



IWMA
International Water Mist Association

The History of IWMA

- Founded on 4th April 1998
- Head office in Hamburg, Germany
- Annual conferences since 2001



The History of IWMA

- 2009: The IWMA Scaling Project
- CV Magazine Award in 2017
- 19th International Water Mist Conference (IWMC) will take place in Berlin, Germany, on 23rd and 24th October 2019



17th IWMC in Rome in 2017

IWMA is ...

... the world's leading water mist forum for:

- manufacturers
- distributors
- insurance companies
- fire departments
- classification and academic institutions
- users of water mist firefighting systems



IWMA is ...

- ... the 1st and still the only organization worldwide dedicated to water mist and related technologies!



The Structure of IWMA

- IWMA Board of Directors (President Are Brandt and eight further members of the Board)
- General Manager Bettina McDowell



IWMA President Are Brandt

The Structure of IWMA

- IWMA Scientific Council (Chairman Hong-Zeng Yu / FM Approvals)
- IWMA Marketing Group
- Over 60 corporate and private members



Hong-Zeng (Bert) Yu

Aims and Activities

- IWMC as a networking platform and exchange of knowledge
- Educational and topical seminars worldwide
- „IWMA Young Talent Award“



Ragnar Wighus and Hong-Zeng Yu with „IWMA Young Talent 2017“ James White

Involvements

- CEN (CEN/TC 191/WG10) → prEN14972 → EN14972 (Chairman Dr. Joachim Böke, Minimax)
- IMO International Maritime Organization



CEN/TC 191/WG10-Chairman Joachim Böke

Involvements

- NFPA 750 (Water Mist Fire Suppression Systems)
- NFPA 25 (Inspection, Testing, Maintenance)
- European Commission / Expert Group on Marine Equipment (EMSA) + Fire Information Exchange Platform (FIEP)
- Sustainable Fire Engineering



IWMA representative Max Lakkonen (IFAB)

The History of Water Mist

- 1880: F.E. Myers → back pack system to fight small forest fires
- 1978: Lecture Book „Fundamentals of Fire“
- Late 1980s: Execution of the Montreal Protocol



The History of Water Mist

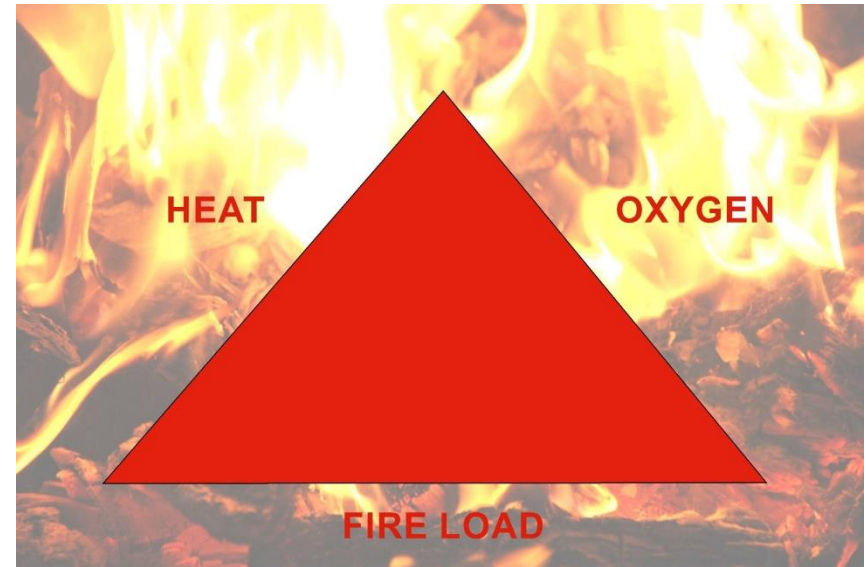
- 7th April 1990: 158 people die during a fire on the Scandinavian Star (nearly 50% of all passengers)
- 2013: IMO Sub-Committee, 56th Session: Water Mist Lances on Container Ships



How does Water Mist work?

A fire triangle consists of three elements:

- Combustible material / fuel
- Heat
- Oxygen



How does Water Mist work?

Water mist removes two of these elements:

- Heat
- Oxygen

(Traditional sprinklers only remove the heat ...)

- Low pressure water mist: less than 12.5 bar (181 psi)
- Medium pressure water mist: between 12.5 and 35 bar (507 psi)
- High pressure water mist: up to 120 bar (1740 psi)

How does Water Mist work?

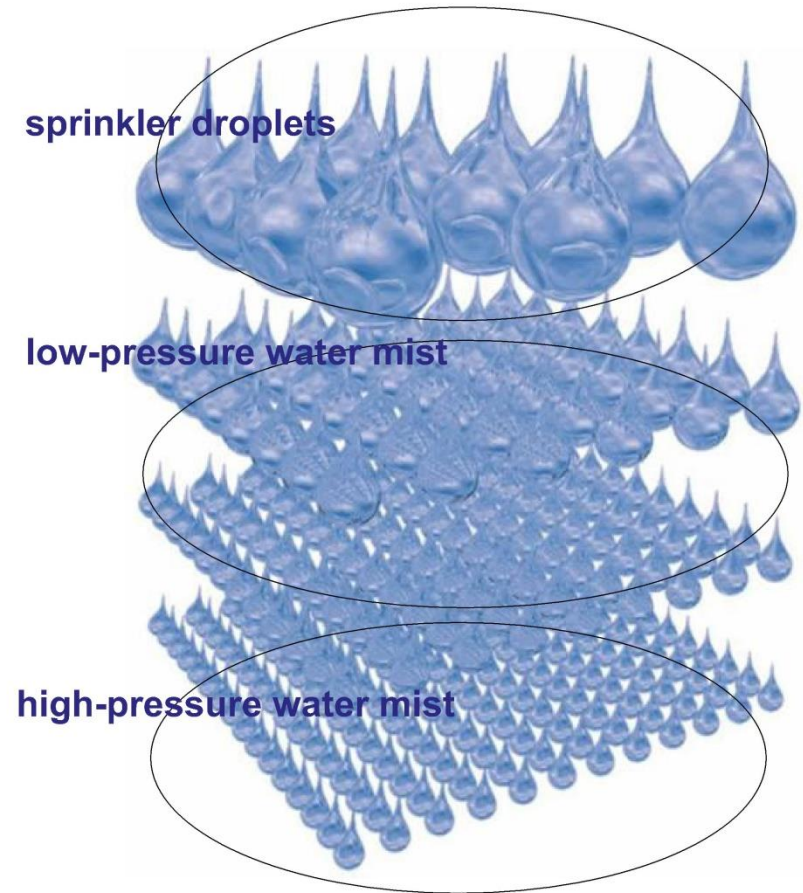
It jets water at low, medium or high pressure through specially designed nozzles. As the system pressure increases, the size of the droplets decreases which results in droplets with an altogether larger surface and water turning into steam. Consequently, the system rapidly reduces the temperature as well as the oxygen at the fire front. Thus, energy is taken away from the fire. Due to its cooling effect, water mist prevents re-ignition!

How does Water Mist work?

Definition:

Droplets size less than 1 mm – 1,000 microns

- NFPA say: 99% of the droplets less than 1 mm
- CEN say: 90% of the droplets less than 1 mm



Advantages of Water Mist

- less water → less water damage
- removes heat AND oxygen
- does not deplete the ozone layer
- does not contribute to global warming
- does not harm humans
- reliable – versatile – flexible
- thinner pipes ...

Applications: The Hall of Fame

- St. Patrick's Church,
New York, USA
- The Hungarian
Parliament, Budapest,
Hungary
- The Eurotunnel
- ISS International Space
Station (portable water
mist fire extinguishers)



Applications: General

- cable tunnels
- high-rise buildings
- food industry: industrial oil fryers
- hospitals, intensive care units, care homes
- museums and heritage buildings
- libraries and archives
- data centres
- hotel rooms and cabins on board of ships
- saunas
- machinery spaces
- Transport systems
- etc.

Standards & Guidelines

- CEN prEN14972
- NFPA 750
- FM 5560
- UL 2167
- VdS 3188
- IMO A800 + MSC 265
- IMO MSC.1/Circ. 1165
- The British Standards
- The French Standard
- The Nordic Standard
- The Danish Guideline

IWMA Communication

- Quarterly newsletter for IWMA members
- Quarterly newsletter for non members
- Press articles in relevant publications
- Articles and water mist groups on LinkedIn
- Tweets on Twitter
- Wide range of information on/via IWMA homepage



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