BY EMAIL

28th April 2011

Dear Anita,

Yes I would say the proposed Standard is fundamentally and deeply flawed in several areas, which will have a severely negative effect on the growth of the Residential Sprinkler market in the UK and thus limit the number of lives that can be saved by these systems.

This draft of BS9252 was prepared by a Task Group with the intention that the full FSH18/2 committee would then be able to comment, and if appropriate, approve the document for publication.

Having taken so many years to get the document to this stage it seems inappropriate to try to rush through the decision to publish without proper consultation and discussion within the FSH18/2 committee, especially where there are so many contentious technical issues.

In particular, the performance requirements in this standard BS9252 differ substantially from those required by both UL and FM (which between them dictate how these Residential sprinklers are expected to be manufactured and perform in the US and the rest of the world) and it would seem highly unlikely that any Manufacturer would produce a Residential sprinkler especially for the UK market given the scale of the world market when compared to the UK market.

Moreover, now that CEN has agreed to work on the Scandinavian draft EN 12259-14 (which much more closely resembles the US UL/FM design parameters) and that is widely supported by both Manufacturers and other EU states), this standard BS9252 is superfluous and FSH18/2 should be employing its limited resources on more important matters such as the review of BS9251.

I know that others are making representations about other technical flaws in BS9252 however the RSA is particularly concerned at the contents of Section 4.5.2 and Annex S.

In 2001 the US Manufacturers of Residential sprinklers agreed a new testing protocol with the NFPA, NFSA, AFSA and others, which was incorporated into the US standard UL1626 and from 2002 all Residential sprinklers were designed and tested to this new standard.

Amongst others things, this new protocol required the second and subsequent sprinklers operating to flow at the same rate as the first sprinkler and incorporated a minimum applied density of 2.02 mm/min.

Annex S still maintains the old concept requiring the first sprinkler to run at 4 mm/min and subsequent sprinklers to run at 2.85 mm/min, which is the same as the 60 l/min for one sprinkler and 42 l/min for each of 2 or more sprinklers operating over 15 sq m contained in the current BS9251.

This concept was discarded by the Industry nearly 10 years ago and it would seem about time that British Standards caught up with the rest of the world.

Tables 3 & 4 would appear to require sprinklers being used at the limited areas given in Table 3 to flow at a minimum rate of 2.85 mm/min as opposed to the Industry accepted

2.02 mm/min.Quite how this relates to Annex S is unclear and may lead to confusion should the standard be published in this form.

Assuming that the applied densities in fire test in Annex S are to be used this would mean that 2 popular Residential sprinklers (VK457 & RFC49) would, if used at 4.9 x 4.9 m area of coverage for instance, would be required to flow at around 96 l/min at a pressure of 1.9 bar as opposed to their UL approved listed flow rate and pressure of 49 l/min and 0.5 bar.

Effectively this nearly quadruples the pressure requirement and doubles the flow rate. One of the main obstacles to the wider use of Residential sprinklers in the UK is limited mains water flows and pressures so any unjustified increase in flow rate and/or pressure requirement simply serves to limit the number of people that may benefit from this form of sprinkler protection.

Mains water is the most reliable source of water for Residential sprinkler systems but where this is inadequate pumps and tanks may be used but at a higher cost on installation and a reduction in reliability.

Also it is often difficult, if not impossible, to find space for a tank in modern houses and this increase in required flow rate will simply increase the tank size proportionately thus making this problem more difficult.

Perhaps of paramount significance is the fact that no evidence has been produced to support these proposed minimum application densities, which at best appears arbitrary, whereas the minimum applied density in the US was established through many years of rigorous testing, some 30 years practical experience in the field and around 100 million Residential sprinklers installed.

The RSA is therefore of the view that this draft standard BS9252 is technically deeply flawed and should not proceed to publication.

Yours Sincerely

Sir George Pigot
Secretary General RSA