

# FIRE AND RESCUE INTERNATIONAL



Integrated fire, rescue, EMS and incident command technology

Volume 4 No 8

Official magazine of  
SAESI

## SAESI 2017 review



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# Comment

We are proud to present our 44th edition of **Fire and Rescue International (FRI)**. Enjoy the read!



Lee Raath-Brownie

**SAESI News**

Outgoing SAESI president, Dino Padayachee, provides an overview of the institute's performance, detailing its organisational structure, external environment, business model and governance procedures, strategies and working groups.

The SAESI News this month primarily features the SAESI Conference, Expo and Training Challenges 2017 held at NASREC, Johannesburg, from 29 October to 3 November 2017. We provide brief overviews of the event with as many photographs as possible. You are welcome to visit the SAESI 2017 gallery on our website [www.fireandrescue.co](http://www.fireandrescue.co) under Galleries/SAESI/SAESI2017 and download the photos from there.

The SAESI 2017 Review in this edition includes the official opening, incoming president's inauguration, long service awards, student awards, conference plenaries, world record and meet and greet prior to the conference and the gala dinner. We also provide overviews of the training events and challenges and, of course, the results!

**Rescue from submerged vehicles**

In our technical article, Colin Deiner looks at the intricacies and considerations during rescues from submerged vehicles. Deiner highlights the importance of using technology in order to stay a step ahead.

**For the love of adrenaline**

National Petroleum Refiners of SA (NATREF) CFO Rory Hodgkinson, discusses the importance of looking beyond the Curriculum vitae (CV) when employing fire fighters.

**First Sikorsky UH-60 Blackhawk in South Africa**

Rob Taylor provides an interesting insight into the technicalities of the arrival of the first ever Sikorsky Blackhawk in South Africa. The man behind this historic feat is Mark Jackson, one of South Africa's best fire fighting pilots.

**Leadership**

US-based contributor, Wayne Bailey of the International Fire Service Accreditation Congress (IFSAC), writes about leadership principles in his regular column on leadership.

**Heritage**

Our regular column Heritage, which focusses on the origins and traditions within the fire, rescue and emergency medical services, brings you the story behind the humble fire bucket in this issue.

Without our contributors, this magazine would not be possible. Thank you for your effort and insight. Also, a BIG thank you to all our advertisers and readers for their continued support! Fire and Rescue International is your magazine. Read it, use it and share it!

**Lee Raath-Brownie**  
Publisher

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**This month's FRI Images winner!**

**Congratulations to**

Yolande Pretorius for her photograph 'Cape Winelands Fire Services in action' taken with a Nikon D3000 with an 18mm lens. Settings: ISO 100, shutter speed 1/320 and an F-stop of 6.3.

**Yolande Pretorius wins this month's prize money of R2 000!**

**Photo description:**  
Montagu fire

**Well done!**

**Best rescue, fire or EMS photo wins R2 000!**

Fire and Rescue International's (FRI) monthly photographic competition is open to all its readers and offers you the opportunity of submitting your digital images of fires, fire fighters, disasters, incidents, emergencies and rescues.

**Rules**

- All photographs submitted must be high resolution (minimum 1 meg) in jpeg format
- Allowed: cropping, curves, levels, colour saturation, contrast, brightness, sharpening but the faithful representation of a natural form, behaviour or phenomenon must be maintained
- Not allowed: cloning, merging/photo stitching, layering of two photos into one final frame, special effects digital filters
- Fire and Rescue International (FRI) reserves the right to publish (printed or digitally) submitted photographs with acknowledgement to the photographer
- Winners will be chosen on the merit of their photograph
- The judge's decision is final and no correspondence will be entered into afterwards



**Entries must include:**

- Name of photographer
- Contact details (not for publishing)
- Email (not for publishing)
- Name of photograph
- Brief description of photograph including type of incident
- Camera, lens and settings used

All entries must be emailed to:  
**lee@fireandrescue.co**

**>> ENTER NOW!**



# Outgoing President's comment



Dino Padayachee

## Organisational overview and external environment

SAESI is a success story of member advocacy, participation and collaboration that created value over time that must be embraced and shared by our youth and future leaders to ensure sustainability.

The institute was originally founded in 1959 by its members located within the municipal fire brigades with a

vision to promote the fire services for the people of Southern Africa by developing professional standards, policies and legislation.

The perseverance and passion of the members saw the Institute being formally recognised 28 years later in the Fire Brigade Services Act, Act 99 of 1987, as a member of the Fire Brigade Board.

The Institute in 1995 evaluated five levels of Fire Technology programmes with the Human Science Research Council (HSRC) Centre for the Evaluation of Educational Qualifications that formed the basis for professional development and employment and still prevail in the industry today.

Much work has been done since then to respond to stakeholder aspirations to draw alignment of these occupational programs into the National Skills Development Strategy that translated to the registration of the Occupational Certificate Fire-fighter Practitioner in the NQF Sub-framework (NQF4).

The Institute further transformed itself to accommodate its expanded member base spanning over municipal, military, marine, aviation, petrochemical, wildland and

industrial sectors and became known as the Southern African Emergency Services Institute (SAESI).

SAESI also collaborated internationally and was admitted since 1995 as a certifying entity of the International Fire Services Accreditation Congress (IFSAC) to quality assure its proficiency-based National Fire Protection Association (NFPA) programmes in Southern Africa.

Current collaborations also include the International Association of Fire Chiefs (IAFC), NFPA and the Metro Fire Chiefs of USA (MFCA).

SAESI has also strengthened local partnerships with the Local Government Sector Education and Training Authority (LGSETA), Quality Council for Trades and Occupations (QCTO), Cooperative Governance and Traditional Affairs (CoGTA) and National Disaster Management Centre (NDMC) as a community of expert practitioners (CEP).

## Governance

SAESI is now a registered non-profit company having in place an adopted Memorandum of Incorporation (MOI).

The governance of SAESI is vested within the board of directors who are guided by a board charter, which is modelled in line with the principals of good governance and are regulated by a code of ethics and conduct. The board has appointed its first chief executive officer (CEO).

## Business model

SAESI's objectives direct its business activities,

- a. To promote emergency services for the people in Southern Africa through advocacy, support and participation in the development of professional standards, policy and legislation within the field of emergency services;
- b. To facilitate training and development of its members, the community and other relevant structures in the field





- of emergency services by sharing and publishing relevant research and training materials and facilitating forums for discussion and dissemination of emergency services techniques, methodologies and information;
- c. To serve as an organisational aid to promote the interests of its members as a whole and the emergency services, in pursuance of the objects of the emergency services;
  - d. To act independently in so far as their actions do not affect the general policy of emergency services;
  - e. To do all such other things as are incidental to or conducive to the attainment of all or any of the above objectives.

### Strategy and resource allocation

SAESI has adopted a developmental approach to learn as we advance and to advocate, collaborate and participate whilst maintaining independence to aspire to the stakeholder expectations that would improve our services to all people of South Africa.

SAESI has in place four work groups that are occupied by full time company officers from the head office that provides the secretariat and members elected into office for a four-year term to respond to its activities namely:

The Quality Assurance Work Group (QAWG) that focuses on key outputs of Assessment and Accreditation of training services providers and Moderation and Certification of training programs in line with the IFSAC standards. SAESI has also created value in extending these training opportunities to the existing services providers to advance the South African LG SETA standards.

The Events and Marketing Work Group (EMWG) that focuses on sharing and publishing relevant research and training materials and facilitating forums for discussion and dissemination of emergency services techniques, methodologies and

information. Its outputs are grandly displayed in its conference and involve merchandising and media relations to maintain contact with our stakeholders.

The Research and Development Work Group (RDWG) that focuses in the development of professional standards, policy and legislation within the field of emergency services. Its outputs involve participation, collaboration and advocacy within environments of the LG SETA, South African National Standards Authority on the National Building Regulations to develop new and upgrade existing standards.

The Administration Work Group (AWG) that focuses on the objective to act independently in so far as their actions do not affect the general policy of emergency services and focus on two key outputs of management of the companies' risks and conducting internal audits to ensure administrative and legal compliance.

### Performance

The stakeholder's primary desire since inception was the professionalisation of the industry.

On 1 September 2017, the South African Qualifications Authority (SAQA) published its intent to register a professional body and professional designation. This milestone gives just cause to celebrate.

The next phase requires the migration of all fire fighters of the professional body to Recognition of Prior Learning (RPL) against the new occupational qualification. The process for applications will be finalised soon.

The challenges ahead that require attention are firstly mandatory membership with the professional body to ensure continuous professional development (CPD). This may create some challenges as the membership and participation was historically on a voluntary basis.

The strict adherence to the Ethics and Conduct of Professionals is



another challenge in that members fall with environments regulated by organised labour and power play actions poses potential threats to professionals that participate in any activities that compromise the safety of our citizens and the integrity of the institution.

### Conclusion

In conclusion, allow me to welcome the 31st President of SAESI, Mr Melvin Ramlall, who has 29 years of experience in the eThekweni Fire and Emergency Services in KwaZulu-Natal. He has served actively on many committees over the years and is a fellow Member of the Institute. He is also registered as one of the company's first directors in 2014. I am pleased and confident to say that Mr Ramlall is very well exposed to the environment and I have every confidence that he will lead the Institute effectively.

We also welcome our first female vice-president, Ms Arlene Wehr. We are of the strong belief that she will also assist in taking SAESI to the next level.

We wish our president and vice all the success over their term of office. ▲



# SAESI Conference, Expo and Training Challenges 2017 official opening

The Southern African Emergency Services (SAESI) Conference, Expo and Training Challenges 2017 took place from 29 October 2017 to 3 November 2017 at NASREC, Johannesburg. The conference was aptly themed 'Climate change and the emergency services'.

Melvin Ramlall, City of eThekweni Fire and Rescue, was inaugurated as the 31st president of SAESI and Arlene Wehr, City of Cape Town Fire and Rescue, as vice president during the official

opening on 1 November 2017. Ramlall will be heading up SAESI for the next two years. Wehr made history as the first female vice-president since the institute's inception.

Jugathesan (Juggie) Padayachee preceded over the traditional necrology with Hennie Croucamp ringing the bell in honour of those members that have passed on. Chaplain Rodney Berry read the Fire Fighter's Prayer followed by a moving performance of 'The Last Post' by Emile Conrad on the saxophone.

Dr Moses Khangale was programme director and Clinton Manuel welcomed delegates after which outgoing SAESI president Dino Padayachee, delivered his report. Padayachee also introduced the incoming president, Melvin Ramlall, followed by the ceremonial handing over of the presidential chain with the assistance of past presidents Marthinus (Tinus) Pretorius and Moshema Mosia. The incoming presidency took Oath of Office presided over by Judge Sakkie Bosman, followed by the formal address by Melvin Ramlall.

## SAESI holds EXCO prior to conference

The Southern African Institute of Emergency Services (SAESI) held its executive committee (EXCO) meeting in Boksburg North on 30 and 31 October 2017. The EXCO meeting

was a special session with the purpose of reviewing the Strategic Planning Assessment and alignment with the Annual Performance Plans and International Reporting Framework with its next Five-Year

Plan as guidance. SAESI 2017 international speaker, Allan Pellowe of 112 Solutions in the United Kingdom, joined the EXCO in order to circulate amongst SAESI EXCO members and management.





SAESI president Ramlall reiterated the conference theme of climate change and the impact on emergency services and said that the conference links to the Global Agenda of The Paris Agreement on Climate Change and South Africa's National Agenda of Sustainable Development and the Local Government Sustainable Development Goals to 'make cities inclusive, safe, resilient and sustainable'. "This conference also links to the SAESI objectives; to facilitate training and development of its members, the community and other relevant structures in the field of emergency services by sharing and publishing relevant research and training materials and facilitating forums for discussion and dissemination of emergency services techniques, methodologies and information," he added.

President Ramlall introduced the incoming vice-president, Arlene Wehr, who holds an Associate Diploma and is the chairperson of the Cape Peninsula Branch, has 21 years' active experience in the emergency services industry with a passion for vehicle



extrication and rescue and has successfully led teams in international competitions environment."

Local Government Sector Education and Training Authority's (LGSETA's) Pumla Mkele shared the development status of Fire Fighter qualifications and said that the LGSETA and SAESI was approved as Assessment Quality Partner by the Quality Council for Trades and Occupations (QCTO). Mkele also detailed the Recognition

of Prior Learning (RPL) project and the development of the RPL toolkit.

Alan Pellowe of 112 Solutions in the UK delivered the keynote address. Pellowe focused on the effects of climate change on the fire profession globally, highlighting the importance of an integrated approach and the role of the emergency services, training, volunteers, the public and advanced early warning systems in mitigation and response.

Student Awards Certificates / 2016 Academic Year
KV Phoko Chubb Floating Trophy Highest Percentage over 70 - FST300
KM Nmaguvhuni Chubb Floating Trophy Highest Percentage over 70 - FST300
KV Phoko Sasol Floating Trophy Highest Percentage over 70 - FES300
MW Modimola Hi-Lay Sales Floating Trophy Highest Percentage over 70 - FIT300
C Bart Flip van Staden Floating Trophy Highest Percentage over 70 - MNG100
KS Ngema Bob Hardy Floating Trophy Highest Percentage over 70 - FST400
A Ahmed Bob Hardy Floating Trophy Highest Percentage over 70 - FST400
RE Netshipise Confeco Floating Trophy Highest Percentage over 70 - FES400
PI Masola Sysman Floating Trophy Highest Percentage over 70 - FIT400
NJ Mulefu Amkus Floating Trophy Highest Percentage over 70 -MNG200
LP Masindi MSA Shield Highest Percentage over 70 - FST500
MN Mathebula MSA Shield Highest Percentage over 70 - FST500
P Kgatla MSA Shield Highest Percentage over 70 - FST500
MN Mathebula "The Alliance" Shield Highest Percentage over 70 - FES500
TS Ngwenya "The Alliance" Shield Highest Percentage over 70 - FES500
OM Pule Eskom Floating Trophy Highest Percentage over 70 - FIT500
SG Khunoane Dries Lombard Floating Trophy Highest Percentage over 70 - MNG500
TS Ngwenya Dries Lombard Floating Trophy Highest Percentage over 70 - MNG500
KV Phoko Angus Floating Trophy Highest Overall Percentage - All 4 (300)
LP Masindi Shorten Floating Trophy Highest Overall Percentage - All 4 (400)
TS Ngwenya Sir HM Smith Floating Trophy Highest Overall Percentage - All 4 (500)
TS Ngwenya LS de Villiers Floating Trophy Highest Overall Percentage 75% Distinction - All TS Ngwenya M050173 SAESI Student of the Year 2016 Top Achiever on 500 level
Johannesburg Emergency Management Services Hannes de Beer Floating Trophy Most Awards Received





▶ Dr Mmaphaka Tau, deputy director-general (Head), NDMC, highlighted interface between climate change and disaster risks in South Africa and the global fire risk context. He discussed the measures and strategies that fire services must implement in the context of climate change and said that communities must also take ownership for reducing the risks posed by fires.

Dr Tau added that fire services need to improve their discipline, commitment and fitness levels. He furthermore said that the NDMC will ensure the development of applicable legislative and regulatory frameworks to support the delivery of fire services within the context of the Back to Basics Programme.

The following awards and certificates were awarded:  
**Fellow Awards Certificate**  
 VM Smith

- MED Galvin  
 D Snyman
- 30 Years Continued Membership**
- D Padayachee  
 DS Khunou  
 MP Malange  
 NH Mutshauba  
 CM Reynard  
 E Jacobs  
 WJ Welkom  
 AG Munyai  
 LJ Mashiloane  
 MW Sekhantsa  
 ML Tshivhase  
 SL Mokoena  
 CE Carls  
 NK Birjalal  
 A Visser  
 CF Aucamp  
 AR Hartley  
 CP Daniels  
 J Laubscher  
 MP Mosia  
 NP Moloji  
 PA Herbert

- CT Bibby  
 JW Sekano  
 A Hartshorne  
 EM Jansen  
 JFH Burger  
 RJF Klaassen  
 LP Cloete

**40 Years Continued Membership**

- SF Abrahamse  
 JCW Roets  
 FJ Bekker  
 MED Galvin  
 JL Ingram  
 VM Smith

**President's vote of appreciation**

- CP van der Merwe (Posthumously)

Fire and Rescue International congratulates Melvin Ramlall and Arlene Wehr on their achievement and is certain of the leadership, diligence, attentiveness and success that the incoming presidency will provide SAESI and its members as well as the industry as a whole. ▲







# SAESI Conference and plenaries 2017

The SAESI Conference and plenary sessions ran concurrent with the SAESI Conference, Expo and TrainingChallenges2017 at NASREC, Gauteng. The plenary session topics were industry-specific and provided a wealth of information as well as opportunity for open discussion. Topics included wildfire/urban interface, technical rescue, airport rescue and fire fighting (ARFF), fire safety and industrial fires. The plenary sessions ran over two days and finished at lunchtime in order for delegates to visit the exhibition and challenges.

The wildfire/urban interface plenary was championed by Lee Raath-Brownie and included presentations on 'Challenges of wildfire and climate change on forestry industry' by Churchill Mkwalo of the Department of Agriculture and Forestry (DAFF); 'Wildfires in the urban interface: ICS challenges' by CFO Ian Schnetler of the City of Cape Town Fire and Rescue; 'Pre-season planning' by Malcolm Procter of DAFF; 'Wildfire courses and training' by Braam du Preez of the Nelson Mandela University (NMU); 'Fire protection association (FPA) strategies and lessons learned' by Stephen Devine of Mpumalanga Umbrella FPA; 'Wildfire awareness toolkit' by Etienne

du Toit of Western Cape Government; 'Forensic wildfire investigations in the light of climate change' by Rob Erasmus of Enviro Wildfire Services and 'Knysna: a case study' by Colin Deiner of the Western Cape Province.

The technical rescue plenary, championed by Colin Deiner, included presentations on 'Technical rescue, an international perspective and trends' by Alan Pellowe of 112 Solutions, UK; 'Trench rescue' by Charles Mbaso of City of Tshwane Fire and Rescue; 'The rhythm of technical rescue' by Colin Deiner; 'Combat search and rescue (CSAR)' by Peter van der Spuy of ER24; 'A journey through Africa's largest NGO' by Ahmed Bahm of Gift of the Givers and 'Off road rescue' by Ivor Rimmer.

The ARFF plenary was championed by CFO Clive Naidoo of OR Tambo International Airport (ORTIA) and topics included 'Aerodromes categorisation, audits and licensing requirements' by Nomusa Mkhize of the Civil Aviation Authority (CAA); 'Importance of brand and reputation' by Clive Naidoo of ORTIA; 'Training standards' by Rudi Swanepoel of Lanseria International Airport; 'A pilot's perspective' by David Chandler of Avex Air; 'Fleet

and equipment maintenance' by Jo Niemann of Aerodrome Rescue and Fire Fighting and 'Search and rescue' by Santjie White of the Aeronautical Search and Rescue Coordination Centre.

The fire safety plenary was championed by Lee Raath-Brownie, assisted by Johan Breytenbach of City of Tshwane EMS and included 'Fire safety in South Africa: challenges' by Dr Moses Kghangale of the NDMC; 'SA Fire statistics' by Moshema Mosia of FPASA; 'Enforcement of fire safety on high-jacked buildings' by January Molo of the City of Johannesburg EMS; 'Pre-incident planning' by Anthony Bruno of Midvaal Fire and Rescue; 'Fire service industry, where to from here?' by Tony Belanco of JASCO; 'Johannesburg safety kits' by Synock Matobako of CoJEMS and the 'Smoke alarm campaign' by JJ Pretorius of Breede Valley Fire Department.

André Tomlinson headed up the industrial fires workshop with topics such as 'International incidents and trends', 'Tank farm fires', 'Fixed systems vs response', 'Water supply and relay' and 'Emerging and future technologies'. Sasol Secunda's CFO, André Labuschagne, discussed the 'Importance of training in industrial fires'. ▲

## Gauteng PIER spreads fire safety message to school children at SAESI 2017

The Gauteng Public Information, Education and Relations (PIER) promoted fire safety and awareness

through discussions and activities at SAESI 2017. Around 200 primary school children were bussed to event each day where they were given

the opportunity of learning about fire safety and preventative measures, enabling them to take the information back to their communities. ▲





# World record achieved!

**A** new world record was set by fire fighter teams on 29 October 2017 at SA Emergency Care, Modderfontein, when 68 fire fighters pulled/pushed the Midvaal pumper over a distance of one kilometre in an amazing time of 8 minutes and 41 seconds!

The event formed part of the Meet and Greet day prior to the SAESI Conference, Expo and Training Events 2017. Chris Batts of Sport Against Crime was in attendance to manage,

audit and record the event on behalf of Recordsetters.

The specifications of the attempt as sent through to Recordsetters for registration as a World Record:

- Date: 29 October 2017
- Venue: Modderfontein, Johannesburg, South Africa
- Coordinator: Chris Batts from Sport Against Crime
- Attempt: A team of 68 members from SAESI to pull a fire engine weighing 14 860 kilograms over the distance of one kilometre in the

shortest possible time  
• Time: 8 minutes and 41 seconds

Batts confirmed that this was a new world record.

Thank you to all who were involved with a special mention to Midvaal Fire and Rescue, the Southern African Emergency Services Institute's (SAESI's) Salomé van der Berg and the SAESI HQ staff, Theresa Geldenhuys of Ekurhuleni EMS and, of course, the teams that made this memorable event possible. 🔥





# Rosenbauer

## Service Excellence Award 2017



The prestigious Rosenbauer Service Excellence Award 2017 was presented on 1 November 2017 at the SAESI 2017 Conference, Expo and Training Events. The winner of the 2017 award to the value of R80 000 was Overstrand Fire, Rescue and Disaster Management and was received by Chief fire officer Lester Smith.

**Rules**  
SANS 10090:2003 was used as the basis for the assessment of service excellence under certain criteria. All district B and C municipalities were allowed to enter. The information supplied had to be supported by valid documentation for the two-year period from July 2015 to June 2017, which was verified.

**Charity donation**  
Rosenbauer also donated R10 000 to a charity, which was selected from the nominations submitted by the fire services. This year the donation went to Children of Fire.

Congratulations to Overstrand Fire, Rescue and Disaster Management and Children of Fire! ▲

## Dräger confined space challenge wows at SAESI 2017



Dräger South Africa offered a confined space training challenge in its purposely-built mobile training trailer at the recently-held SAESI Conference, Expo and Training Challenges. Teams of two had the opportunity of challenging other teams to see who could do the

circuit in the fastest time possible. Participants had to wear bunker gear and self-contained breathing apparatus (SCBAs) and find their way in the confined space maze in the dark with simulated smoke. The teams were donned in the latest Dräger fire fighting bunker gear and Dräger SCBAs. Dräger experts were

at hand to explain what makes Dräger's safety solutions different and shared product information and live demonstrations. The team from City of Cape Town Fire and Rescue won with a winning time of 1 minute 23 seconds and were able to walk away with a new Dräger fire fighting helmet each! ▲

# Your Mission drives us

Staying safe when saving lives comes down to being able to count on the reliability of your equipment in any incident.

Dräger is dedicated to you; offering equipment that fulfils the highest safety standards, is easy to use and comfortable to wear. It's all part of our commitment to providing you with the solutions you need so you can focus on nothing but your mission.



**Firefighting Helmet  
HPS® 7000**

Innovative and dynamic design, ergonomic fit with components which make it a multifunctional system solution. It provides optimum protection during every operation.



**Thermal Imaging Camera  
UCF® 9000**

Thermal imaging and digital camera in one helping you to remain focused.



**Self-Contained  
Breathing Apparatus  
PSS® 4000**

One of the lightest professional self-contained breathing apparatus for firefighters.



Visit us at SAESI Expo 2017,  
Nasrec Expo Centre, Johannesburg  
Hall 8 Stand F7 – 11

For more information visit: [draeger.com](http://draeger.com)



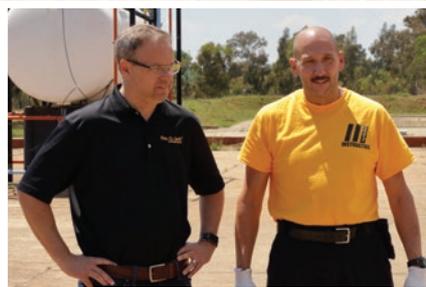
# SAESI 2017 Meet and greet and badge swapping

**S**AESI Conference, Expo and Training Challenges 2017 kicked off on 29 October 2017 with a registration day for all participating teams prior to the two-day training sessions, which were followed by the challenges. Apart from the administrative work, teams had the opportunity of taking part in the World Record attempt and to just mingle, catching up on old times and making new friends. The traditional badge swapping event took place on Tuesday evening, 31 October 2017. Both events took place at SA Emergency Care's Training facility in Modderfontein.





# Vehicle extrication training and challenge at SAESI 2017



SAESI 2017 held at NASREC, Johannesburg, saw teams from City of Cape Town, Midvaal Municipality, Eden District Municipality, City of Mangaung, Msunduzi Municipality, City of eThekweni, City of Ekurhuleni and Cape Town Metro Rescue participate in the vehicle extrication training and challenge. The champion for vehicle extrication was Theresa Geldenhuys and it was endorsed and supported by the South African Medical Rescue Organisation (SAMRO), a member of the World Rescue Organisation (WRO).

The vehicle extrication training took place two days prior to the challenge and was held at the City of Johannesburg's Rietfontein Training Centre. Training topics included risk assessment, physical and mechanical entrapment, vehicle stabilisation, international trauma life support (ITLS)

approach, new vehicle technology and hand tools including high-lift jacks. SAMRO also held its annual Assessor's Workshop.

### Challenge

Teams consisted of six members where one member was designated as the team captain/leader and one member as the team medic.

The challenges were based around simulated rescue scenarios or 'evolutions'. The teams were briefed on the actual scenarios for each evolution on the day. These included the 'standard/limited rescue' where teams had to assess the casualty and identify the correct pathway for extrication, whilst recognising the limitation of the tools available. To achieve success teams needed to work efficiently and manage all the resources at their disposal to complete extrication of all

casualties within the available time frame.

In the 'medical emergency rescue (rapid)', teams had to recognise the immediate lifesaving needs of the casualty and to achieve success, needed to demonstrate a balance between efficiency, safety and urgency in order to achieve the task within the prescribed time frame.

In the 'complex rescue/evolution', sufficient space needed to be created for medical assessment and intervention, with the casualties release/packaging relative to their mechanism of injury. Teams were expected to triage the casualties and identify the medical priority for extrication and to be successful, the teams needed to work within the full three phases of vehicle extrication rescue to affect a thorough release and removal of both casualties. ▶







# Emergency medical rescue training and challenge

**S**AESI Conference, Expo and Training Challenges 2017, which was held at NASREC in Johannesburg, included an Emergency medical rescue training and challenge as part of its portfolio. Netcare's Mandé Toubkin and David Stanton were the designated champions. A two-day training schedule preceded the challenge and was held at Florida Park Fire Stations in Johannesburg.

Training topics included infection control, ventilation, spinal management, street drugs, incident management, ethics, fatal scenes, leadership, customer service, organ

donor recognition, terror incidents, blunt trauma, burns, mechanism air accidents, paediatric head injury or cardiac, who's your sister and a question and answer session on the Health Professions Council of South Africa (HPCSA). Teams consisted of three members and there were two levels of participation ie Intermediate Life Support (at least 1 x ILS member) and an Advanced Life Support (at least 1 x ALS member). Sponsors included Netcare and STAT-Tiakeni Medical and T-shirts for the judges were sponsored by Fremtac Fire and Rescue.

The training benchmarks included:

- Develop a 'safety first' attitude

amongst all emergency services workers

- Emphasise patient, rescue personnel and scene safety
- Encourage higher and more proficient levels of pre-hospital care
- Create the broader spectrum of treatment principles and techniques

The challenge included mostly real-life scenarios and teams were judged on the following criteria:

- Scene safety
- Initial patient contact
- Assessment of injuries and condition
- Treatment of casualty
- Patient handover ▲





## SAEC Fire Fighter Combat and Rescue Challenge at SAESI 2017

The SA Emergency Care (SAEC) Fire Fighter Combat and Rescue Challenges took place during SAESI Conference, Expo and Training Challenges 2017 held at NASREC in Johannesburg. The event consisted of an individual combat challenge, a rescue challenge for teams and a team relay event. Bunker gear and self-contained breathing apparatus (SCBA) sets were worn during all the events.

60 people participated in the individual challenge, 13 of whom were female and 15 teams entered the relay event, of which two teams were female. The rescue challenge saw nine teams participating of which only two were all female

teams. 23 masters (over the age of 35) participated with six being female.

Participating municipalities included Eden District Municipality, City of eThekweni, City of Cape Town, Overstrand Municipality, Midvaal Municipality, Nelson Mandela Bay Metro Municipality, Drakenstein Municipality, Msunduzi Municipality, Mangaung Metro Municipality, City of Johannesburg reserves, the South African Air Force and some independent teams.

### Individual and team relay events

The individual event included the tower stage where participants had to carry rolled hose up five flights of stairs and then hoisted another rolled hose coil, weighing 21kg, to the top of

the tower. The Kaiser Force machine followed where after they had to run zig-zag through a course of cones, pick up a charged hose at the end and pull it over 20 metres, exit through swing doors, open the nozzle and knock the target over. The dummy drag then followed over a distance of 30 metres.

### Rescue challenge

The rescue challenge saw a team of four fire fighters crawling through small tunnels and over a triangular obstacle, retrieving Oscar the dummy and returning over the same obstacle course on their knees while being blindfolded.

A very big thank you to Jan and Elmaré Liebenberg for their sponsorship of this event. ▶









## High angle rescue technician training and challenge at SAESI 2017

The high angle rescue technician (HAT) training and challenge was held at SAESI 2017 with teams from the South African Air Force (SAAF), City of Cape Town, City of Mangaung, City of eThekweni and City of Ekurhuleni participating in the event. The HAT training and challenge took place at NASREC, Johannesburg, was sponsored by HeightSafety and Waco/SGB Cape and was championed by Charles Royine. T-shirts for the judges were sponsored by Fremtac Fire and Rescue.

The challenge consisted of two categories namely the Advanced Category (High Angle 2 qualified) and the Intermediate Category (High Angle 1 qualified).

### Training and challenge

The two-day training programme included a day of theoretical training and a day of practical training exercises, fine tuning the rescue teams' skills in the various high angle challenge scenarios. Training topics included working at height:

fall arrest, travel restrict and work position; back tie anchors; reinforcing the marginal anchors and floating anchors; safe belay systems TWPB vs 540 belay device vs MPD vs Petzl ID D20; a uniform national curriculum for Advanced Rope Rescue (High Angle 2); legislation; acts; local and NFPA codes relative to rope rescue in the fire and rescue services; SAQA Rigging Unit Standard 229997 and its relevance to urban technical rope rescue and industrial rope access and the fire and rescue service.

## Fire and Rescue International gifts fire engine model at SAESI 2017



A competition run on Fire and Rescue International's stand at SAESI 2017 had visitors fill in a questionnaire in order to win a die-cast metal fire engine model of a 1927 Seagrave. The winner of the Signature 1927 Seagrave model was City of Cape Town's Ryan Abrahams. Congratulations Ryan and enjoy! 🔥





# And the winners are.....

SAESI2017 saw representatives from several municipalities compete in bench-marking challenges such as vehicle extrication, high-angle technical rescue, emergency medical rescue and the SAEC Fire Fighter Combat and Rescue Challenge. Although both the challenges and the

training preceding the challenges were demanding and testing the participants' abilities, there has to be a winner.

The SAESI 2017 challenge prizes were sponsored by various companies including HeightSafety, ETS Emergency Training Solutions, SAESI,

STAT-Tiakeni Medical, Skillstrain, Fire and Rescue International, SafeQuip, Chemsystems and ER Safety Signs, amongst others. The trophies and medals were sponsored by Marcé Fire Fighting Technology. A huge thank you to all the sponsors for their support and congratulations to the winners!





SAEC Fire Fighter Challenge			
Male	Time	Rank	Service
Emile Conrad	1:51	1	Eden District
Rudi Van Der Berg	1:57	2	City of Cape Town
Ryan Abrahams	1:59	3	City of Cape Town
Alno Kroon	2:00	4	City of Cape Town
Henco Swart	2:00	4	Rosenbauer
Arnold Van Lill	2:06	5	City of Cape Town
Lucan Wentzel	2:07	6	City of Cape Town
Hugo Van Schalkwyk	2:07	6	Independent
Lehan Steynburg	2:12	7	Rosenbauer
Shadrack Mudzuli	2:12	7	Midvaal Fire and Rescue
Simiso Cyprian Gumede	2:17	8	City of eThekweni
Kakhu Tendani	2:25	9	SA Air Force
Gary Kouffman	2:28	10	Rosenbauer
SM Gcwensa	2:29	11	City of eThekweni
Nic Berry	2:31	12	City of JHB reserves
Lesley Coltman	2:33	13	Nelson Mandela Bay
Doniel Fortuin	2:34	14	Drakenstein Municipality
Duane Grantham	2:34	14	Msunduzi Municipality
Russel Hoskins	2:39	15	Msunduzi Municipality
Thabani Elvis Mgumbese	2:39	15	City of eThekweni
Nkululeko Sibetha	2:41	16	Msunduzi Municipality
Ricardo Simonato	2:43	17	Rosenbauer
Mnduzi Vilane	2:47	18	City of Ekurhuleni
Lethukuthula Khanyile	2:47	18	Msunduzi Municipality
Xolani Zwane	2:48	19	Midvaal Fire and Rescue
Kurwin Gericke	2:49	20	Eden District
Shane Booysen	2:50	21	Overstrand Municipality
Senzo Mjana	2:51	22	City of eThekweni
Gert Steynsburg	2:52	23	Rosenbauer
Bradley Grootboom	2:55	24	Overstrand Municipality
Thabo Mbengwane	3:00	25	City of Ekurhuleni
Moeketsi Maboya	3:01	26	City of Ekurhuleni
Aghmat Steele	3:04	27	City of eThekweni
Dewald Meintjies	3:08	28	Rosenbauer
Cyprian Ayslie	3:11	29	Drakenstein Municipality
Mark Van Wyk	3:15	30	Drakenstein Municipality
Sam Zitha	3:17	31	City of Ekurhuleni

SAEC Fire Fighter Challenge			
Female	Time	Rank	Service
Chey McDonald	3:50	1	City of Cape Town
Precious Pinky Mpungose	3:57	2	City of eThekweni
Mathe Buyisile	4:43	3	City of eThekweni
Faith Simangele Mbanja	4:48	4	City of eThekweni
Enie Manzini	5:05	5	City of Ekurhuleni
Grace Masango	5:52	6	City of eThekweni
Mileka Mofokeng	6:00		City of Cape Town
La Rochelle Wales	6:00		City of Cape Town
Baigum Abrahams	6:00		City of Cape Town
Thobile Ngwane	6:00		Msunduzi Municipality

Vehicle Extrication Challenge		
Overall	Total	Ranking
Cape Town Destroyers	2366	1
Cape Town Metro Rescue	2190	2
Midvaal Municipality	2168	3
Cape Town Warriors	2116	4
Mangaung Metro Municipality	2055	5
Msunduzi Municipality	1967	6
Izembe (eThekweni)	1885	7
Hulk (Ekurhuleni)	1373	8
Eden District	1368	9
<b>Best Medic</b>	Cape Town Destroyers	
<b>Best Incident Commander</b>	Cape Town Destroyers	
<b>Best Technical team</b>	Midvaal Municipality	

High-Angle Technical Challenge		
Overall	Total	Ranking
South African Air Force	1810	1
City of Cape Town Fire and Resc	1746	2
City of eThekweni	1576	3
Mangaung Metro Municipality	1567	4
City of Ekurhuleni	1297	5
<b>Best Medic</b>	South African Air Force	
<b>Best Incident Commander</b>	South African Air Force	
<b>Best Rigger</b>	South African Air Force	

Emergency Medical Rescue Challenge		
ALS	Total	Ranking
Cape Town Tumournator	575	1
Ekurhuleni Amabhubesi	505	2
<b>ILS</b>		
Cape Town Tumournator	500	1
Ekurhuleni Anaconda	491	2
<b>Best Incident Commander</b>	Ekurhuleni Anaconda	

SAEC Rescue Challenge - Relay		
Male teams	Time	Ranking
Rosenbauer 2	1:42	1
City of Cape Town	1:42	2
City of eThekweni	1:49	3
Rosenbauer 1	1:51	4
Midvaal Fire Rescue	1:55	5
Eden District Municipality	2:04	6
Disaster Unit	2:11	7
Overstrand Municipality	2:12	8
Drakenstein Municipality	2:13	9
Mangaung Metro Municipality	2:14	10
Msunduzi Municipality	2:15	11
Nelson Mandela Bay Metro	2:31	12
City of Ekurhuleni	2:33	13
<b>Female teams</b>		
City of eThekweni	2:53	1
City of Cape Town	2:58	2



# SAESI hosts gala dinner at SAESI 2017 Conference, Expo and Training Events



the people of Southern Africa' as reflected within the Memorandum of Incorporation (MOI) objectives, as well as the councillors who represent the interest of the membership at grass root level.

He added, "I am deeply honoured to be entrusted as the 31st president to lead this remarkable member- founded institution that was created in 1959 to 'Promote the fire services for the people of South Africa'. My involvement with SAESI would have not been possible without the support of the members who motivated, nominated and elected me, my employer, the eThekweni Municipality, for granting me permission to participate and, most importantly, my family especially my wife, who stand by my side and keep me motivated to persevere and drive the industry towards professionalisation to better serve the people of southern Africa."

Ramlall also introduced Arlene Wehr of the City of Cape Town, who serves as the first female vice-president. "She is an active member of the institute holding the Associate Diploma," said Ramlall.

The National Disaster Management Centre's Godiraone Lloyd Phetlhu provided a brief update on legislation, feedback from the various working groups and current status of the White Paper. Phetlhu also congratulated Melvin Ramlall on his appointment as president of SAESI.

A traditional illustrious gala dinner was hosted by the Southern African Institute of Emergency Services (SAESI) at its biennale conference, providing a glamorous setting and back drop for SAESI members, chief fire officers and industry delegates to socialise and mingle with their families and Brotherhood families. SAESI's Riaan Janse van Vuuren was programme director for the evening and provided humour to the evening's proceedings.

Chaplain June Jeffrey opened the evening with prayer. Musician Niko tied up with fire fighter Emile Conrad of Eden District Municipality and formed a fantastic duo to the great excitement of attendees. Conrad

started the evening off with Amazing Grace on the saxophone.

Past president Dino Padayachee reflected on the past two years of SAESI's achievements prior to handing over to Melvin Ramlall as SAESI's president.

Ramlall honoured the past SAESI presidents for the leadership and foresight and acknowledged the SAESI board of directors for availing themselves voluntarily to embrace the obligations and responsibility for the governance and enterprise risk management of SAESI NPC for the period 2017 to 2019:

Ramlall added appreciation to the executive committee (EXCO) who operationalise the strategic vision to 'Promote emergency services for

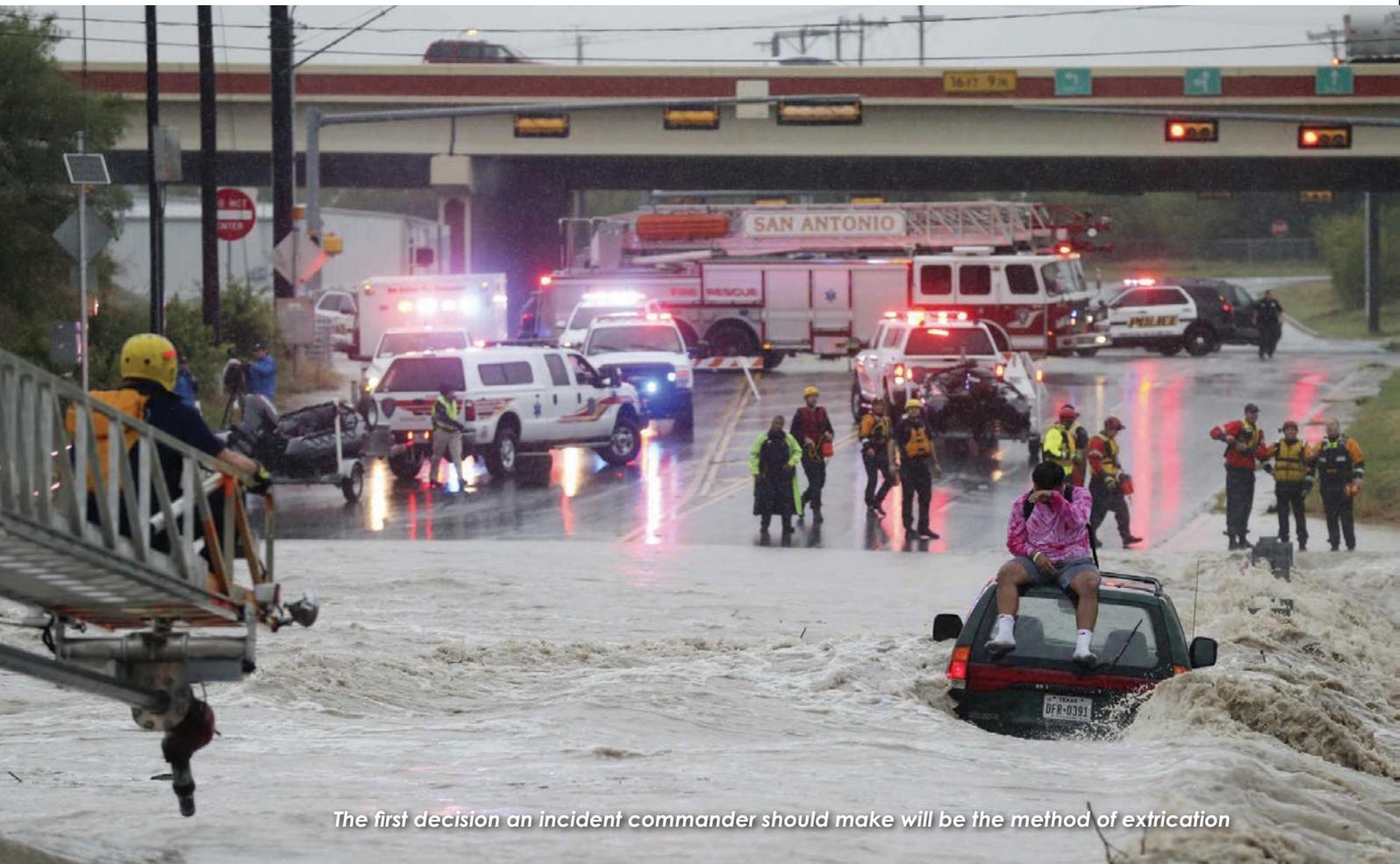






# Rescue from submerged vehicles

By Colin Deiner, chief director, disaster management and fire brigade services, Western Cape Government



*The first decision an incident commander should make will be the method of extrication*

Most emergency rescue services respond to motor vehicle accidents with entrapments almost every day. Generally the affected vehicles end up on the road surface or in close proximity. Should the accidents occur off the road surface and end up in a different environment, the challenge becomes more problematic. Vehicles going over a mountainside or into an adjacent structure will require a more specialised approach, a greater deal of stabilisation and probably, heavier lifting tools. In all these cases and depending on the condition of your patients and level of entrapment, will require a careful approach. It can, however, be that a vehicle has come to rest in a body of water. In this case most of the rules will change. You

might not have the time to address all safety precautions; you will only have limited time to remove the victims, which may require taking a 'life over limb' approach). Tragically, in many such incidents, you simply will not be able to reach the vehicle in time to make any difference. It is for this reason that we should do a thorough risk assessment of our response areas, ascertain the presence, nature and position of significant water bodies and develop effective response procedures for any possible incidents.

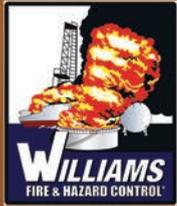
### Risk: rivers

Vehicles ending up in water could present in a variety of ways and therefore provide a whole range of challenges for this very reason. The one we are probably the most familiar with in this country, are

vehicles being swept away by flood waters. In such incidents vehicles can be partially submerged or the victims might be able to exit the vehicle and position themselves on the vehicle's roof. Depending on the velocity of the water stream, these victims might be able to be accessed relatively easily by land, boat or helicopter. However, they could be thrown free of their vehicles and get relocated a long distance from the location of the vehicle, which might require a protracted search along the banks of the river.

Accessing a vehicle in a moving stream will provide a number of hazards and challenges including:

- The possibility that the vehicle might become dislodged from its position while the extrication is in progress. ▶



# Industrial Fire & Hazard Control

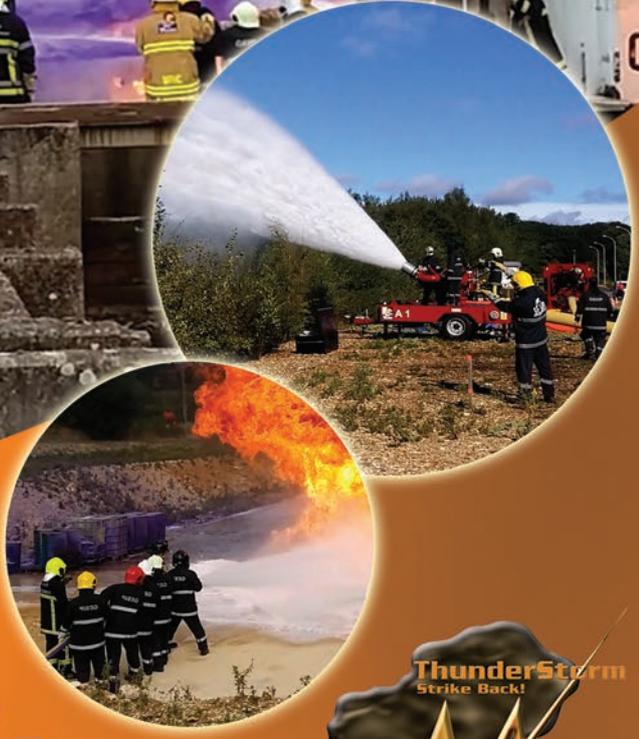
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## Submerged vehicle rescues



*Most of your stabilisation will entail securing the wreck to a series of solid points*

- ▶ • Continuous water flow into the cab of the vehicle.
- Floating debris with a potential to cause serious injury to entrapped victims and rescuers.
- Compromised vehicle systems such as hybrids, undeployed airbags, vehicle batteries and floating escaped fuel and other hazardous fluids.

The command decision to enter the water will have to be well considered and the above risks will have to be taken into account. Rescuers entering the water cannot do so wearing structural fire fighting gear. Water rescue gear or specialised rescue suits that provide protection against mechanical damage (such as cutting and ripping) and hypothermia. Even in a warm climate, rapidly flowing water will be colder and working in it for a prolonged period of time, could induce hypothermia, thereby compromising your rescuers and placing them at risk unnecessarily.

Another primary safety consideration will be the stabilisation of the scene and the vehicle. Always work from a solid and safe territory; make sure that anyone entering the water has been secured by means of a safety line and ensure that the vehicle and any other unstable objects are secured. Do your research around personal flotation devices (PFDs). The situation

will dictate what equipment you will require for this task. A number of years ago, the department I worked in attended to an incident where a medium delivery vehicle was swept off a bridge. The vehicle ended up on its side, partially submerged, a few metres below the bridge with the bottom facing upstream. In this case, the bottom of the truck formed an eddy, which allowed our rescue crews to work in a still space to remove the victim. The major concern was that the vehicle would be lifted by the river, taking the rescue crew along with it. We addressed this by parking a heavy rescue unit on the bridge (the water had subsided at this point) and securing the wreck to it by using two cables.

Any rescue service facing this possible risk, should take time to think about submerged vehicle stabilisation and how it can be achieved. Most of your stabilisation will entail securing the wreck to a series of solid points ie the big freakin' tree (BFT) and the big freakin' rock (BFR), which originated in the rope rescue fraternity. It will then become necessary to have a range of cables and related fastening equipment readily available. With the technology available to us nowadays, we have access to very accurate weather forecasting technologies, which allow us to identify high-risk areas and

therefore we can prepare our crews and units to respond accordingly. A suitable early warning system can provide the necessary information to prompt the activation of additional water rescue resources and to stage them at certain high-risk areas. These teams need to be well equipped and highly mobile enabling them to rapidly respond from the staging area to any incidents within their operational sector. The service's command system must include these response teams within their operations sections with clear lines of communications to the task-level leader on the ground.

### **Risk: dams**

It often happens that vehicles end up in large, still bodies of water such as dams, lakes, reservoirs etc. When a swift moving vehicle hits a static body of water, the deceleration will be severe causing serious injuries to vehicle occupants. The use of standard restraint systems will, in this case, have a dual role in preventing or minimising the initial impact shock and prevent the occupants from being thrown out of the vehicle. Seatbelts and undeployed airbags can of course present additional obstacles to rescuers intending to remove victims from a rapidly sinking vehicle.

Most passenger vehicles that land up in deep water will float on the surface for a short period of time ie from 30 seconds to several minutes. But, all vehicles will sink! If the water is deeper than the height of the vehicle body, it will submerge and disappear beneath the surface. Factors that effect the float time include closed, sealed and intact windows and weather seals, as well as the design, body style, construction quality and the condition and age of the vehicle. If the engine of the vehicle is located at the front, the vehicle will immediately assume an angled nose down position in the water.

Vehicles with open windows will submerge quicker as the water enters the vehicle. A closed vehicle will eventually lose its buoyancy and will sink rapidly at this point. It could be very difficult for entrapped occupants to open doors or break window glass from the inside of the vehicle and, for this reason, rescuers must carry tools for this purpose. Spring-loaded window

punches and seat belt cutters must be part of the first kit taken along by the rescuers entering the water. Window punches will not work on laminated windscreens and are only effective on tempered side-windows.

Should a victim be involved in a complex limb entrapment situation where prolonged extrication is required, this might exceed the ability of a rapid water/vehicle rescue squad. You have very few options here and it is for this reason that, in the absence of a heavy rescue unit, it would be a good idea to partner with a heavy vehicle recovery company and include a big recovery rig in your primary staging position. If it is possible to access the affected vehicle from the banks with such a rig, it can be temporarily lifted out of the water to such a point that will allow the extrication to be performed.

Fortunately, in most cases, there are not complex entrapments and squads should therefore train for a 'punch-and-go' evolution

- Punch the window out
- Cut the seatbelt
- Lift the victim out of the wreck
- Go!

### Equipment

The initial safety equipment will be your standard swift-water rescue gear. Obviously, know you have to include the kind of equipment required for vehicle extrication. It is in marrying up all these resources that the challenge will come. Not all hydraulic rescue tools can work in a submerged or partially-submerged environment. Is this part of the specifications when we go to tender? Do we have the right forcible entry tools to break the windows of a submerged vehicle? Obviously the standard electrical tools are not an option.

At some point it might be necessary for the rescuers to spend time underwater while affecting the rescue. I am not talking dive rescue here, as that is a specialised discipline with a different set of rules and procedures, which is not the attention of this article. Planning must be done to enable rescuers to access submerged areas of a vehicle for short periods of time.

How is your equipment stowed on



*People who have located to the roofs of their vehicles may be able to be rescued by means of a throw rope*



*Invest in a good weather forecasting system*

your rescue truck? Can you access it quickly and can you move it where you need it with minimum effort?

There are a number of inflatable platforms available that can be deployed as a 'floating staging area' or bases to move rescued victims onto.

### Responding to the incident

As mentioned earlier in this article, your size-up will begin well before an incident takes place. Ensuring that all the necessary equipment is available and in good working order and that all rescuers have been trained to a very high level of proficiency in such a high-risk skill set, is the first step.

The second step would be investing in a good weather forecasting system. The South African Weather Services (SAWS) recently launched their 'Impact Based Forecasting System',

which not only provides a severe weather warning functionality but also provides critical information on the impact of that weather on the area it will reach. Having this information available will allow you to deploy the necessary resources to pre-determined areas well beforehand and enable them to rapidly respond to any sudden emergencies. A great example of such a system was the swift-water rescue response plan of the Sandton Fire Department in the 1900s and early 2000s. A number of structures were identified along the banks of the Jukskei River in the Alexandra area and a flood monitoring device was placed under an upriver bridge. When the river reached a certain level, the swift-water rescue team would respond and rig their systems in anticipation of anyone becoming swept away. Many lives were saved through this practice. ►

## Submerged vehicle rescues

- ▶ Although the call for response to incidents where people are trapped in a fast current and moving swiftly downstream must be the priority, also ensure response to incidents where people are located in disabled vehicles in ankle-deep water that's barely moving. This situation could rapidly deteriorate and it is better to get them out of their vehicles and to safety at the first opportunity. These people might be traumatised, hypothermic or have suffered other injuries. Make sure that these people are constantly supported from the moment they leave the vehicle until they are handed over to rescue or EMS staff on dry land.

In either a swift- or still water rescue, the first decision an incident commander should make will be the method of extrication. Once this strategy is decided upon, all resource and their tactics must be focussed on supporting it. If it's a helicopter-based rescue, there might be a need to clear debris in front of and around

the victim location. Putting rescuers in the water should be the last option. If this is the decision, a huge effort must be made to provide for additional safety. Have a stand-by team on hand to carry out any rescue tasks if responders themselves get into trouble or if exhausted and/or hypothermic rescuers have to be replaced.

People who have located to the roofs of their vehicles may be able to be rescued by means of a throw rope. Ensure that if the person is going to be removed by this method, that a) the victim is capable of holding on to the rope and b) there are no obstacles in the intended way of travel. It might be necessary to get a rescuer to the victim.

If a heavy rescue unit or aerial apparatus is to be used, make sure that it is placed on stable ground before being put into use.

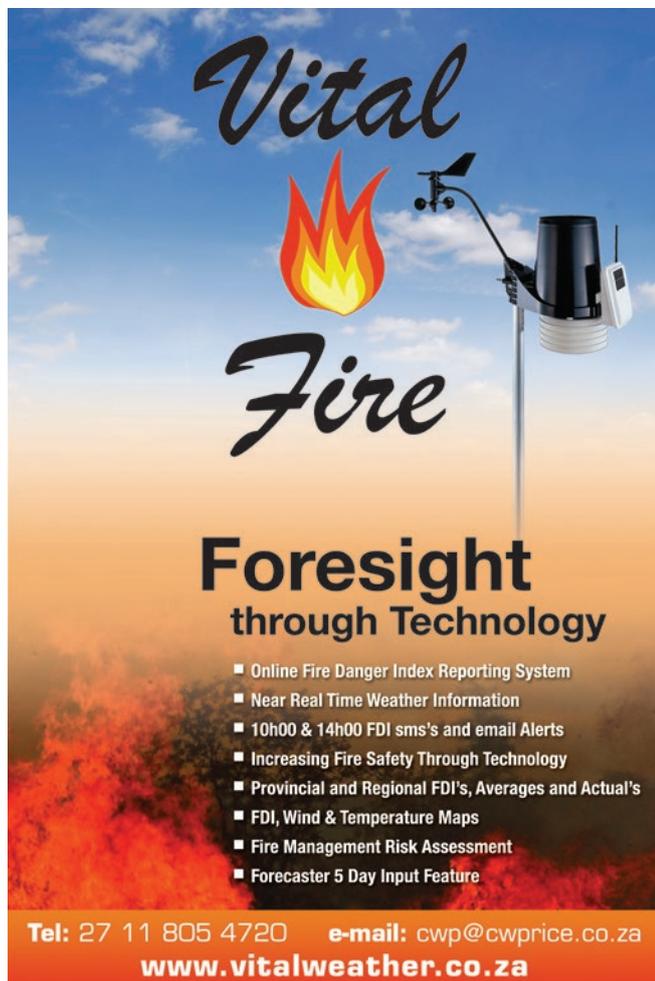
Finally, safety officers should be strategically positioned upstream to monitor currents and floating

debris that could pose a hazard to the rescuers.

### Finally

This is an article. It is therefore not possible for me to explore all the aspects of responding to emergencies involving submerged or partially submerged vehicles. There is still a whole range of information and learnings to be obtained from response of heavy vehicles and large passenger vehicles involved in water-related incidents. It is up to you to identify these risks in your response area and spend time thinking, planning and training for such incidents.

The most important point I wish to leave with you is the potential of using weather technology to plan your emergency response and resource staging. During recent major fire incidents in my own province, we have made extensive use of technology to support our incident command system. We often see (or use) the term 'force multiplier'. Technology can do just that for you. ⚠



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# For the love of adrenaline

By Chief Rory Hodgkinson, fire chief, Emergency Management Services,  
National Petroleum Refiners of SA (NATREF) Refinery

“The most important aspect that you need to determine when appointing a new fire fighter recruit, is his/her job-fit trait.” Generally, the public sees fire fighting as a tough servanthood type of career. It can put great physical and emotional strain on a fire fighter. When it comes to fitness and physical abilities, “You cannot train enough for a job that can kill you.”

The primary job of a fire fighter is to save lives and prevent the destruction of property but we all know that there is so much more detail to this; from the recovery of mutilated bodies, the death of an individual in your arms, the extreme life-threatening decision making at a fire or emergency incident to physical high-intensity exhaustion of the body.

In my career, I noticed that those who survive in the profession, are not really those who are tough but those who can relate to fire fighting as a drug. Extreme sports can be a natural fit for the adrenaline junkies. These activities include bungee jumping, rock climbing, rugby, mountain biking and auto racing; any activity that involves a significant level of danger.

A born fire fighter can find the same thrill through the activity of fire fighting. A supremely resourceful fire fighter can be addicted to the almost nonstop adrenaline rush and see it as an opportunity to express his esoteric skill in a difficult emergency rescue or fire fighting incident. This type of fire fighter, when faced with a difficult situation, will the majority of the times chose the ‘fight over flight’ reaction.

Sensation-seeking traits have been useful to humans. Without risky experiences, there would be little impetus for discovery or, as we say in fire fighting, there would be very little lives and property saved. This sounds cool but there is a thin line between normal and pathological behaviour.



Fire fighting is not sensation-seeking but spiritual-satisfaction-seeking where your addiction is to be an instrument in God's hands to save lives, putting your own life at risk and taking no glory for it, becomes the addiction; not a ‘cowboy hero’ addiction. You are addicted to the servant hood. This servant hood is closely linked to the love of adrenaline but with the added ability to do it for humble reasons.

I have heard numerous stories about fire fighters with qualifications, who do not get promoted for various reasons but I know for sure that at least one of the reasons is that they do not have the ability to produce the desired result with the knowledge they have in a very difficult situation. Paper qualifications give you the potential to do the job but it does not qualify you to do the job when you are under pressure. Any average school boy can kick a rugby ball over the posts in practice but do that after 79 minutes of high intensity, bone crushing tackles and activity, then it is a different story all together.

It takes a special breed to do this. The love of adrenaline is a personal trait harder to get than a degree. It takes literally hours of exposure to fear and physical pain with extreme elevated levels of dopamine to develop this love. In appointing new recruits, this

should be the first trait in the selection progress to ensure job fit.

In my career, I have seen the best fire fighters who have the love of adrenaline come from:

- Individuals who have performed on high competitive level in extreme sports and are still active, know the pressure of performing on levels where most people fear to tread. If done in a team extreme sport, even better.
- Individuals who were never afraid of doing what others feared to do and we all know that one person who is always in trouble for mischief. That individual who was always in the headmaster's office.
- Individuals who go against the stream. They are doing challenging, physical activity against their own logic to receive a desired result. That guy who will run 5km to work every day when he has a car.
- Individuals who have grown up in a very tough environment where it was the survival of the fittest.
- Individuals who hate paperwork and find joy in working physically the whole day.

It is not impossible to develop this love of adrenaline but is usually something that is formed in your childhood years and a trait that is desperately needed in the new generation of fire fighters. ▲

# First Sikorsky UH-60 Blackhawk in South Africa

By Rob Taylor, owner, Flymed cc



*The first ever Black Hawk in South Africa*

The eagle hasn't landed but the Blackhawk has; right here in South Africa. It is believed to be the first civilian Blackhawk and one of the only two civilian helicopters of its type outside of the United States. The man behind the project is Mark Jackson, owner and operator of Leading Edge Aviation. The process of acquiring this US Army Special Forces aircraft began in August 2016 when Jackson bought the Black Hawk and started the long process of importing it to South Africa.

For the two weeks prior to the Black Hawk's arrival on 6 October 2017, Nelspruit Airport was a-buzz with rumours and speculation about the machine and its arrival date. Jackson must have got tired of answering questions about the machine and when it was going to finally arrive.

The initial plan was to assemble the Black Hawk in Durban and then fly to Nelspruit. This idea was shelved because of the amount of work that had to be done to the

helicopter before it flew. Most of it was cosmetic and made sense to complete all the painting and polishing whilst the machine was in a state of disassembly for the transport. A low-bed was hired and the aircraft was trucked from Durban via Pongola to Nelspruit arriving at the

old Nelspruit Airport and parked in front of Jackson's hangar, watched by a gang of excited spectators and aviation enthusiasts.

A massive heavy duty breakdown truck was used as the crane and the Blackhawk was carefully lifted off the low-bed and gingerly lowered onto its wheels on the apron. From there it was carefully steered with a bakkie and tow-bar into its new home, which only weeks before had been extended (at great expense), to accommodate the new arrival.

We all joined Jackson and his team for a braai to celebrate something that I feel might just change the face of aerial fire fighting in South Africa forever.

## The machine

Black Hawk UH-60  
Engines: Two General Electric T 700 turboshafts, 1 600 horsepower each.  
AUW: 11 000kgs  
Sling capacity: 4 000kgs  
Max speed: +- 150kts  
Main rotor: 4 blades  
Tail rotor: 4 blades



*Mark Jackson and Captain Tosh Ross breathe a sigh of relief*

Crew: In US Armed forces configuration standard crew is: pilot, co-pilot, crew, chief.

First entered service with the US Military in 1978.

### The man

The man behind this project is Mark Jackson. He has been in the Lowveld for many years and has earned a reputation as master restorer and refurbisher of light aircraft. He has been operating and flying two Hueys on fire fighting for quite a number of years, so he is no newcomer to helicopters and runaway fires. If anybody can do it, Jackson is the man.

### The team

Leading Edge Aviation has a team of dedicated helicopter engineers who have extensive experience and knowledge of helicopters. Peter Jackson, Jackson's son, has recently returned from an extended stay with a Blackhawk operator in the US and has brought back a comprehensive knowledge and technical skills base from the overseas operator. Peter Jackson and fellow pilot, Tosh Ross,



The helicopter is gently lifted off the lowbed

underwent specialised flight training in Montana, USA last year to learn to fly this machine. Their instructor visited Nelspruit Airfield in December 2017 to continue their training with Mark Jackson this time.

"The Black Hawk will complement our fire fighting fleet, such as the Hueys, that we are currently using in fire

fighting operations. The Black Hawk can reach speeds of up to 300km/h and lift three tons of water per drop, where the Hueys are currently doing one ton," says Mark Jackson, one of the most skilled Huey and aerial fire fighting pilots in the country.

Congratulations to Mark Jackson for this historic achievement!

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The end of the road - Durban to Nelspruit Airport



Mark Jackson starts the big job of stripping and inspecting



The refurbished interior



Finally the big bird is ready for its first flight

# Flight attendants refresh their fire fighting skills

**O**n-board fire fighting and the management thereof should be understood and taken seriously as fires can get out of control quickly. On-board fires are a very real threat to life. Aircraft crew should at all times be aware of smells and other fire related signals, so that immediate action can be taken.

The Civil Aviation Authority (CAA) law requires that all flight attendants are fully competent in on-board fire fighting. All on-board staff is required to recertify their skills every three years. Fire and Rescue International attended a flight attendant refresher course, which was held at the Fire Protection Association of Southern Africa's (FPASA's) Boksburg training centre in order to see and experience what the training involved.

A significant fire on-board in the passenger cabin, a lavatory, galley or luggage compartment within the cabin during flight is among the worst situations that crew can be faced with. The heat, toxic smoke and fumes building up in this confined space can quickly incapacitate the crew and passengers and may lead to death by suffocation or the inhalation of toxic gasses. Panic among passengers, rushing to either end of the aircraft may create an out of balance condition making the aircraft difficult to control. Aircraft systems may also be damaged leading to a loss of control situation.

Time may be critical; an established in-flight fire is difficult to bring under control so every effort, using immediate and aggressive action, must be made to extinguish the fire as soon as it is detected.

Part of the course is a revision of the fire triangle, illustrating the three elements a fire needs to ignite ie heat, fuel and an oxidising agent (usually oxygen). The classes of fire and specific methods of extinguishing each type, is the next focus. Selvarani Naidoo, the course facilitator, explained the different classes and the equipment used in each type.



Portable extinguishers are situated in the cockpit and in the cabin. They are designed to fight small fires and, as such, have limited capacity. The portable fire extinguishers may contain Halon 1211 (BCF) or water, as extinguishing agents. Halon 1211 has several advantages over other extinguishers on board an aircraft. Although it has been proven to be extremely environmentally unfriendly, its ability to extinguish fire quickly is vital in a contained space such as an aircraft cabin. It can also safely be used on most types of fires.

The following are the different types/classes of fires and its suppression method:

- A. Combustible materials, such as seats, paper/wood, fabric, plastic are best extinguished by Halon extinguishers which will smother/saturate/cool the fire. This must be followed up with a water extinguisher.
- B. Liquids and gasses such as petroleum based fluids are best extinguished by smothering agents such as, BCF, then backed up with a water extinguisher.
- C. Wires and electrical fires can be quickly controlled by cutting off power to the piece of equipment concerned. If the source of the smoke and/or fire, and the electrical system concerned, can

be identified, or accessible, a Halon extinguisher must be used.

- D. Combustible metal fires are beyond the control of aircraft crew, as these would generally be landing gear or external equipment fires and there is nothing on board to extinguish these with. The ground fire crew will take responsibility for this on landing.

South African commercial aircraft are fitted with protective breathing equipment (PBE), an essential piece of aircraft crew fire fighting equipment and a smoke hood. Staff re-examine the procedures for use of these as well



## Training

- ▶ as checking whether the expiry date is still valid and that the Litmus is blue.

The course then continued on to what staff is required to do in the event of an actual on-board fire. A team of four is needed ie a fire fighter, a back-up, a coordinator and a communicator. The fire fighter is responsible for handling the actual extinguisher, while the back-up will open doors as necessary to allow access to the source of the fire. To allow the touching of hot objects, she would wear special flame resistant gloves. These gloves are kept in the flight deck or in the cabin to protect the user against heat. The coordinator handles the safety and comfort of the passengers and the communicator reverts information back to the captain.

Communication is key when dealing with an in-flight emergency. The flight attendant responsible for communication must ensure the captain receives viable information in order for them to make a judgment as to whether to continue the flight to destination, land at the nearest

suitable airport, or, in extreme circumstances, where the aircraft may soon become uncontrollable, land off-airfield.

The location of a fire is described using the closest door number, port or starboard, aft or fore. The description needs to include the intensity of the fire and a description of the flames, smoke and heat. A full description of the smoke, its colour, smell and density as well as the level of visibility must be added. The type of fire will most often determine all of the other factors.

The most common in-flight and ground fire/smoke events relate to the galley and involve some kind of electrical equipment. Oven fires may occur because of inappropriate items being placed inside the oven or because of overheating of food items or an electrical malfunction. Lavatory fires are often caused by burning cigarettes being placed in the waste paper bin but there is also electrical equipment inside a lavatory, which may cause a fire such as a toilet flush, lights, etc. Waste container fires may

have many different causes including burning cigarettes, excessive heat due to spilt hot drinks or hot plates or chemical reactions. Waste container fires are normally easily contained.

Overhead compartment fires are often caused by items found in passengers' hand luggage such as lithium batteries in personal electronic devices (PEDs). PEDs are more likely to be a fire source when in use or being charged than when in an overhead locker.

In flight seat fires are rare because of the fire resistance of materials used in construction and are easy to identify. Increasingly complex entertainment systems and services supplied to individual seats do present the possibility of an electrical fire in a seat.

The course participants were required to demonstrate their practical skills as part of the course. A small, controlled fire was lit in the mock cabin at FPASA's training ground and teams of two were required to put these out with a CO2 extinguisher, while simulating all other aspects of their training. ⚠



# Africa Health Exhibition and Congress 2018

The African region is seen to be one of the most sought after markets globally for healthcare investments, having experienced stellar growth over the last decade and showing no sign of slowing down in the near future. According to a report by the IFC, the private-sector arm of the World Bank, it is estimated that by 2022, Africa will need \$25bn-\$30bn in investment in physical healthcare assets alone, including hospitals and clinics.

This investment is sorely needed. An article published by the World Economic Forum noted that Sub-Saharan Africa accounts for only 13 percent of the world's population, despite bearing 24 percent of the global burden of disease, most of which comprises preventable illnesses.

According to Ryan Sanderson, Exhibition Director at Informa Life Sciences Group Africa, organisers of Africa's largest healthcare conference, Africa Health, the pressure to identify real solutions for Africa's healthcare challenges should be a critical consideration for any entity looking to invest in the region.

Sanderson says that with high levels of mobile penetration on the continent, coupled with advancing technologies and new approaches to healthcare management, digital transformation within the healthcare sector may be one of the solutions to addressing the challenges faced, particularly in rural parts of Africa.

Incorporating digital disruption into the healthcare market will be one of the central discussions at the eighth annual Africa Health Exhibition and Congress, which will be held at the Gallagher Convention Centre, Johannesburg, from 29 to 31 May 2018.

Africa Health is the largest platform on the continent for international and local companies to meet, network and do business with the ever-growing African healthcare market. The event is expected to attract more than 10 100 healthcare



professionals and over 553 leading international and regional healthcare and pharmaceutical suppliers, manufacturers and service providers.

The event will run 16 CPD accredited conferences offering education on the latest medical and non-medical techniques, topics and trends. The conferences will focus on a number of medical specialties including; surgery, nursing, decontamination and sterilisation (CSSD), public health, hospital build, healthcare management, healthcare technology life-cycle management and ethics human rights and medical law, amongst others. The exclusive Leaders in Healthcare conference will highlight the importance of Public-Private Partnerships (PPP) in enhancing the capabilities of healthcare systems in the region.

The event will host distinguished local and international speakers and industry leaders, who will touch upon key issues affecting the healthcare sector, including;

- Opportunities for investment in healthcare start-ups in Southern Africa
- Water saving and efficiency in health facilities
- Making nurses techno savvy
- Planning and managing healthcare technology across the lifecycle of healthcare facility
- Community lived experiences of climate change in relation to energy sources
- The impact of political decisions on healthcare
- Telemedicine: Providing remote access to high quality care

Sanderson says that, year-on-year, Africa Health continues to cement its position as a leading platform for dialogue around the most pressing healthcare issues that the continent faces. "Finding solutions to these challenges will not only result in greater access to health services for those who need it the most but it will in turn reduce the financial burden that all governments experience when trying to meet their nation's healthcare needs."

All proceeds from the conferences will be donated to local charity, RuDASA (The Rural Doctors Association of Southern Africa) and associations.

Africa Health is supported by CSSD Forums of South Africa (CFSA), The Association for Peri-Operative Practitioners in South Africa (APPSA – Gauteng Chapter), the International Federation for Medical and Biological Engineering (IFMBE), the Emergency Medicine Society of South Africa (EMSSA), the Independent Practitioners Association Foundation, Southern African Health Technology Assessment Society (SAHTAS), The Clinical Engineering Association of South Africa (CEASA), Medical Device Manufacturers Association of South Africa (MDMSA), Faculty of Health Sciences at the University of the Witwatersrand, the Academy of Nursing in South Africa (ANSA), the Public Health Association of South Africa (PHASA), The Council for Health Service Accreditation of Southern Africa (COHSASA), and the Trauma Society of South Africa (TSSA).

Conference cost: From R150 - R300 for online registration.

Visit [www.africahealthexhibition.com](http://www.africahealthexhibition.com) for more information. ▲

# Securex South Africa 2018

## celebrates a landmark 25 years



Securex South Africa 2018, the only security and fire trade show of its kind on the African continent, is returning to the Gallagher Convention Centre in Midrand once again from 22 to 24 May 2018. Securex 2018 is set to be a bumper edition, as the expo celebrates its 25th year, explains Sven Smit, portfolio director at Specialised Exhibitions Montgomery. "Securex was originally established in 1993, for the country's private sector to support government-owned police and defence forces, and since then, the exhibition has grown from strength to strength, entrenching

itself as the largest trade show of its kind on the continent today. The fact that Securex is marking 25 years of success, is a true testament to its excellent reputation with exhibitors and visitors alike."

Co-located with A-OSH EXPO, Africa's leading occupational safety and health trade exhibition, the two shows drew in more than 7 600 visitors in 2017, with 5 048 pure visitors attending Securex 2017 alone.

The 2018 show is set to feature more than 160 exhibiting companies, showcasing a full range of security-related products

and services, including access control, biometrics, CCTV, cyber and IT security, fire detection and prevention systems, perimeter fencing and protection, retail security, training, vehicle and personnel tracking devices, x-ray scanning and screening equipment and more.

"And while we commemorate Securex' quarter Century anniversary, we can also confirm that the South African Intruder Detection Services Association (SAIDSA) will be honouring its own 50th birthday milestone at Securex 2018, stating that the expo is the ideal platform for its commemoration," says Smit. "SAIDSA will once again be running its Techman competition at Securex 2018, where SAIDSA-certified technicians will compete against one another in a practical challenge."

"In addition, not only will the free-to-attend Securex seminar theatre keep attendees abreast of the latest in security trends, but they will also be able to see live demonstrations, conduct direct discussions with specialists, network with peers and learn about new technologies and legislation," Smit adds. "The show's new product display area will also be front and centre, presenting the latest and greatest in security-focused products."

Visitor entrance to both Securex South Africa 2018 and A-OSH EXPO 2018 is free. 🔥



# SECUREX

SOUTH AFRICA | 2018

**22 - 24 MAY 2018**  
GALLAGHER CONVENTION CENTRE, JHB



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Gain an **OVERVIEW** of the  
local security landscape

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SPECIALISED EXHIBITIONS  
MONTGOMERY

# Leadership principles learned from Royal Mortenson

By Wayne Bailey



About a year ago, I had the pleasure of sitting in a classroom with Royal Mortenson where he was speaking. He offered the following notes to us and to use as we see fit. He even offered for us to claim the words of wisdom for ourselves. The first point below talks about being a person of character and strength, so this author is giving credit where it's due.

Be a person of character and strength. What does this mean? Someone once said character is doing something when no one else is looking, good or bad. Strength to me is having the will power to do the right thing.

Never be afraid to take a moral ethical stand on something you believe in your gut to be right. At the end of the day when you go to bed, can you say you made the best judgment based on the knowledge you had at the time?

Hold yourself accountable for all you do. Hold others accountable for their

actions. Who are you accountable to? We all need to be accountable to someone. If the big boss has a boss. Unless you work for yourself, be accountable to someone. Never live the life without checks and bounds.

Don't lie or steal. This would be the thing that would get me in the most trouble when I was growing up. My dad would say, you can do just about anything and I will forgive you, however, he didn't have any room for a lie or not told the complete truth. Listen to and help anyone anytime. Expect and demand that your leaders do the same. When this occurs, they must reach out and grasp and give a hand up.

Someone had to lead on the absence of authority. Take charge. The old saying is if someone is not in charge, just wait, someone will step up to the plate.

Band of brothers. Never turn your back on family. In the profession we work in, our lives depend on us taking care of each other on or off the fire ground.

Always strive to be tribal and tactically proficient in all you do. Never let it be said that you and your unit failed because you didn't do your homework.

Everything you do must purpose yourself.

Take care of your family. Don't offer them what's left over from your day. Make them a priority. In a blink of an eye, you're celebrating your 50th anniversary and watching your kids have kids. Don't let life pass you by.

Never promote racism or otherwise cruel freaking behaviour; it is a

hallmark of an ignorant person and unprofessional.

How you roll will always be the foundation of your organisation. People do what they see.

Have an irrational vision of success. Find out what makes you succeed, drink it and stick with it.

Visionary leadership. What will you be doing in six to eight years from now?

Manage your time wisely. If you don't, someone will. Priority is time, people and money.

Be out in the field or office every day. Talk to and touch the people that are in the trenches.

Figure out the organisational centre of gravity. The strength to accomplish must be your main effort. Using a bicycle as an example; be the axle and let the life around you be the spokes. If you have one spoke shorter or longer, you're going to be in for a bumpy ride. It's important to have balance.

People must know your priorities. Don't make people guess what is important. Let your family know they are priority in your life; don't assume they know.

Look, listen and learn before you make change. Know your lesson before making changes. Change for change is insulting to those you lead.

Build consensus in your organisation. The art of leadership is getting people to do what them to do.

Executive leadership is about environment. Your job is to create an environment where others feel valued and productive.

## Fire buckets

The history of fire buckets is intertwined with the history of fire fighting and mankind's historical relationship with leather, metal and plastic.

Putting out a fire didn't used to be as simple as dialling 999, 911 or your local emergency number. Before about the 17th Century, there was very little in the way of an organised fire service anywhere in the world. Needless to say, this lead to a number of devastating fires engulfing many of the world's major cities.

London suffered great fires in 798, 982, 989, 1212 and the infamous fire in 1666. Originally started at a bakery on Pudding Lane, the fire quickly tore through two square miles of the city and destroyed thousands of buildings including the Royal Exchange, the Guildhall and the medieval St Paul's Cathedral.

### Early beginnings: The humble leather fire bucket

Back in those days, fires were fought by parish groups using leather fire buckets, axes and simple water squirts stored in the local church. At that time there were no organised fire brigades. Instead,

people fought fires within their own parishes using equipment stored in the local church. Fire hooks were used to pull down buildings in an attempt to stop the fire spreading to other buildings. Buckets, made from leather with a rope handle, only held a small amount of water and were passed along a line of people towards the fire.

Early English buckets were 'stout', being almost as wide as it is tall. By the 1820s-1830s, traditional methods used in England to construct buckets began to change. No longer were fire buckets entirely held together by hand-stitching but instead copper rivets were substituted for cordage.

This leather bucket (right) was found in a burned out cellar at the end of Pudding Lane along with the remains of wooden supports for barrels. The cellar and its contents were preserved under collapsed buildings and debris used to build up the ground after the Great Fire of London. The bucket may have been used to fight the Great Fire and was probably dropped in the chaos. The leather bears the initials SBB and traces of the first three figures of the date painted on it – 166 – but the final digit is unclear.



18th Century leather fire bucket In the Museum of the City of New York



Be consistent in your demeanour and focus. Don't have a flavour of the day.

Communicate with others. Encourage open debate. Don't be threatened by disagreement or threatened by a different opinion.

Be transparent in your leadership style. Make as many decisions in open forms as possible. This leaves no doubt who made the decision.

It's never about you. It's about the mission and the people charged with accomplishing the mission. 🔥



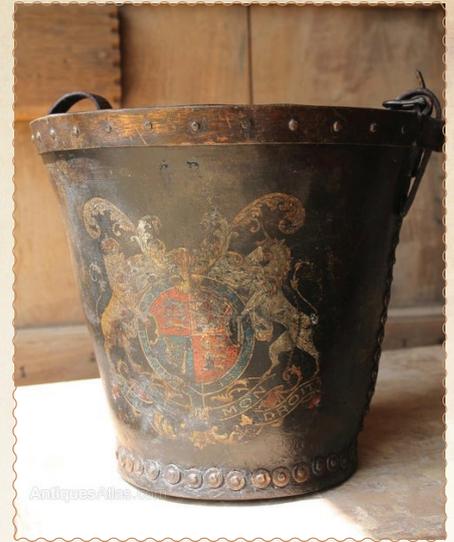
# HERITAGE



Photo: Trish Steel



Early 20th century conical shaped fire bucket from Baltimore and Ohio (B&O) Railroad near Baltimore, Maryland, US



19th Century leather fire bucket with coat of arms

▶ Made from leather with a rope handle, the buckets only held a small amount of water and some of that water was spilt as the buckets were passed from hand to hand along a line of people towards the fire.

Individual homeowners were required to keep special leather buckets on hand so they could help to transport water from a nearby well or lake to the scene of the fire by volunteers.

### After the Great Fire of London

It was after the Great Fire of London that insurance companies started to form organised fire brigades. But, initially at least, these were private fire brigades and were instructed

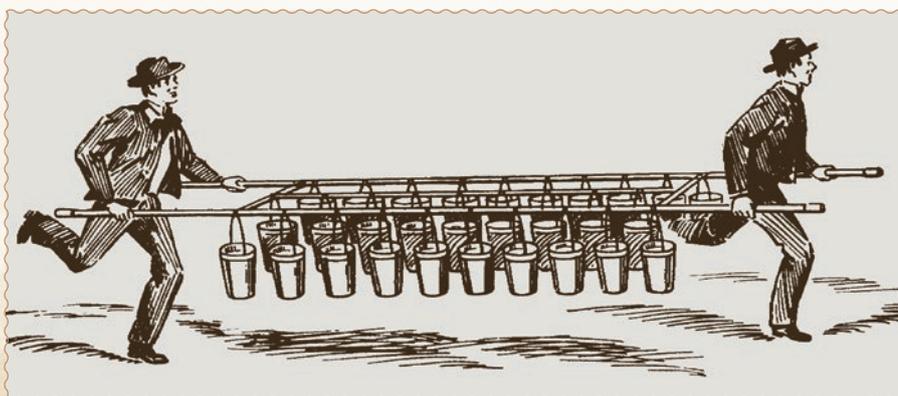
only to extinguish fires on properties that were insured by the insurance company. Eventually these brigades started putting out other insurance company's fires (for a fee to be charged later) and then started extinguishing all fires to stop fires spreading to insured buildings.

Technological advancements like fire engines and sophisticated pumping systems made fire fighting easier and publicly funded fire brigades followed closely behind.

During the 18th Century, many leather fire buckets were exported to North America. This was at a time when there were few makers of fire buckets operating in the

North American Colonies due to the prohibitions against making and exporting finished goods. Very likely, during the early years of the Republic, the first American makers of fire buckets were English trained and so it stands to reason that the many of the earliest fire buckets actually made in the Colonies would strongly resemble the same form of fire bucket that was most familiar to them. As time went on, fire buckets made in the exColonies diverged from the classic English pattern and took on a more American style. This divergence of pattern was a predictable result of the eventual need for new equipment as with the wooden moulds that buckets were formed over. (you can make a pattern fit a mould but it is very difficult to make a mould properly fit a pattern). Not only did the basic body shape transform over time, new improvised methods of construction were devised.

Fire fighting in the Colony of New York Organised fire fighting began as early as the Dutch settlement in New Amsterdam (now New York). In 1648, the Governor of the colony, Peter Stuyvesant, appointed four fire Wardens to help prevent fires by patrolling the colony and



Bucket brigades being modernised

# HERITAGE

inspecting homes for wooden chimneys and thatched roofs. Townspeople were expected to wake up and hurry to the location of the fire. Fires, at that time, were fought using leather buckets. Citizens of New Amsterdam were required to fill three buckets of water at sunset and place them at their doorsteps in case an alarm was sounded. At the scene of the fire, a bucket brigade was formed; one line of people passed filled buckets from the water source to the fire and the second line passed empty buckets back to the water source to be refilled.

In 1683, the British took over the colony of New Amsterdam and renamed it New York. Fire buckets in colonial towns had the owner's name painted on them. Laws often required residents to purchase them and keep them in repair. In the 1680s, in New York, the number of buckets a home or business needed was determined by the risk of fire. A baker must have three buckets and a brewer had to have six buckets on hand in case of fire. Penalty fines were used to keep fire equipment, such as hooks, small ladders, and buckets, in good condition. During a fire alarm, citizens were expected to throw their buckets into the street to be picked up by able bodied persons forming part of the bucket brigade. Fires were fought in this manner until hand engines were introduced.

But the humble fire bucket still had an important role to play.

## **Metal fire buckets**

As metal became easier to mine and manipulate, metal fire buckets became the next obvious jump from leather fire buckets.

Instead of being stored in a church hall and used to combat fires wholesale, these metal buckets were stored close to where fires could start and used as a cheap and easy first line of defence against small blazes. They hung on stands in prominent



*Fire buckets at Sheffield Park Station in the UK*

positions like in rooms and corridors, close to fire pits and in government buildings like school canteens and army barracks.

They were coloured bright red to be seen and had the word 'fire' stenciled on them.

## **Why did fire bucket have round bottoms?**

Fire buckets often had a convex, protruding bottom. The rounded bottom resulted in a strong, directed stream of water when the water is thrown at the fire. The rounded-bottom bucket was far more efficient in launching the water at the fire than a flat bottom bucket.

Many metal fire buckets have round or conical bottoms to stop them from being stolen or used for another purpose beside fighting fires. When in use, the buckets were normally

hung up or suspended by frames so that they don't fall over.

Many modern fire buckets that don't have rounded bottoms have now become antiques.

## **Plastic fire buckets**

Plastic fire buckets are the modern answer to the fire bucket. Just as more and more of our products have been made from plastic; plastic buckets have become the option of choice for combatting small fires.

Plastic fire buckets are cheaper than metal ones, they are lighter and easier to use. Plastic buckets are also less liable to dent and rust, as metal ones tend to do when they are left outside for long periods of time.

We have certainly come a long way since the early bucket brigades! ▲

## 2018

### March

#### 4 – 8 March 2018

##### Firehouse World 2018

Offering the largest fire/rescue trade show on the US West Coast. Education on critical topics in the fire service will be addressed by top instructors and industry experts. Attendees can view the latest equipment on the exhibit floor  
Venue: San Diego, California, US  
For more information visit:  
<http://firehouseworld.com>

#### 26 – 29 March 2018

##### 2nd National Cohesive Wildland Fire Management Strategy Workshop

The workshop will be innovative, constructive, and thought-provoking. It will be resolute in its focus on building capacity in practitioners, improving preparedness to meet challenges, and to provide opportunities to learn from past experience. It will inspire collaborative interaction that can only be considered mission critical and operationally supportive.

**Venue:** Reno, Nevada

For more information visit:

[www.iawfonline.org/2nd\\_CohesiveStrategyWorkshop2018/](http://www.iawfonline.org/2nd_CohesiveStrategyWorkshop2018/)

#### 27 – 29 March 2018

##### International Fire Conference and Exhibition Malaysia 2018 (IFCEM 2018)

It aims to be an avenue for the deliberation of latest fire safety and disaster management philosophy and technology. As a platform for the promotion of corporate network, business matching and collaborations among the fire industry players regionally and internationally. To showcase recent cutting-edge technology and products in the field of fire safety, rescue, disaster management and security

**Venue:** Sunway Pyramid Convention Centre, Kuala Lumpur, Malaysia

For more information visit:

<https://ifcem.my/ifcem-2018/>

### April

#### 16 – 18 April 2018

##### European EMS Championship 2018

The European EMS Championship will be a fun, challenging and educational experience for emergency medical personnel. The competition will be all about team work, skills, experience and the ability to find a solution, when challenged. The competition will be scenario-based events that test each team's ability to manage patients in various circumstances with common critical medical conditions and trauma.

**Venue:** Copenhagen, Denmark

For more information visit:

<https://emseurope.org/european-ems-championship/>

#### 9 April 2018

##### ECUFPA Annual General Meeting 2018

Eastern Cape FPA's, ECUFPA partners, stakeholders, interested and affected parties are invited to the annual general meeting of the Eastern Cape Umbrella

Fire Protection Association

**Venue:** Dutch Reformed Church Hall, Stutterheim

**Contact:** [admin@ecufpa.co.za](mailto:admin@ecufpa.co.za)

#### 13 April 2018

##### KZNFPA Annual General Meeting 2018

KwaZulu-Natal Fire Protection Association's annual general meeting

**Venue:** Shafton Airstrip, Howick

**Contact:** email: [denise@kznfpa.co.za](mailto:denise@kznfpa.co.za)

#### 23 – 28 April 2018

##### FDIC International

The upcoming Fire Department Instructors Conference International (FDIC Intl) offers dynamic fire service leaders in its General Sessions, nationally known instructors in its Hands-On Training (HOT) and classroom sessions, and the latest technology from fire industry exhibitors

**Venue:** Indiana Convention Centre, Illinois, US

For more information visit: [www.fdic.com](http://www.fdic.com)

### May

#### 4 May 2018

##### International Fire Fighters Day 2018

International Fire Fighters' Day is observed each year on 4 May. On this date you are invited to remember the past fire fighters who have died while serving our community or dedicated their lives to protecting the safety of us all. At the same time, we can show our support and appreciation to fire fighter's worldwide who continue to protect us so well throughout the year

**Venue:** George, Western Cape

**Contact:** [Cjibarnard@george.gov.za](mailto:Cjibarnard@george.gov.za)

#### 22 - 24 May 2018

##### Securex and A-OSH Expo

Securex will be the largest and most comprehensive show of its kind in Africa and the only show exclusively dedicated to the very latest developments in security, safety, fire and protection.

**Venue:** Gallagher Convention Centre, Johannesburg, South Africa

For more information visit:

[www.securex.co.za](http://www.securex.co.za)

#### 29 - 31 May 2018

##### Africa Health 2018

Africa Health is the largest platform in the African healthcare market for international and local companies to meet, network and do business. Africa Health provides an opportunity for you to see the latest healthcare technologies, products, equipment and services, as well as the chance to network with more than 10 000 of your healthcare industry peers

**Venue:** Gallagher Convention Centre, Johannesburg

For more information visit:

[www.africahealthexhibition.com](http://www.africahealthexhibition.com)

### June

#### 7 - 10 June 2018

##### International Hazardous Materials Response Teams Conference

The selection of PPE during an offensive

Hazmat response is one of the most critical tasks you must undertake. At Hazmat 2018, join David Berry as he breaks down what's in your closet and compares it to chemicals of the challenge using a process that has been successful for 20 years

**Venue:** Baltimore, Maryland, US

For more information visit: [www.iafc.org/](http://www.iafc.org/)

### July

#### 22 - 27 July 2018

##### 53rd Annual GSSA Congress

The annual congress will be hosted by the Gauteng Province and will be incorporating the highly acclaimed research skills workshop to be held from 22 to 23 July 2018 and the second policy and practice workshop focussing on ecological infrastructure on 27 July 2018

**Venue:** ARC Training Centre, Roodeplaat Vegetable and Ornamental Plant Institute, KwaMhlanga/Moloto Road (R573), Pretoria

For more information visit:

<http://grassland.org.za/events/upcoming-events/annual-congress-2018/>

### August

#### 10 – 11 August 2018

##### Toughest Fire Fighter Alive, 2018

The South African Toughest Firefighter Alive Championships will be hosted by the fire fighters for Excellence Foundation in Cape Town, South Africa

**Venue:** Roeland Street Fire Station, Cape Town

**Contact:** Mark Smith

Email: [ffa@fireandrescue.co](mailto:ffa@fireandrescue.co)

### September

#### 10 – 17 September 2018

##### The 13th World Firefighters Games Chungju, 2018

The World Firefighters games was established to promote international fire fighting information exchange in addition to fostering friendship between current or retired fire fighters (including soldiers) and their families through sports. Unlike elite sports events, fire fighters from all over the world can participate in the event, rather than competition. In order to create a festive atmosphere, the competition differs according to age and gender

**Venue:** Chungju, South Korea

For more information visit:

[http://wfg2018.chungbuk.go.kr/eng/sub.php?code=01\\_abou04](http://wfg2018.chungbuk.go.kr/eng/sub.php?code=01_abou04)

#### 19 – 23 September 2018

##### Africa Aerospace and Defence (AAD)

The Africa Aerospace and Defence (AAD) is Africa's only aerospace and defence expo that combines both a trade exhibition and an air show

**Venue:** City of Tshwane

For more information visit:

[www.aadexpo.co.za/contact-us](http://www.aadexpo.co.za/contact-us)

## *Could you love a fire fighter?*

Could you love a fire fighter through their ups and downs?  
When visions of accidents leave their emotions spinning round?

When their pager goes off, would you just let them leave?  
Or would you ask them not to go, begging them, 'Please' ?.

Would you stress yourself out worrying about their safety?  
Or would you convince yourself they might quit for you, just maybe?

Could you stand by their side when things aren't going well?  
When they need to be rescued, is it you who they can tell?

Will you hold their hand and say it's alright?  
Would you listen and comfort them through the night?

Could you deal with their silence after a horrible call?  
Or knowing after the fire they almost didn't come back at all?

Could you provide them comfort after a small child dies?  
And help them through memories of the small feeble cries?

Could you help them deal with having to rollback the dash,  
To recover the bodies of the family killed in the crash?

It's not an easy job that we choose to do,  
But we do it to save innocent people like you.

So, think about that if you're falling for me.  
Could you deal with my life?  
Could you see what I see?

**Author: Ana-Maria G**

# ULTIMATE INDUSTRIAL SYSTEM

**HYDRANT, VALVES,  
MONITOR AND TRUCK  
CONNECTION  
ALL IN ONE**

The above ground hydrant is easy to access and service if needed. The valve system allows for use as a traditional ground hydrant monitor or boost the pressure and flows by adding lines from an apparatus. Foam can even be added to the system from the truck, eliminating the need to store and transport foam totes.

**VANGUARD**  
FIRE & SAFETY

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