Watermist Fire Protection in 2016

Bob Whiteley C. Eng.; M.I.Mech.E.; M.I.Fire E.; B.Tech(Hons)
Chair: BSI FSH18/5 Watermist Working Group
Why is watermist so contentious?

Is it or isn’t it a sprinkler system?
Reluctance to accept by Building Control and Insurers.
Lack of component testing
Test based designs
Cowboy charter
Lack of standards
Is mist system the same as a sprinkler system?

NO!

Automatic mist nozzles do use the same frangible bulb as sprinklers.

Sprinklers suppress fire by wetting, mist suppress fire by cooling.

Sprinklers provide floor wetting

Mist delivers droplets into the combustion air stream.

Mist nozzles have height limitations
Lack of acceptance by Building control and Insurers

Building Control:
Not fire system experts.
Need the ‘comfort’ of a British Standard to justify acceptance.

Insurers:
Seeking full property protection
Risk averse
Lack fire system technical expertise
Lack of component testing standards

FM/UL embed component testing in their fire testing.

CEN has been drafting component test documents for 6 years.

Major test houses (LPCB/VdS) have in-house component test protocols.

Lack of published test standards has put off manufacturers.
Test based designs

Limited ‘common’ test protocols

Do tests replicate actual hazards?

High cost of testing

Validation – 3rd parties

Lots of tests done

Tests inform application and limitations of tests
Cowboys charter

Lack of standards leaves buyers vulnerable to ‘plausible salesmen’

Seduced by low water flows and small water storage

Discharge times depend on, or ignore FRS response times

Entrants into the market lack a fire engineering background or understanding

Installer audit schemes needed
Lack of watermist standards

NFPA750 – onus on manufacturers to provide tested design solutions.

FM 5560 – insurer in-house standard for components and fire tests

CEN – moving towards creating standards for design, fire tests and components (later?)
New British Standards

Standards:
- raise public awareness of industry best practices
- set benchmarks for effective application for fire protection watermist.

BS – 8458 – published – domestic and residential design and installation

BS -8489 – commercial and industrial – design, installation and test protocols.

• Public domain rules for design and installation
• Test protocols
• Recommendation for component certification
Thankyou !!