

Setting goals for the future

On the eve of the 15th International Water Mist Conference in Amsterdam, IWMA Chairman Ragnar Wighus writes about the Association's intentions for the next generation of fire test protocols.

The International Water Mist Association's purpose of combining a scientific approach to the development of standards and regulations with the market demand for safe and efficient systems has led to a number of changes in regulations. In the early days of IWMA for example a workshop in Hamburg led to a common view on IMO regulations for water-based protection of machinery spaces on board ships. A later research project then formed the scientific basis for scaling up the results from the tested volume to double the size of machinery spaces, then implemented by the IMO Fire Protection Sub-committee in IMO 1165 in 2010, (IMO MSC.1/Circ.1385).

Land-based applications differ from marine-based ones in that there are many regulatory bodies and approval authorities, which has led to a number of different standards for similar applications. While the technical differences between them may not be huge, nevertheless water mist system manufacturers have had to comply with all these different national standards and approval bodies with the consequent cost implications.

The IWMA has actively supported standardisation work for a common European standard to the point that today's Technical Specification EN TS 14972 is being proposed as a European standard.

At last year's annual conference the IWMA presented the results of a research project summarising both the variety of test protocols for water mist sprinkler installations and the variation levels between them. As a result of this project a number of approval organisations will be attending a workshop after this year's conference where approaches for reducing the number of test protocols will be discussed, with the aim of opening up further applications for water mist systems.

Some test protocols require that water mist system performance is demonstrated in comparison with water mist sprinkler systems. While the IWMA has always welcomed the demonstration of equivalent performance of the water mist system with alternative systems, is it necessary to repeat these reference tests so many times, as is required to today? The IWMA aims to agree generic acceptance criteria that are based on the most relevant performance measurements of the water mist systems. The workshop in Amsterdam will hopefully be the starting point for a common understanding of these acceptance



criteria as well as set the path for further simplification of the test protocols.

The next generation of test protocols should be based on the basic principles based on the three Rs: repeatability, reproducibility and realism. Repeatability means that the test results should be within acceptable limits when a number of tests are repeated, based on statistical analysis. Reproducibility means that the materials, components and other equipment used in the tests should be available for testers around the world. The most important R is – from IWMA's point of view – that the tests represent a realistic challenge for the water mist system. This means that the tests feature geometrical details and important parameters that influence the effect of the system's performance. For a water mist system, these parameters encompass coverage of the water mist, the extension and ventilation of the protected volume as well as the combustibles present in the tests.

In addition to reducing unnecessary testing, the IWMA seeks new test protocols and more generic acceptance criteria, as well as a fruitful cooperation between water mist system manufacturers, approval bodies, insurance companies, authorities and research institutions.

The 15th International Water Mist Conference takes place at the Mercure Hotel, Amsterdam, 28-29 October 2015. For more information visit www.iwma.net.