Chinese company (www.ekaicheng.com) has designed robots which can perform many tasks usually performed by firefighters. This means there is less risk of firefighters being exposed to hazardous materials and radiant heat. We were pleased that we were able to demonstrate and test the use of the robot (SCARAB) of the Fire Department of Amsterdam-Amstelland during different fire scenarios including a small tank fire at the training facility of CNPP in Vernon, France. The robot was capable of effectively extinguishing a full surface fire of a storage tank with 11-meter diameter (see images).

We showed a video of the use of this robot in our JOIFF accredited three-day course "Tank and Bund Fires" training which H2K and Marsh held in June 2018. The participants were impressed. As with all new developments, we still have to learn what the capabilities and limitations (like duration of use, and maximum exposure to radiant heat, etc.) are for using of these robots to fully implement them as a resource into standard incident response processes. In addition, there is a need for clear instruction for operation, testing and maintenance of robots to ensure their availability and reliability 24/7.

We also need to define the training requirements for operating personnel and adjustment of emergency response plans as these robots have to be transported to the incident site. Perhaps this can be structured within a JOIFF guideline as there is real a potential for global use of these robots. We would seriously

consider participating in the workgroup responsible for setting up this guideline.

Setting conditions for the use of these robots will contribute to their success. We would like to encourage readers of the "Catalyst" to share their views and perhaps experience with us if they already have used robots.

Editor's note 1: JOIFF embraces new technology and if anyone is interested in taking up Peter's suggestion please contact the JOIFF Secretariat. If you like to share your experience on robots used in firefighting, contact Peter Butter; Innovation Manager Fire Department Amsterdam-Amstelland p.butter@brandweeraa.nl 2: Peter de Roos is Project Manager of JOIFF member organisation and JOIFF accredited Training Provider H2K,Schiedam, The Netherlands. He has many years' experience as an instructor and consultant for Industrial incident response. H2K provides JOIFF accredited education and training programs for the Chemical and Petrochemical industry and Fire Brigades dealing with High Hazard Industry. Peter can be contacted at p.deroos@h2k.nl





Monitor with Foam Tube







HARNESSING WATER

DECON/pak Douses Carcinogenic Debris

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The DECON/pak is a self-contained agent proportioning and rinse application system developed specifically for the decontamination of firefighting personnel, gear, and equipment. Throughout 2017, the DECON/ pak was field tested at fire departments and training facilities, refining the final version into an easy-to-deploy system to perform DECON operations on-scene. The DECON/pak uses a simple 3-step process: 1) Add Cleansing/ DECON Agent, 2) Connect to a hose, 3) Wash/Scrub/Rinse. Studies show that field DECON using soap, water, and a brush can reduce cancer causing contamination by 85%. The system includes a 9.5 L tank for DECON agent, 3.6 m hose with fan-type nozzle, and a built-in eductor that allows water from any source to be used in a mix or rinse application.

The Master Stream 1250 with flush has the ability to produce an excellent hard-hitting stream at any flow from 1100 l/min to 4800 l/min (300 to 1250 GPM). Easily adjustable from a straight stream to a wide dense fog pattern, the Master Stream 1250 with flush is standard with a new, rugged, aluminum shaper with fixed metal fog teeth. The nozzle features a selector ring behind the shaper that allows both flow selection and flushing the nozzle of debris without stopping the flow. The Master Stream 1250 with Flush is suitable for use with foam and accepts the FJ-LX-M Foamjet foam attachment.

MasterStream 1250 will flow from 1100 to 4800 l/min



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ife and asset protection in an industrial environment is a challenging task. Two important factors when mitigating a hazard are delivering flow and reaching your intended target. This is why Industrial AHJ's continue to specify TFT's Monsoon monitor for their apparatus. An increasing number of industrial pumpers are being installed with two rear mounted Monsoon monitors. The low 15 lb. friction loss design of the Monsoon gives the ability for a combined flow of 7,600 l/min (4,000 gpm) with 76m (250 ft.) or more of reach.

There's a new Hydrant in town (H.U.M.)

TFT's Hydrant Under Monitor (H.U.M.) is the latest FM approved innovation for industrial fire protection. The H.U.M. is an integrated hydrant valve that supports monitors up to 9500 l/min (2500 gpm), rated up to 21 bar (300 psi), and gives you the choice of two additional intake or discharge outlets. The outlets are available in sizes from 152mm (6'') storz to 65mm (2.5'') storz, and other threads/ couplings are available. This solution is easily maintained without major logistics and capital expense, and offers multiple functions not available on any standard hydrant or manifold. TFT's Hydrant Under Monitor (H.U.M.) offers functions nat available on any standard hydrant or manifold.



(Now FM Approved!)



A GIANT STEP FOR WATER MIST

Two portable water mist extinguishers have now arrived at the International Space Station and more will be arriving later this year (image above, commander Scott Kelly on a December 21, 2015 spacewalk). Image Credit: National Aeronautics and Space Administration.

The moment that Atlas V rocket took off on 6 December 2015 for the International Space Station was the moment when the fire extinguishing agent of choice for space travel and exploration became water mist. Jose Sanchez de Muniain, Editor of Industrial Fire Journal, interviewed Dr Angel Abbud-Madrid, director of the Center for Space Resources, Colorado School of Mines, US about the 18-year journey to get portable water mist fire extinguishers in space.

Why water mist?

Back in 1997 we were looking at how the industry was changing after the Montreal Protocol had banned halons for fire suppression. We started researching possible replacements and water mist seemed like a great technology to put out fires, particularly fires in space where there were several issues to deal with.

Which technologies did you look at?

Back then the Space Shuttle had halon extinguishers. For the International Space Station NASA opted for CO2, which we thought could be a better alternative. But the problem with putting out fires in spacecraft is that if you use any chemical agent or carbon dioxide, you have the problem of increased levels of toxicity in a fully enclosed space. The protocol from NASA was that if you discharged a halon extinguisher in the Space Shuttle you would have to come back to Earth almost immediately. We wanted to propose a suppression agent that was non-toxic, non-corrosive, and that if you were on a long trip – not just on orbit around Earth but to the Moon or Mars – you could actually refill it onboard instead of coming back to Earth. And water mist was perfect for this.

What experiments did you carry out?

We started looking at how water mist interacts with propagating flames such as propane-air mixtures in a cylindrical tube. Our basic questions were: what are the optimum droplet size and water amount necessary to put out the fire? For a controlled experiment, we conducted tests in microgravity, because it is the only way to create a homogeneous mist without settling after a few seconds. It just stays floating until the flame propagates through it. We ran different tests with flames interacting with this mist, changing either the droplet size or adding more water until we finally extinguished the flame. In that way, we determined that the optimum droplet size was around 20 to 30 microns in diameter. If you go below that size you start evaporating the water way ahead of the flame. And above that, you waste water as large droplets begin to go through the flame without fully evaporating.

How does water mist behave in zero gravity? Does it coalesce?

That was one of the first questions we had, so we started with experiments in a parabolic-flight airplane capable of giving us 30 seconds of microgravity. This wasn't long enough to give us a clear idea of what was really happening, so we went to the Space Shuttle where you get unlimited time of steady microgravity. There we discharged the mist into a cylindrical tube and what we saw is that after moving around for a few seconds and occupying the entire volume, the mist would then just stay quiescent. I mean, these droplets wouldn't go anywhere, they would just float there for minutes. It was beautiful to see it! We did not detect any effect on the droplet size; the mist stayed





Portable water mist fire extinguisher flight unit at NASA Johnson Space Centre.



Dr Angel Abbud-Madrid, Director of the Centre for Space Resources.

homogenous all the way until the flame passed through it.

Did you test conductivity on that mist?

There was an initial concern regarding the effect of using water on electrical components. The way we addressed it was by using de-ionized water. In addition, the size of the droplets is so small that they evaporate very quickly, with little water accumulation left behind.

Why did it take 18 years to develop?

From the initial concept to flying on the Space Shuttle it took us five years, because once you are scheduled on a flight you have to wait your turn, and our mission kept being delayed. After the Shuttle flight we realized water mist was a great choice for a fire suppressant for spacecraft, so we proposed its use to NASA. But by then the Space Shuttle had only a few years before its retirement and NASA had settled for CO2 as the fire suppression agent for the Space Station. A large investment had gone to develop these extinguishers. But then in 2011 NASA decided to extend the life of the Space Station and conducted a review of all its subsystems. For fire suppression, NASA realized that while CO2 was effective, its discharge could lead to high toxicity levels. Besides, the breathing masks required to be used by astronauts filtered fire by-products, but not CO2, nor provided oxygen. It was only then that NASA recommended the use of non-toxic water-mist fire extinguishers to mitigate this risk.

How does the extinguisher work?

A terrestrial water extinguisher has a dip tube that pulls the water from the bottom of the extinguisher, but in microgravity water clings to the walls and so this technique does not work. The space-rated extinguishers have to work in any configuration – up, down, and in any gravity field. The main tank has a metal bellows inside where water is contained, while outside the bellows nitrogen is kept at a high pressure. When the handle is squeezed, the water mixes with the nitrogen at the nozzle, where the atomisation takes place.

In the film Gravity Sandra Bullock uses a CO2 fire extinguisher to propel herself from the Soyuz to the Tiangon capsule. Would a water mist extinguisher have also saved her life?

I always get that! And actually that was one of the questions we had to answer in a test, to measure the kickback force on an astronaut and keep it to a minimum. The force is low enough that it's not going to violently propel astronauts against the wall. They will definetely feel a small force, but a very managable one, not Sandra-Bullock type, not as dramatic!

Will the new extinguishers be used on future space missions?

Absolutely, yes. After water mist became the fire suppression agent of choice for the space station, we and our industrial partner ADA Technologies have been talking to companies which are building human-rated spacecraft. In fact, for the Orion spacecraft being planned for trips to the Moon, NASA* is considering the use of a modified version of the portable fire extinguisher for the capsule. Hopefully, water mist will be used on the Moon, Mars, and any other future mission. Together with ADA Technologies, we are also actively looking into terrestrial applications for portable water-mist fire extinguishers.

*The Orion Multi-Purpose Crew Vehicle is NASA's first spacecraft designed for long-duration, human-rated deep space exploration. Four more portable fire extinguishers are scheduled to take off 22 March on Orbital's OA-6 mission in a United Launch Alliance Atlas V rocket and two more payloads will be carried by Space X later in the Spring.

Editor's note: This article first appeared in the Q1 2016 edition of Industrial Fire Journal and is reproduced in The Catalyst with their kind permission. For more information visit <u>www.hemmingfire.com</u>





NEWS FROM JOIFF ACCREDITED TRAINING PROVIDERS

How ready are you ? How do you know ? By Steve Gregory

Fortunately major incidents or emergencies are rare. However, when they do occur, they can have a significant impact on people, the environment, neighbours, customers, asset infrastructure, business continuity, organisational reputation and the list goes on.

They will also attract the attention of the local, national and international news and social media and of course the Regulatory and Competent Authorities with the possible result that organisations and individuals may face prosecution.

So how ready are you to respond organisationally and personally and how do you know?

Any unscheduled event which results in an emergency, incident or crisis needs the response to be professional, robust and coordinated, both internally and externally and a core element in the effective response is the role of the Incident Management Team (IMT).

A properly prepared Emergency Response Team (ERT) will have the ability to use their combined skill, knowledge and experience coupled with their training and exercising to assess the situation, initiate the immediate executive system shutdowns, then start implementing plans and procedures including the having the autonomy to implement off site plans, domino notifications, mobilisation of all parent organisation response teams, liaise with and guide and advise the Emergency Services, record and secure decisions and rationale and very importantly give constant guidance and immediate operational support to the emergency responders.

Effective communication, understanding and interaction between the IMT and the ERT is key to resolving the incident or emergency quickly and efficiently.

At the same time the IMT is striving to support those at the scene to protect and maintain life, prevent further escalation of the event

and protect the environment all whilst endeavouring to ensure legislative compliance.

Only regular quality training, preparation and exercising of your Crisis, Incident and Emergency Response Teams will prepare your organisation to any level of effectiveness; during a recent experience we made comment that 2 hours a year was just not enough!

Eddistone Consulting has drawn together a team of specialists with a vast amount of experience, coming from Industry, the Emergency Response Services, the multi-agency response community, Health & Safety and Education to develop and deliver training and exercise based on competency-based frameworks matched to each response level. This framework has identified performance deliverables in order to measure effectiveness. The credibility and reality of our exercises coupled the ability to

The credibility and reality of our exercises coupled the ability to make mistakes in a safe environment, rather than make a mistake and fail is valued by our customers. The skill, knowledge and experience of our consultant team help to really develop competencies of team members; and we know because we can measure it.

Editor's note: Steve Gregory is one of the subject matter experts in Eddistone Consulting Ltd. for emergency, incident management, Humanitarian and crowd safety. He holds a Master of Science Degree in Disaster Management and Emergency Planning, is a Fellow of the Institute of Civil Protection and Emergency Management and holds a Level 4 Diploma in Spectator Safety Management.

Eddistone Consulting Ltd. provides JOIFF accredited courses and assessments for those who undertake the critical roles and key tasks at the Crisis, Incident and Emergency (Strategic, Tactical and Operational) levels. Contact Eddistone Consulting Ltd. at + 44 (0)1433 659 800 email: opportunities@eddistone.com

JOIFF NEWS - SAVE THE DATE!!

JOIFF are pleased to announce that in association with ENM, the J**OIFF Africa Fire & Explosion Hazard Management Conference** will take place at the Graceland Hotel, Casino & Country Club, Secunda, South Africa 24th - 25th June 2019

With this early dairy notification we hope that it will enable you to plan and that you will able to join us and hundreds of fellow High Hazard Fire & Safety Specialists from all over the African Continent at this unique event in 2019.

For more information, contact the Conference Organiser Paul Budgen, Tel. + 44 (0)203 286 2289 Email: <u>events@edicogroup.net</u>













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JOIFF MEMBERS PROTECTING THEIR COMMUNITY PROPANE TRUCK VS PASSENGER VEHICLE

JOIFF member Nathan Calabrese is a member of Washington Township Volunteer Fire Department in Valparaiso, Indiana, USA. Located about 40 miles southeast of Chicago, the department is fully volunteer, has approximately 32 active members, and operates two stations covering a semi-rural area of approximately 40 square miles



On May 4, 2017, we received an alarm at 16:54 hrs for a Motor Vehicle Crash: Truck and Driver Pinned in Vehicle. I went directly to station 1, and made the first engine with a crew of 4. Our engine from station 2 was manned with a crew of 3, and was already on scene when we arrived.

Initial size up showed a severe collision, two victims, and a HAZMAT incident. A passenger car was driving west on a 2-lane highway, crossed the centerline, and struck a fully loaded propane truck head-on, which was travelling east. The passenger vehicle was highly damaged and crumpled, and came to rest on the north edge of the highway. The driver was pinned in the vehicle with multiple bodily injuries. The propane truck had veered to the north, dropped off the side of the highway, and came to rest about 50 yards (45 meters) off the side of the road, down into a field after a full end-over-end rollover. It was located about 500 yards (450 meters) to the east of the passenger vehicle. Although the truck landed upright, the truck driver was pinned in the cab with unknown injuries, the rear axles had been torn off, the valve and piping system was ruptured, and there was a large, steady propane leak. The truck engine was still running and could not be turned off.

Our Incident Commander radioed in a second alarm at 17:13 hrs for mutual aid requesting additional resources and manpower, a

HAZMAT notification to our county HAZMAT team, and a longterm road closure request to our county and state highway departments.

It was determined safe to extricate the passenger vehicle victim, due to the distance between scenes. I was on the engine crew attending to the truck, and slowly approaching the leaking rear of the truck, I closed all open valves. The leak slowed, but was still active. A gate valve in the system had ruptured, and would not close fully. I covered the leak with a charged hose line while two of our firefighters approached the vehicle and cut the battery cables to disable the engine. The driver was conscious, and had minor injuries. Still manning the hose line, our crew proceeded to extricate the truck driver, and loaded him into a waiting ambulance. We then deemed the truck scene as secure as possible for the moment, and retreated back to the roadway. Our crew at the passenger vehicle scene had successfully extricated that victim, placed him into a waiting ambulance, and transported him a short distance to an air-med helicopter for rapid transport to a trauma center.

With victims clear and the HAZMAT team on scene, we needed to assist in bringing the truck back up to the roadway, transfer as much propane as possible into a secondary propane truck, and burn off any residual remaining propane, all before the wrecking crew could safely transport the damaged vehicle. The HAZMAT team further inspected the truck, and there was no way to further slow or stop the leak, so we would be working in delicate conditions. At 19:34 hrs Incident Command radioed in another alarm for our department requesting additional manpower from any available members not already on-scene.





JOIFF MEMBERS PROTECTING THEIR COMMUNITY, CONTD.



We began the long process of attempting to raise the frame of the truck from the mud. Using air bags, wooden blocks, and brass and aluminium tools, we dug in the mud for space below the frame to stabilize. Blocking and raising inch by inch, after multiple rotations it was finally high enough for the wrecking crew to properly and safely attach their cables. We retreated to the roadway, and two crews with charged hose lines stood on the ready as the wrecking crew slowly winched the truck onto the roadway, finally able to get it secured and stabilized.

The HAZMAT team together with professionals now on scene from the propane company set up the transfer system, and transferred as much propane as possible into a standby propane truck. When the process slowed and it wasn't possible to transfer any more propane, the HAZMAT team set up their burn-off torches, following the strict procedures for using such equipment. The torches were lit, and the remaining propane was safely burned off with our engine crew on standby and at the ready. Just after 0400 hrs the following morning, all propane had been transferred or burned off, the wrecking crew had loaded the truck, and all personnel were clear of the scene.

Editor's note: Regardless of the specialised job roles of emergency responders in Industry, most will assist in mitigating any type of incident if they come across it when off duty. All experiences by such a person are potential learning for someone else and one of JOFF's important 3 pillars is Shared Learning. The Catalyst is pleased to receive reports on the great work that our members do in protecting their communities when "off duty" from their job role.



NEWS FROM JOIFF ACCREDITED TRAINING PROVIDERS



Kevin Keeler Head of International training FSC and Andy Gilravey College Director ISTC



PRESS RELEASE:

International Safety Training College, Malta
The Fire Service College, United Kingdom

It is with great pride that ISTC wish to announce the arrival in Malta of our newest alliance partner, the Fire Service College, UK.

The Head of International training for the FSC, Mr Kevin Keeler will be attended ISTC for two days of workshops on 27 & 28 June 2018, culminating in the signing of an agreement, whereby both ISTC and the FSC entered into a business relationship in the pursuit of mutually beneficial training opportunities, that will allow for either party to make full use of their Instructors and training resources, and for each party to promote each other's respective programmes of training and consultancy services.

The Fire Service College in the UK is an award-winning leader in fire and emergency response training and one of the world's largest operational fire and rescue training facilities. They specialise in providing dedicated training for fire and rescue services, emergency responders and a wide spectrum of commercial and public sector clients globally.



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HEALTH AND WELLBEING

DON'T GIVE CANCER A CHANCE

Safety and health should be a daily focus and a daily consideration – in particular for emergency responders. Let's blend safety and health together and call it quality of life. Everyday should be a quality of life awareness day! Each day, we need to be aware of the preciousness and fragility of our life and act accordingly to protect it. Perhaps in this manner we could defeat the moments of living on the edge and "pushing the envelope".

Every day, we should strive to reduce the dangers we face and the one of the biggest dangers firefighters face today is cancer. Don't Give Cancer a Chance.

Despite the large and growing amount of information being disseminated Worldwide about this hazard, cancer is being acquired by firefighters at an alarming rate, well beyond the level experienced in the civilian population. This is not because of what firefighters do, but because of what they do not do! An effective offense combined with a strong defense is not only the winning combination of football teams and armies but also holds true in the avoidance of cancer.

Don't Give Cancer a Chance - Remove the Carcinogens – Clean your gear! The crud, dirt, soot and products of combustion on your PPE are the not-so-secret agents of cancer. Left alone, they will enter your body covertly and contaminate it. The best defense is to attack these agents before they can infiltrate! Clean your gear and kill the agents of cancer before they can kill you!

Don't Give Cancer a Chance – Keep the carcinogens out – Respiratory protection The products of combustion are a veritable cornucopia of bad things to breathe. Some of them are identifiable and get a lot of attention such as carbon monoxide, phosgene and hydrogen cyanide. However the ones that are more concerning are the ones that are new and unique to each fire. These mutants, spawned by the burning interaction of the chemicals and petroleum based contents of a fire are unknown and inherently bad news. They invade our body via the respiratory system, an entrance that many times, is left unguarded. The best defense is to protect your respiratory system by wearing your SCBA during suppression and overhaul (post fire) operations while attacking and dispersing the invaders with aggressive ventilation. Remember, our gas monitors tell us what we already know is there, they will not detect the mutants.

Don't Give Cancer a Chance – Fit, Rested and in Good Health – Strengthen body defenses! We are at our peak when we are well rested, mentally and physically fit and in good health. Just as a roof or floor truss, this defensive triangle is only as strong as its weakest link. While it is never you, you know or have heard stories of other firefighters that come to work to "rest up" after a rough couple days off. Then there is the firefighter that shows up for work but in less than stellar health who would rather work than take sick time. A weakness in mental and physical fitness and general health directly affects the ability of your immune system to resist attack. With your immune system compromised, you are at the mercy of whatever you might come upon.

Don't Give Cancer a Chance – Early Detection – Regular

check-ups The danger to the security of your body or a house is the lack of threat assessment or awareness of danger. Cancer in the body is very similar to termites in a house. They enter unseen, establish themselves secretly and do extensive damage before their presence is realized. In many instances, when they finally do make themselves known, the structure they now live in (house or body) is not salvageable. Our best defense is to be aware and have regular check-ups in accordance with the recommendations of your doctor. If an invasion or infiltration is detected early, it can be stopped without long term damage to you...or your house !!

Don't Give Cancer a Chance - What if - Resources for those Combating Cancer

If you are diagnosed with cancer, it is not the end and you are not alone! Each of us has been faced with adversity to one degree or another and while cancer is one of the more egregious adversities, it is just that. There are weapons at your disposal to fight and overcome cancer. They are as powerful as you make them and when used together in a combined arms assault are invincible!

Attitude – Eradicate despair, hunt down and kill melancholy, live each day with vitality, a positive attitude and positive energy.

Your support group – Friends, family, the Firefighter Cancer Support Network <u>www.firefightercancersupport.org</u> nationally and/or local support groups.

Traditional and non- traditional Medicine – Seek out sound counsel/advice. Question everything and do not hesitate to get a second opinion. Once a course of treatment(s) is decided, embrace it and surround it with an attitude and aura of success.

Faith – The old adage is that there are no atheists in fox holes, nor are there many undergoing cancer treatment. Regardless of your belief system, whatever gives you comfort and solace, embrace it and use it

It is my ferrvent wish that cancer will never be at your doorstep, but it something that you must take an active part in preventing. Live long and prosper, experience all that a full life as to offer. **Don't Give Cancer a Chance!**

Editor's Note: This article was written by Chief Charlie Brush who lost his fight with the cancer he contracted as a result of exposures in a serious fire some years before he died. Charlie said he was "the last man standing" of the team of which he was leader, all of whom contracted cancer and died of the exposures before Charlie passed away after a brave and painful fight to stay alive over many years. What he has written is as relevant today as it was when his article was first published in The Catalyst more than 7 years ago.







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2ND INTERNATIONAL FIRE & EXPLOSION HAZARD MANAGEMENT CONFERENCE Corinthea Hotel & SPA - 29 - 30 October, 2018 - Malta



IN ASSOCIATION Johnson Controls

JOIFF CONFERENCE SPEAKERS, TOPICS AND STRATEGIC OBJECTIVES

Vision: An international conference providing a unique blend of international perspectives and a broad range of intellectual, philosophical and practical applications to the Industrial Fire and Explosion Hazard Management discipline.

Objective: Elevate the Holistic global response capability to Industrial Fire, Explosion, Hazmat and other incidents. Create the opportunity to network, educate, and learn from a broad range of disciplines, industries, geographies, and contextual variations on an international basis. Create a conference environment of energy, professional depth, engagement, and enjoyment.

The Speakers: Our keynote speakers set the tone of exceptional achievement and commitment to our profession. The combination of notable speakers brings a broad range of perspective and all are committed to meeting the vision and objectives of the conference. Each is recognised as an expert in their disciplines and fully embraces the spirit and intent of JOIFF; a selfless serving of the response community for the sake of strong capabilities, and continual improvement.

The Attendees: At the first JOIFF FEHM Conference held two years ago, we had attendees from every continent (except Antarctica of course), representing industry, legislators and government officials, service providers, manufacturers, training providers, lawyers, insurers, etc. the conversations and networking opportunities were as expansive as the presentations themselves. Like the first conference, the attendees registered so far for this Conference are reflective of the profile of JOIFF membership and the Response Industry itself.

Sponsors: All of the Conference sponsors will be present to offer their expertise and demonstrate their resources. None of this could happen without their support and commitment to what the Conference is about, the opportunity to see and learn from them is a critical part of the opportunities that are available. Their support is a tangible demonstration of a commitment to learning.

Topics flow and integration: Note: JOIFF reserves the right to revise the schedule up to and including the days of the conference. Also note that speakers have a degree of flexibility to modify their presentations as they see fit, so topic may vary from descriptions.

Protecting today's assets in tomorrow's world – (names of speakers are available on the speakers list)

- We will review the lessons learned from one of the most significant incidents to occur in our industry, the Deepwater Horizon. Analysing key lessons learned from three different perspectives, including a key note address from the federal Incident commander during the incident response.
- We will hear from deeply experienced officials from the highest levels of government (another key note speaker) discussing the practical components of managing risk as an integrated, cross disciplined response. We will hear from specific subject matter experts on Foam, one of the most important and at the moment,





2ND INTERNATIONAL FIRE & EXPLOSION HAZARD MANAGEMENT CONFERENCE CORINTHEA HOTEL & SPA - 29 - 30 OCTOBER, 2018 - MALTA

controversial tools of industrial response.

- We will learn about wildland and fires and key lessons learned from the largest multi-response efforts in US wild fire fighting history including details of integration, logistics management, interagency cooperation, and lessons learned.
- We will learn about the integration of Science and Engineering into the basis of Fire and Explosion Hazard Management from a leading world recognised and accomplished expert (another Key note address)
- We will learn about the finer points of responsibility and accountability, and balancing our philosophy within FEHM from case studies and lessons learned from the courtroom, and the field. (another key note address)
- We will review the technology of drones as a frontier emerged technology which is already being integrated at a very rapid pace, and analyse how to integrate this into current response planning.
- We will learn about Design and new construction, and modification to existing facilities for fire protection technologies and

integration with asset life. Active and Passive detection and protection systems. This sounds dry but is actually a profoundly and highly influential component of our overall FEHM and one that we spend billions (British £) annually as an industry, and often miss-apply or missdiagnose.

- We will analyse the modernisation of existing departments within the limitations of available resources and organisational constraints as well as look at practical case study and recommendations.
- We will review training and the ways JOIFF seeks to influence the most critical components of response: Knowledge, Skills, and Competency.
- We will learn about how the pharmaceutical business and state agencies approaches industrial response from a range of industrial sectors.
- We will learn about how India's high hazard industries work to solve the complexities of FEHM. We will learn their approach, methodologies, limitations and constraints and how they solve these dynamic challenges.

We believe this conference design and construct is the right progression and evolution from the first conference, a wholly different and complimentary approach that will continue to drive the development of our industry. JOIFF is a non-profit organisation representing an international community of high hazard industry response professionals and this is our way of providing tangible support to your growth.

For further details on the Delegate Package or the Sponsorship and Exhibition Opportunities, Contact Event Director **Paul Budgen** on + 44 (0) 203 286 2289 or Email <u>pbudgen@edicogroup.net</u>



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NEWS FROM JOIFF CORPORATE MEMBERS

MSA IS LOOKING FOR THE BEST FIREFIGHTING BUDDIES

Berlin, 18th April 2018: For firefighters, their buddy is absolutely crucial – someone who has their back and they can trust and rely upon in any situation. Now there's a chance to reward them and say "thanks for always being there".

MSA is running an exclusive competition for all firefighters in Europe to be crowned the "Buddy of the Year" in the 2018 Buddy Awards. In addition, all participants have the chance to win some amazing prizes for their fire station. To enter, all they need to do is upload their buddy stories, photos and videos on why their buddy should win, share their story and let others vote!

All entries will be reviewed over the summer and 25 firefighters will be invited to take part in the European finals starting on 1st September 2018 for the chance to win the Buddy of the Year Award and great prizes, such as a custom foosball or table tennis table or dartboards for their station.

The 2018 Buddy Awards is run by MSA and open to any firefighter in Europe. Only one submission per firefighter is allowed. The first round of the competition runs from 18th April to 30th June 2018. The second round for the voting of the finalists starts on 1st September 2018. You can enter the Buddy Awards now: http:// MSAsafety.com/M1



Contact: Anne Gossing Phone: +49 30 6886-1427 E-Mail: Anne.Gossing@MSAsafety.com



About MSA

Established in 1914, MSA

Safety Incorporated is the global leader in the development, manufacture and supply of safety products that protect people and facility infrastructures. Many MSA products integrate a combination of electronics, mechanical systems and advanced materials to protect users against hazardous or life-threatening situations. The company's comprehensive line of products is used by workers around the world in a broad range of markets, including the oil, gas and petrochemical industry, the fire service, the construction industry, mining and the military. MSA's core products include self-contained breathing apparatus, fixed gas and flame detection systems, portable gas detection instruments, industrial head protection products, fire and rescue helmets, and fall protection devices. With 2015 revenues of \$1.1 billion, MSA employs approximately 4,600 people worldwide. The company is headquartered north of Pittsburgh in Cranberry Township, Pa., and has manufacturing operations in the United States, Europe, Asia and Latin America. With more than 40 international locations, MSA realizes approximately half of its revenue from outside North America. For more information visit MSA's website at www.MSAsafety.com .

FLUORINE FREE, ALCOHOL RESISTANT, HIGH PERFORMING, FULLY CERTIFIED: RESPONDOL ATF

Today; when considering to purchase foam concentrates the choice is vast and the regulations varied. Conventional AFFF and AR-AFFF foams are now being challenged by next generation fluorine free foam concentrates. These concentrates do not utilise 20 year old technology which has previously thought to be the only option. Now there is a choice. However until now the performance of fluorine free foams has left a lot to be desired.

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Angus Fire has developed a unique fluorine free foam which has been delivering exceptional results test after test. Respondol ATF is a versatile, high performing fluorine free foam concentrate available in 3-3% and 3-6% concentrations for use on hydrocarbon and polar solvent risks in applications, where fire water run-off cannot be contained, i.e. dispersive releases. Respondol ATF has been developed for general emergency responders who are faced with a variety of risks in a range of situations. Respondol ATF is a patented formulation, which will produce a vapour sealing blanket of foam over the surface of a fuel to secure the incident.



Respondol ATF is the highest rated fluorine free foam available with 1A approvals on every fuel, using every water type within the European test protocol. Industry benchmarking has shown Respondol ATF has a lower viscosity than other fluorine free foams and very low corrosion characteristics which is important if the foam is to be stored in a tank on board a fire truck or within a fixed system. When it comes to approvals Respondol ATF scores exceptionally well. It is fully approved to EN1568pt 3&4, with 1A/ 1A approval using both sea and fresh water. It is also approved to Underwriters Laboratories UL162 with fresh and sea water on hydrocarbons and polar solvents. It has passed Lastfire testing with "Good" ratings on both fresh and sea water. Respondol ATF is also certified by International Martime Organisation (IMO).

When you need a high performing foam concentrate you can rely on, but operate in an uncontained or dispersive situation, Respondol is the best foam for you.

Contact us today, to find out more about Respondol ATF. You can watch Respondol ATF's performance on our website, visit <u>www.angusfire.co.uk</u>



NEWS FROM JOIFF CORPORATE MEMBERS



THE BIGGEST IN MOBILE FIRE FIGHTING



The challenge with fighting an established fire in a large storage tank will require a mobile high capacity fire-fighting system. With tank diameter up to 90 m (295 ft) and total volume around 100.000 m3 (378.500 gallon) of highly flammable liquid in one tank only the right equipment will do the job.

FFS has long term experience with large firefighting systems from their marine division. Total 4100 vessels are on their reference list by mid 2018 including all the biggest fireboats in the world. The systems comprise large pumps with drivers, deluge and foam system, valves and monitors with state of the art remote control. Their technology is now introduced to land-based systems where high capacity is becoming highly focused as the tank storage industry is growing. Some contracts have already been delivered and a growing number of new projects are in the pipeline as the market learn about what FFS can do.

FFS has taken the step into the land-based market for large capacity fire- fighting where they can offer complete systems with performance guarantee based on their in-house system engineering and product range.

The need for tailor made systems in the land-based market is perfect match for the FFS company profile. Their technical department located at head office in Norway do initial design and product development while their production unit in Sweden take care of production and testing in their own factory. Advanced tools are used for verification of system hydraulic calculations to secure performance according to client request. Need for costly consultants are considerably reduced or even deleted by use of FFS engineering competence.

The contract with SCDF (Singapore Civil Defense) is a typical sample of what FFS can do for the tank storage industry:

The world's biggest fireboat with a pumping capacity of 240.000 lpm (63.400 GPM) is due for delivery by Q4 2018 to SCDF. The boat will also be used as back up pumping station for a land

based mobile system with capacity of 100.000 lpm (26.400 GPM) designated for fighting fires in large storage tanks. The trailer and truck-based system comprises one 80.000 lpm (21.000 GPM) monitor and one 20.000/40.000 lpm (5.200/10.400 GPM) monitor including hydraulic driven lift pumps and booster pumps all with diesel drivers. The system includes several kilometers of large diameter hoses with couplings and deployment system as well as foam liquid pumps and induction.

FFS has developed the system in close cooperation with SCDF to ensure capacity and ability for both the big fireboat and

the land-based system as well as interfacing of the two systems. Commissioning and training is due early 2019. Nine years maintenance of the system is also included in the package from FFS which is handled by their local office in Singapore.

In order to maintain their strategy of being a complete system vendor also for the land-based tank farm industry FFS have an extensive program for development of dedicated equipment they can include in their already comprehensive range of in-house made products: Lift pump systems, pump skids, hose handling systems, booster pumps, various monitors and nozzles, foam handling and injection systems, various monitoring and remote/ wireless control to mention some.

All FFS systems undergo a complete test program at their testbed in the factory and/or at their full-scale testing facility at the nearby lake Vanaren where customers are invited to witness the performance before delivery.

All projects for the land-based market is handled by the FFS LB division with office in Prague, Checz Republic. Please contact Managing Director Roger Champagne,

<u>r.champagne@fifisystems.com</u>, or check www.fifisystems.com Images taken from https://youtu.be/xh95M2_3-0Q







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Learn more about US Fire Pump at our booth at the JOIFF Conference in Malta







JOIFF is delighted to congratulate the following people who were awarded JOIFF qualifications during April to June 2018.

DIP JOIFF

ADNOC Fire Team, United Arab Emirates

The following members of the ADNOC Fire Team successfully completed and were awarded the JOIFF Diploma:

- Fahd Abdulla Mohamed Abdulla Alwatani al Ali Dip.JOIFF
- Faisal Abdulla Saeed Alghannami Safdani Dip.JOIFF
- Khaled Salem Khameis Abdulla Salem Dip.JOIFF



Craig Watters Dip.JOIFF Emergency Responder, INEOS Emergency Response Team Grangemouth, Scotland

Craig started his career as an Emergency Responder in 2008 at Stirling Fire Station in Scotland, as a full time Firefighter. Over eight years Craig worked hard to gain as much knowledge and experience as possible, including diverse specialist roles in Swift Water Rescue and a Swift Water Boat Operator. In 2016 Craig joined INEOS Grangemouth as an Emergency Responder where he has now gained his JOIFF Diploma and is enjoying his experience working in the Petrochemical Industry.

Ricky May Dip.JOIFF

Queensland Fire and Rescue Service Tactical Training Unit, Australia

Ricky joined the Queensland Fire and Emergency Services (QFES) in September 1986 as as a probationary firefighter and performed operational duties in the Brisbane area. In 1996 he enrolled in the officer training program and was promoted to the rank of Station Officer (S/O) in 1997. Whilst performing the duties of an Operational Station Officer Ricky also held the positions of Brisbane Staff Officer and Zone Training Officer, where he was responsible for holding the portfolios of first-aid, live fire training, and the Brisbane Region officer development program in which he received a Australia Day medal for his services.



In 2009 he commenced as an acting Inspector in the roles Manager Regional Training, and later in Community Safety as Manager of the Licensed Premises and Places of Public Assembly. 2011 saw Ricky's appointment to the rank of Inspector where he managed the Tactical Training Unit at the Queensland Combined Emergency Services Academy (QCESA). Ricky has also been involved with incident management responsibilities across Australia. One major campaign was as the Incident Controller (Durack Division) during the 2010/11 Brisbane floods where he was awarded the QFES Commissioner's Meritorious Service Medal.

In 2014 Ricky was encouraged to act as a Superintendent with the Strategic Training Command at School of Fire and Emergency Services Training (SFEST) for 12 months which has led to another acting Superintendent opportunity with the Operational Planning Section for 18 months. Among other duties this role has been significant in seeing Ricky manage and audit large scale tactical and strategic multi-agency exercises focusing on interoperability and aligning objectives with the Emergency Management Assurance Framework. In July 2018 Ricky was promoted to the rank of Superintendent and appointed to SFEST.

DIP JOIFF CONTD...



LUKOIL Mid-East Ltd, West Qurna-2 Project, Iraq

The following members of the Lukoil Mid-East Fire Team successfully completed and were awarded the JOIFF Diploma in 2018:

- Sarmad Nadhim Zbari Al-Hameed Dip.JOIFF
- Alexander Telenkov Dip.JOIFF
- Hasan Al Kabi Dip.JOIFF
- Abdullah Sultan Hamza Alrashid Dip.JOIFF
- Kareem Mohammed Falih Al-Battat Dip.JOIFF
- Mustafa Abdulkhadim Ali Al-Ameri Dip.JOIFF
- Hussein Malik Hashim Al-Bahli Dip.JOIFF
- Alaa Munther Abdulalah Alrashed Dip.JOIFF
- Ali Mahmood Shakir Alhawi Dip.JOIFF
- Ilya Boyko Dip.JOIFF

- Adam Sivell
- Sergey Zelenkov Dip.JOIFF
- Ibrahim Al Sameri Dip.JOIFF
- Anwer Ibrahim Mandeel Al-Maliki Dip.JOIFF
- Mohammed Najm Abdulzahrah Ahmed Dip.JOIFF
- Abdullah Taha Qasim Alfandi Dip.JOIFF
- Mustafa Sameer Saddam Al-Gharbawi Dip.JOIFF
- Wisam Al Najarri Dip.JOIFF
- Simon John Williams Dip.JOIFF

We are proud to publish pictures and comments from some of the successful members overleaf.

Message from Jamie Fleming MJOIFF

Emergency Rescue Service - Guard Commander Health, Safety & Environment Department, LUKOIL Mid-East Ltd, West Qurna-2 Project

At Lukoil, we are extremely proud of the multinational team we have constructed and continue to develop.

Lukoil Emergency Rescue Service (ERS) based on the West Qurna 2 project in Iraq was conceived in 2013 and has rapidly progressed into a professional and proficient organisation capable of responding to the development's risk panorama, which includes life risk in accommodation areas, oil and gas industrial hazards and the mitigation of environmental hazards.

ERS personnel chose to undertake the JOIFF Diploma to further enhance their knowledge and maintain their competencies. The ERS training plan is aligned to the JOIFF Diploma performance criteria so progression has been swift, with each ERS shift submitting evidence to prove their competence in the field of industrial emergency response.

Our next step is the JOIFF Leadership 1 certificate; the team are preparing to make a start in last quarter of 2018.





DIP JOIFF CONTD...

Some of those who achieved Dip JOIFF from LUKOIL Mid-East Ltd, West Qurna-2 Project, Iraq

Wisam Al Najarri Dip. JOIFF



I have joined to ERS department in march/2013. The fire department was just a job for me, but I started feeling I was born to be a firefighter. The ERS department changed my life radically - it changed my thinking in life. With the beginning of the early stages of training Firefighter 1 and Firefighter 2, I began to feel that I had found my dream in life. The training continued with hazardous materials, rope rescue, oil spill and Road Traffic Collision and after a while I was promoted to Deputy Team Leader to continue training in a broader and deeper manner. I became obsessed with science in everything related to firefighting and I took many courses online including Pipeline Emergencies Awareness and Operations. I did

not stop there but I studied and succeeded with the JOFF Diploma. The JOIFF Diploma will not be the last qualification I attain, I believe to evolve as firefighter we must continue to learn and seek knowledge.



Ilya Boyko Dip.JOIFF

Ilya Boyko started his career as a rescuer at Russian Federal Air Mobile Rescue Troop (Centrospas). After several years at Federal division, where he received qualifications of Firefighter, Rescuer and HAZMAT ops manager, he moved to Moscow Fire-Rescue Center, that later evolved to Moscow Specialized Fire-Rescue Troop. During 10 years at that troop, he progressed through the roles of Team Member and Crew Manager to Shift Manager.

In 2014, he left Russian Fire Service to join LUKOIL

Middle East oil project in Iraq as a Team leader, later becoming an ERS Manager.

Ilya's current duties include the projects systematic management of fire risk and ensuring that Lukoil's Emergency Rescue Service continues to mitigate the hazards posed by a constantly evolving risk panorama in such a remote environment.



Mustapha Al Gharbawi Dip.JOIFF

Adam Sivell Dip.JOIFF

Adam Sivell started his career as a firefighter in the Royal Air Force. After 4 year's service Adam left and joined Norfolk Fire and Rescue Service where he completed a "Firefighting in the Community" National Vocational Qualification and various trade specific qualifications including: HAZMAT, Incident Command, Crew Manager, RTC, SCBA, Fire Behavior, Fire Setters Educator, PTTLS and A1 Assessor. Adam also worked for Suffolk Fire and Rescue Service as a Crew Manager and Petans International Training Centre as a Senior Fire and Safety Instructor. Adam then completed several health and safety qualifications including a master's degree in safety and risk management.

His career then shifted into the oil and gas industry with different roles in safety, emergency response and crisis management. In 2013, Adam joined LUKOIL Middle



East in Basra Iraq as an operational Team Leader specializing in fire safety progressing to Deputy Chief Fire Officer, with the responsibility for logistics and organizational planning.

Most recently, Adam's career took another change of direction when he was recruited by The Heineken Company to take up the role of Senior Global Safety Lead Capex Projects, his responsibilities include the management of international projects and the monitoring of process safety throughout the company.



DIP JOIFF CONTD...

Some of those who achieved Dip JOIFF from LUKOIL Mid-East Ltd, West Qurna-2 Project, Iraq



Simon John Williams Dip.JOIFF

In June 2018, Simon Williams, LUKOIL Mid-East Ltd, having successfully completed the JOIFF Diploma Programme was awarded the Post Nominal Dip JOIFF. Simon has extensive experience in fire and rescue, starting as a firefighter and working his way through the ranks to Assistant Chief in Aerodrome firefighting, working in various locations around the globe, including some of the most hostile environments.

In 2013, Simon was part of the start-up team on the Lukoil WQ2 petrochemical project, Iraq. Tasked with developing a first rate fire and rescue team and response to the entire projects risk panorama. His skills in leadership, training and inspection came to the fore, ensuring he became a key member of the team, and leading from the front, he continues to strive for excellence refusing to let the departments standards drop. Simon is a great believer in the process of continuous learning, having already achieved many of the IFSAC qualifications, he as starting progressing with JOIFF to refresh his knowledge of high hazard industrial emergency response.

Sergey Zelenkov Dip.JOIFF

In April 2018, Sergey Zelenkov, LUKOIL Mid-East Ltd, having successfully completed the JOIFF Diploma Programme was awarded the Post Nominal Dip JOIFF. Sergey was promoted to the position of Team Leader of Emergency Rescue Service Health, Safety & Environment Department LUKOIL Mid-East Ltd. West Qurna 2 Project. Sergey started his career with the Fire and Rescue Service in the public sector in Moscow. He joined LUKOIL Emergency Rescue Service as Deputy Team Leader. His current Emergency Response duties in Emergency Rescue Service include Operate as On-Scene commander in case of fire or other emergency, Fire & safety analyses and fire risk



assessments of project facilities, organizing and controlling activity of the duty shift of ERS Fire station.

JOIFF GRADUATE

Mark Buckingham Grad.JOIFF Head of Fire and Emergency Planning, Birmingham Airport Limited, United Kingdom



Mark Buckingham started his career as a fire-fighter in May 1995 in Bedfordshire & Luton Fire & Rescue Service and was promoted through the ranks to Station Officer. During his time with Bedfordshire, he qualified as an Instructor and operated as programme manager on behalf of 3 fire brigades for a wholetime fire fighter recruits courses at the Fire Service College, Moreton in Marsh; managing a team of 6 instructors.

In April 2006 Mark moved to London Luton Airport as Deputy Senior Airport Fire Officer/Training Manager in which positions, he assisted in overall running of fire service sharing responsibility for Fire Strategy, Fire Safety and Business Continuity issues and was responsible for staff Maintenance of Competence scheme. In April 2010, he moved to Seacor Environmental Services where he was appointed Emergency

Response Manager, Emirates Aluminium (EMAL), moving in 2011 to SEACOR Response (now NRC), based in UAE, a company specialising in Oil Spill response, training and delivery of outsourced services.

In 2012 he moved as Operations Manager/Consultant to Eddistone Consulting a training and consultancy Company based in the UK dealing with a wide range of high hazard industries, both in the UK and abroad.

In April 2015 he joined to BP Petrochemicals, UK where as Crisis & Continuity Advisor his role was to prepare the business for response to all types of adverse situations from process incidents through to business continuity considerations at all levels from Emergency Responders through to senior managers.

In January 2018 he was appointed Head of Fire and Emergency Planning in Birmingham Airport Limited . UK where he manages the Fire and Rescue Service at the Airport.



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HIGH VOLUME FIRE WATER RETICULATION -FIRE WATER SUPPLY FOR HIGH HAZARD INDUSTRIES By Pine Pienaar FIFireE; FJOIFF; FSAESI

Editor's note: Reticulation is "a pattern or arrangement of interlacing lines resembling a net. In the context of firefighting this relates to a network of lines required when dealing with high volume pumping".

Statement of Issue

The traditional philosophy with regards to fire water reticulation systems within high hazard industries needs to be challenged with the development of high volume supply equipment now available on the market. Several older plants must undergo major upgrades due to the deterioration over the lifespan of the plants and the fire water reticulation system inside battery limits (IBL) and this is where the philosophy needs to be challenged.

Purpose

The purpose of this document is to find an acceptable solution to ensure that the IBL fire water supply in high hazard industry is adequate to efficiently and effectively protect the industry. As a retired Chief Fire Officer, the writer would like to make use of a practical experience that will explain this issue better.

Background and Description

When Complex A was built in 1978 firefighting technology relied on 64mm diameter fire hoses to supply fire water from hydrants to fire appliances and the "outside battery limits" (OBL) and "inside battery limits" IBL fire water reticulation systems were designed around the 64mm fire hose capacity.

In the early 1990's high volume fire hose technology was introduced, and the diameter increased to a "massive" 100mm. Fire appliances and OBL fire hydrants were changed to accommodate the "high volume" capabilities.

Today we have introduced a total new concept of "high volume" and fire water supply is now happening via 300mm+ supply lines and fire water monitors have capacities of 54,00 to 82,000 litres per minute.

Challenge faced to repair or replace IBL fire water lines

The current situation around IBL fire water lines is that Complex A is encountering regular fire water leaks due to the deterioration of the original steel fire water lines. To repair or replace these lines within the battery limits of a live plant will entail excavations in the plants which not only pose a major risk to the operations of the plant but will also be extremely costly.

Proposal

The philosophy around fire water supply in high risk industries has moved to high volume supply from safer distances outside of the battery limits to fire appliances that can safely enter the plants and deploy fire attack lines and monitors into the "hot zones".

The manpower requirements and time factor to deploy high volume (300mm diameter) hoses have reduced with the introduction of hose deployment/retrieval





appliances and the introduction of high volume fire water supply manifolds. Industrial as well as Municipal Fire Services have started the deployment of the high-volume hose deployment/ retrieval appliance technology and the diameter of newly installed OBL fire water reticulation systems have been increased in many cases to accommodate high volume fire water manifolds. Taking the above facts into consideration, the proposal is to replace the IBL fire water reticulation system with high volume manifolds in strategic positions on the battery limits of the operating plants with adequate space for fire appliances to manoeuvre. (Needless to mention that this should be risk-based for each application.)

Conclusion

By introducing the advanced high-volume fire water supply technology to high hazard industries, the necessity to repair or replace the current IBL fire water reticulation system can be <u>mostly</u> eliminated. This will not only result in cost savings but will also not adversely impact on the protection and operations of the plant.



Typical layout of high volume water supply – 300mm from pump/ high volume hydrant manifold to 125mm supply to fire appliances

Design specifications and standards in most high hazard industries on Fire Protection will have to be revised to accommodate the philosophy of high volume manifolds in place of the generic requirement that are still mostly found in existing specifications and standards, for example;

"Fire hydrants will be installed at

- a minimum of 15 meters and a maximum of 30 meters from the area to be protected;
- and a minimum of 30 meters and a maximum of 45 meters from each other".

Editor's note: Pine Pienaar has been a professional in the Fire Services for more than 40 years and retired following 21 years' service as Chief Fire Officer of Sasol Secunda, South Africa after. He is a Fellow of the Institution of Fire Engineers, a Fellow of JOIFF, a Fellow of the South African Emergency Services Institute and one of the founders of The South African Petrochemical Fire Chief's Committee. Pine is a Director of JOIFF and is a Consultant on all matters relating to Industrial emergency response and fire hazard management. He can be contacted at pine.pienaar2@outlook.com









High Volume Manifold installation



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JOIFF QUALIFICATIONS

JOIFF Diploma is a competency programme for personnel who respond to emergencies. It covers necessary key skills, learnt and demonstrated by the student in practical training and exercises that allows them to deal competently with site

JOIFF Technician programme is to allow the emergency responder to enhance their knowledge and skills having already demonstrated their competence in Key Skills.

Graduate of JOIFF is awarded to a person from any JOIFF Member Organisation who has a minimum of 5 years full time service in an emergency response role and has shown professional attainment in Industrial Hazard Management activities.

JOIFF Member is awarded to a person from any JOIFF Member Organisation who has a minimum of 10 years full time service in an emergency response role, has demonstrated competence and shown significant professional attainment in Industrial Fire and Explosion Hazard Management activities and has been successfully assessed as competent through recognised training in the range of activities in Industrial Fire and Explosion Hazard Management.

FJOIFF JOIFF Fellowship is awarded by recommendation of the JOIFF Board of Directors to an individual who has made an outstanding contribution to Industrial Hazard Management activities in support of JOIFF.

For further details contact the JOIFF Secretariat: joiff@fulcrum-consultants.com



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8 - 11	IAFC Fire Rescue International, Dallas, USA
September	
19 - 20	Emergency Services Show, Birmingham, UK
19 - 20	18th International Water Mist Conference, London, UK
October	
2 - 4	Fire and Disaster Asia, Singapore
28	JOIFF CLG 2018 AGM, Malta
29 - 31	JOIFF International Fire & Explosion Hazard Management
	Conference, Malta
November	

Ν

10 - 16 Conference on Forest Fire Research, Coimbra, Portugal

2019

June

24 - 25 JOIFF Africa FEHM Conference, Secunda, South Africa

2020

November

JOIFF Health Wellbeing and Environment Conference, UK

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.

JOIFF Secretariat:

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