



- News
 - Events
 - Tech
 - Fire & rescue
 - Data
 - Gallery
 - Jobs
 - Fire protection
 - Archive F&R
 - Archive IFJ
 - Readers
 - Blog
-
- Home
 - About us
 - Contact us
 - FREE Subscription
 - Links
 - Advertise
 - FIRE MAD!
 - UKRO
 -
 - Skicka fråg

Home » Tech

Beautifully proportioned

Published: 09 February, 2015

A foam proportioner that is simple to use and requires no power for its operation? Jose Sanchez de Muniain finds out about a simple and modern technology that is set to change the market – and it will be on show during Interschutz in Hanover, Germany, in June.

Per Aredal is the Sales Director of Firemiks AB, a family-based manufacturer in Stockholm that has been designing and marketing water motor driven proportioners used in Europe and worldwide since 1979. In 2010, the company restarted and decided to not only manufacture its own proportioners, but also to market and distribute them under a new brand name. To this end, the company designed and built a further developed proportioner that took into account advances in engineering technologies. The end result is FIREMIKS, a proportioner that requires no supplemental energy to work – it only needs the pressure from the water to mix and discharge the foam/water mixture.



The response from the market has been an eye opener for Per Aredal: 'The interesting thing that people have been saying is that this will become the new industry standard and we are seeing this shift too. We believe the bladder tank proportioners will disappear from the market more and more in the next five to ten years, maybe also the in-line balance pressure proportioners, which are just too complicated to function efficiently.'

In line balanced pressure foam proportioners require foam concentrate to be supplied at a higher pressure as the pressure at the water inlet. This pressure is created by an electrical or fuel driven pump. They therefore need additional equipment (eg a balance valve) which has to be pre-calibrated to the right pressure to match both the foam pump pressure and the water pressure.

Bladder tanks are another form of balanced pressure proportioners widely used in fixed fire systems throughout the world. They consist of a steel pressure vessel containing a bladder (eg made of elastomer) filled with foam concentrate. The system becomes operational when water is pumped into the steel vessel: the pressure of the water squeezes the bladder and forces the concentrate through piping into a ratio controller. As the foam concentrate pressure is higher than the pressure at the ratio controller, the foam starts flowing towards the water and mixing at a calibrated rate, which is dependant on the water flow rate. A major draw-back for this technology is that if the bladder is empty, the system has to be stopped and refilled before it can function again, a time consuming activity in a possibly

Sign up: eMagazine & eNewsletter

The latest issues in your inbox.

Enter your email Skicka fråg



Company Profiles



Solberg –

Revolutionizing Firefighting Foam Technology

Solberg is the one-stop resource for firefighting foam concentrates and custom-designed foam suppression systems hardware. With our unique offering of environmentally sustainable fluorosurfactant and fluoropolymer-free foam concentrates, and traditional firefighting foam concentrates, Solberg leads the industry in firefighting foam innovation.



PROINERT®
flexible, cost-effective and environmentally friendly fire

suppression

Fike Corporation is a globally recognised supplier of precision-engineered solutions for fire protection, pressure relief, overpressure protection and pressure activation. Because so much is at stake™, since 1945 our highly skilled workforce has designed and built solutions for Fortune 500 companies and businesses around the world that want peace of mind from experiencing consequences of serious financial loss or a devastating disaster



Spectrex Inc. –
Optical Flame and Open Path Gas Detectors

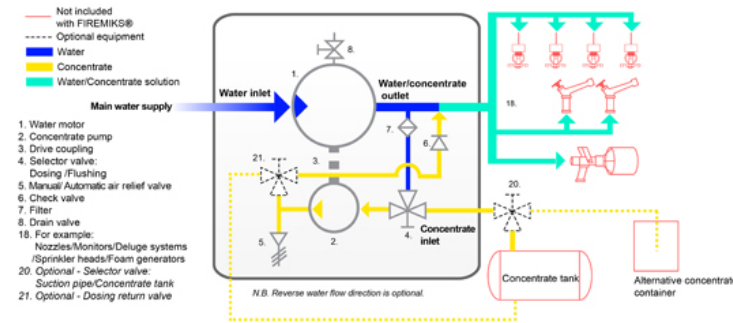
Spectrex Inc. is a world leader in optical flame and combustible gas detection, with over 30 years experience in providing solution for the protection of high-risk onshore and offshore oil & gas, chemical and petrochemical sites, including protection of storage tanks, filling operations, aircraft hangars, atria and many other areas where hydrocarbons fires are a concern.

critical event of a fire, also it is not possible to test a bladder tank system without consuming the concentrate.

This technology is in stark contrast with the simplicity of the FIREMIKS solution.

FIREMIKS proportioner – how it works

As water is pumped into the FIREMIKS, the power of the water flow turns a rotor that is connected to a volumetric foam concentrate pump. The foam concentrate pump pushes the foam concentrate using the water's own power, and creates the water/foam solution. Because the foam pump is driven by the force of the volumetric water motor, the dosing rate automatically adjusts to the amount of water going into the proportioner. The more water that goes in, the faster the drive coupling rotates and the more concentrate is pumped through to mix with the water. And since the foam concentrate is stored in regular atmospheric containers, one can fill up or switch tank during operation, i.e. providing an increased safety margin should the fire extinguishing take longer than anticipated.



The FIREMIKS is available in different flow sizes, it can deal with 300 lpm up to 12,000 lpm with selectable dosing or a fixed dosing rate at 1, 2 or 3 % (other dosing rates available on request) with all types of concentrates – including alcohol resistant ones and wetting agents.

Fixed or mobile units are offered, as well as an offshore anti-corrosion version. The portable version, as well as the fixed version, can be used on the fire ground to multiple nozzles at the same time and at different heights and hose distances.

Other advantages of the system is the fact that it can be regularly tested without discharging any foam – with a dosing return valve, the concentrate can go straight back into the concentrate tank, so there is no need to store or destroy finished foam solution, as Per explained; 'No foam solution needs to go to waste during any mandatory security tests, which is good both environmentally and economically.'

In spite of the fact that the FIREMIKS is yet to receive FM/UL or LPCB approval, it is steadily gaining market share, winning contracts in competition with more established brands: 'We have sold over a few hundred units all over the world, since re-launching in 2010, from Asia and Latin America to South Africa, on the basis of the strength of our engineering and design, and against companies that have FM approved proportioners. We are also moving into the shipping market, where one major order has been 36 FIREMIKS in off-shore version with water motors in bronze to the Singapore Marine. These units are DNV/GL certified. This year we will continue with certifying our product line to comply even more with the standards required by the international industry.'

Email article • Print article

Bookmark this



Comments

Login

[Login](#) or [signup](#) now to comment.

There are no comments posted yet. [Be the first one!](#)

Related Articles

Aircore foam and water mist turbine innovation launched at 150 years Magirus

Last week Magirus, based in Ulm, Germany, launched a multitude of new innovations as part of the celebrations of its 150-year existence. Hemmingfire will be revealing all these new products over the coming weeks as well as in Fire and Rescue magazine Q3 with a full report. One of these new developments was Magirus Aircore, a high performance turbine for firefighting operations.

Are you ready to make the switch to fluorine-free foams?

The Singapore Aviation Academy and the International Aviation Fire Protection Association launch a new firefighting foam seminar, 20-22 July.

PPE & Duty of Care Forum - condensed

Delegates attending the highly successful PPE & Duty of Care Forum held in Birmingham in February experienced the complexities surrounding the evolving process of ensuring that firefighters remain safe not only today but also throughout their lives. Highlights by Jose Sanchez de Muniain.

Will a fluorine-free foam be found capable of meeting the US Milspec?



Falck Fire Academy supports you

The Falck Fire Academy is a vital part of the overall 'safety circle' of professional safety organisations with international high-risk operations and governmental services.



The IWMA – discover the power of water mist

Invented over 100 years ago, water mist technology is making a name for itself as a powerful alternative fire fighting technology. Today, the International Water Mist Association is helping spread the word through a number of informative events worldwide.



XVR Simulation Software, training software for safety and security

XVR is virtual reality training software for the training, education and assessment of incident response professionals – fire & rescue, police ambulance and civil defence. XVR is used by schools and training centres, emergency services, industrial companies and critical infrastructure owners in 23 countries worldwide.



Holmatro - Mastering Power

Holmatro Rescue Equipment develops, manufactures, sells and services high-pressure hydraulic, pneumatic and mechanical rescue equipment. With a comprehensive dealer network on all continents, manufacturing plants in the Netherlands (head office) and USA, and sales offices in China and UK, we supply our products and services to fire and rescue organizations all over the world.



Dr Sthamer - Hamburg: foam fights fire

Dr Sthamer – Hamburg, has been developing and manufacturing state-of-the art firefighting foams since the 1920's. Having been founded in 1886 by Dr Richard Sthamer, we are still proudly owned and managed by the Sthamer family. Our base is still at the original site where we started in, on the banks of the Bille River in Hamburg Germany.

Suppliers Database

Search either by product or company name:

Product:

Company:

Skicka fr:



Latest issues

Industrial Fire Journal Winter 2015



Latest issues

Fire and Rescue Q1 2016



Latest issues

Fire Trade Europe 2015

In the last quarter of 2015 the Strategic Environmental Research and Development Program of the US DoD issued a Statement of Need (SON) for the development of fluorine-free foams in place of AFFF for fire-suppression operations.

Back to Foam School

NEW EVENT: Foam manufacturer Dr Sthamer and fire training provider H2K organise the Foam School 2016, 4-8 April at the CNPP training facility in Vernon, France.



Latest issues

Fire Trade Asia and Middle East 2015

**Free access
to all NFPA
Codes &
Standards**



First Class Firefighter Resource



Operation Florian

CLICK HERE TO SEARCH OVER 2,000 ASIAN & MIDDLE EAST COMPANIES SELLING ACTIVE AND PASSIVE FIRE EQUIPMENT

CLICK HERE TO SEARCH OVER 2,000 EUROPEAN COMPANIES SELLING ACTIVE AND PASSIVE FIRE EQUIPMENT



Calendar

- 11 April, 2016, 10:00 - 15 April, 2016
5th International Fire Behavior and Fuels Conference (Melbourne)
- 13 April, 2016, 10:00 - 14 April, 2016
Tank World Expo 2016
- 18 April, 2016, 13:00 - 23 April, 2016
FDIC International
- 19 April, 2016, 9:00 - 20 April, 2016
Ambition 2016
- 19 April, 2016, 10:00 - 20 April, 2016
Fire Sprinkler International 2016
- 11 May, 2016, 9:00 - 13 May, 2016, 17:00
4th Annual Tunnels Fire Safety Forum
- 11 May, 2016, 9:00 - 13 May, 2016, 17:00
Rettmobil
- 16 May, 2016, 9:10 - 19 May, 2016
4th International Tall Buildings Fire Safety Conference
- 13 June, 2016, 9:00 - 15 June, 2016
The 6th China (Guangzhou) Fire Safety Industry Expo (CFE)
- 13 June, 2016, 10:00 - 16 June, 2016
NFPA Conference & Expo

[Click here to see all 17 events](#)
[Click here to submit an event](#)

Most read articles

7 days 14 days 1 month

1. Faster, higher, smaller vehicles
2. Check yours out
3. Fire and Rescue Q1 2016 has been published.
4. Are you ready to make the switch to fluor...
5. Fire robots
6. A tourist Odyssey
7. Will a fluorine-free foam be found capabl...
8. New multi-functional high-performance fan...
9. NFPA Conference & Expo announces top spea...
10. Car manufacturing win for Spectrex