

Every Fire-fighters Ultimate Fear = No Water

Water is a constantly diminishing resource. Global warming, changing weather patterns and restrictions to pressure fed supplies mean that water is no longer the widely available number one fire fighting resource that it once was. Very often there simply isn't sufficient water available at an incident to control a rapidly developing fire or contain a fully developed fire situation. And without question one of the biggest fire-fighters fears is that the water simply runs out in the middle of fighting a fire.

Numerous incident debriefs have recorded instances of poor water supplies affecting the ability of fire fighting operations. Fire-fighters freely admit that they have experienced situations where the hose torrent turned into a drip within seconds, leaving them in very exposed and dangerous situations or having to adopt a 'defensive' mode of operation due to the lack of readily available water supplies.

The key challenge is to establish how we can work with the Fire and Rescue Service to help maximise the efficient use of all water available during fire fighting operations.

Greater Manchester Fire Service have worked on a solution to this problem for the last 10 years. After extensive research they went into partnership with TSI flow meters in order to maximise the potential of their available water resources.

Flow meters were installed in the low pressure deliveries of all their front line appliances. The findings showed that without the flow meters it had only been possible to set up the optimum operating conditions for one branch even though there are four deliveries on the pumps, because the pump operator did not have the information to utilise the full capacity of the pump. Therefore the efficiency of water usage was very poor.

As a result Greater Manchester Fire Service devised, in partnership with TSI, flow controlled pump operating procedures and dispensed with the more traditional pressure driven approach. The outcome of this is that the same single pump is now being used to drive up to four different branches with each branch operating at its optimum. Each branch is now operated at its design flow rate resulting in maximum performance and the best throw of water. Each fire fighter gets the optimum operating performance for the branch they are using rather than having to compromise. Using TSI flow meters, the fire-fighters are able to position themselves in the safest manner relative to the fire. The risk of fatalities and injuries has been dramatically reduced and as little as possible of the available water is wasted.

Tim Carew MD of TSI Flowmeters said ' The water shortage issue isn't going away and it is very satisfying to be at the forefront of helping fire-fighters make the best use of what water is available to them. We are working in partnership with The Fire Services to make fire fighter working conditions safer. That it turns out that using flow meters when fighting fires is good for the environment in several ways is an added bonus". Tim Carew has a long career in the fire-fighting industry stretching back to 1985 when he worked in Japan designing and supplying flow meters for the Japanese fire service.

TSI Flowmeters Ltd was set up in 1999 and is the global expert in flow meters for fire fighters. Tim Carew has designed the flow meter to precisely meet the fire fighters needs, hence its rapid adoption by fire services in England, Ireland, Germany, USA and Malaysia.

Dr Jim Marsden from Greater Manchester Fire Service recently wrote a paper on the role of the Fire and Rescue community in reducing the carbon footprints of fires and protecting the environment that was published in the June issue of the Journal of The Institute of Fire Engineers. 'We recognised several years ago that we need to put fires out more efficiently' said Dr Marsden 'and flow meters are helping us to reduce our carbon footprint and put out fires more efficiently. I would strongly recommend every fire service investigates flow meters for the future'.

Bill Brewster, engineering manager with East Sussex Fire and Rescue Service started to use TSI flow meters in 2007 to help deal with their problems with water shortages. 'We've been very pleased with the results and we have now specified TSI flow meters in all future builds as we are making the absolute best use of the water resources we have. Flow meters are a real move forward in fire-fighter safety' said Mr Brewster.

TSI Flowmeters Ltd exhibition stand is FR89 at the Fire and Rescue show in Liverpool, 27 to 29 August. Recently retired fire fighter David Morris will join Tim Carew on the stand. David had a distinguished career with GMC Fire Service in operational and in technical departments and was involved with the introduction of several key innovations.

Contact Tim Carew on 00 353 87 235 2107 and email to tim.carew@tsi.ie.