



IWMA · Poststraße 33 · im HBC · D-20354 Hamburg

To:

- UL – Mr. Kerry Bell and Mr. Robert James
- VdS – Mr. Stefan Kratzmeir
- FM Approvals – Mr. Jonathan Carpenter
- BRE – Ms Louise Jackman
- CNPP – Mr. Arnaud Breton
- CEN Working Group – Dr. Joachim Böke
- FM Global – Mr. Bert Yu
- AXA – Mr. Karim Karzazi
- Zurich Insurance – Mr. Gary Howe
- XL Insurance – Mr. Marc van der Velde

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IWMA's Ordinary Hazard-Project for Automatic Water Mist Systems (closed nozzles) Fire Testing

Dear Madam, dear Sirs,

as you may be aware, IWMA's members include numerous manufactures, approval bodies and test institutes. Many of our members have intensively been involved in fire testing and technical norming groups over the last almost 20 years. The approval situation during this time has changed from an almost totally uncontrolled situation to one, where a number of sound standards for the general application of water mist systems with related basic requirements on the one hand and fire test protocols on the other hand are regularly used. As a consequence today water mist systems can be designed, installed, tested and approved on a common and safe basis.

In IWMA's opinion the presently used fire test protocols do lead to a safe use of water mist systems, but certain very positive effects being specific to water mist systems may not be fully utilized on this basis. This specifically applies to the so called "Ordinary Hazard Risks", for which automatic nozzles are used. The present state of the art requires water mist systems to perform in the same way as

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sprinklers. This provides users and authorities having jurisdiction with a sound tool to evaluate the performance of water mist systems with technically simple means. Effects being specific to water mist such as thermal management, gas cooling, the absorbing of heat radiation etc. have for most of the present generation of fire test protocols not been considered.

IWMA is of the opinion that today's understanding of water mist within the scientific community has well been developed to a point, where the available knowledge allows, to start the work on a new generation of fire test protocols. This will enable users and authorities to make use of these additional advantages of water mist, thus further improving safety and efficiency of fixed fire suppression systems.

A first phase of a research project has therefore been carried out by IWMA during 2013 and 2014. A research institute on behalf of IWMA has collected details of presently available test protocols for automatic nozzles. Test scenarios, acceptance criteria and other details have been compiled. Please see attachment or go to IWMA's web page: www.iwma.net/publications/reports/

It is the intent of IWMA to go further with the project and to start the second phase of it, which will be dedicated to the definition of testing requirements covering well defined protection objectives, fire scenarios, fuel packages, measuring equipment and acceptance (pass/fail) criteria. The aim is to be able to check not only upon general fire-fighting capabilities of a suppression system – the water mist system – but also to consider the aforesaid specific advantages of water mist systems. Double testing of the test candidate – the water mist system – and a sprinkler system for comparison would not be needed.

It is not intended to replace other test protocols, but to generate input to all stakeholders for their standardization work around the globe.

This second phase will predominantly be based on theoretical studies. A third phase is being aimed at including actual fire testing for the validation and consequently adjustments of IWMA's recommendations. The largest involvement of organizations, dealing with water mist systems testing and/or approvals, is aimed at by the association in order to achieve the maximum consensus on the matter. The membership base of IWMA already allows to effectively make experts from all continents contributing to the project. As an important part of phase 2 IWMA will hold two workshops along with the carrying out of the studies, to enable IWMA to receive input from interested expert parties, to inform these parties about the progress of the work and to discuss intermediate results. The first of these workshops will be held in Amsterdam on 29th October 2015 from 4 p.m. to 6 p.m. at the Mercure Hotel Amsterdam City.



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We would appreciate to get your thoughts on the above and ideally first comments or any other input. We further would herewith invite you to support this project as an observer and contributor. Contributions may take place in the form of technical information, comments and discussions. We further would appreciate your presence in our workshops, especially the one coming up in Amsterdam.

We would be happy to receive any feedback by 15th June via mail to info@IWMA.net or by phone to Mrs. Bettina McDowell under +49 40 35085-215.

Please let us know whether you are interested in one of the possible activities or in the observer status only. In case you are interested in proposing your organization as the one that might run the project, we will let you have the specifications for the next step of the study to be able to hand in a proposal. Should you be only available to participate as an observer, then we will keep you posted on all the relevant communications and achievements of the study to collect your comments and suggestions.

Kind regards

- Ragnar Wighus (SP Fire Research Norway / IWMA president)
- Dirk Sprakel (Fogtec / IWMA vice-president)
- Luciano Nigro (Hughes Associates Europe / member of the board)
- Brian Stumm (Marioff / member of the board)
- Jonathan Carpenter (FM Approvals / member of the board)
- Carsten Palle (VID Fire-Kill / member of the board)
- Henrik Bygbjerg (Danfoss Semco / member of the board)
- Erik Christensen (Novenco Fire-Fighting / member of the board)