How does Water Mist fit into the Water-Based Fire-Fighting World?

Istanbul, 22 October 2014

Alan Brinson
European Fire Sprinkler Network

- Members from 17 countries
  - Fire Authorities, FPAs, insurers, consultancies, laboratories, sprinkler industry and others
- 1 employee and 3 consultants
- Working to see the wide-spread use of properly designed and installed sprinkler (and water mist) systems in Europe
Agenda

European Sprinkler Market
Agenda

European Sprinkler Market

Water Mist Markets
Agenda

European Sprinkler Market

Water Mist Markets

The Future
European Sprinkler Market
## Sprinklers/Thousand Inhabitants

<table>
<thead>
<tr>
<th>Country</th>
<th>Sprinklers/1K Inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>125</td>
</tr>
<tr>
<td>Norway</td>
<td>120</td>
</tr>
<tr>
<td>Sweden</td>
<td>48</td>
</tr>
<tr>
<td>Germany</td>
<td>40</td>
</tr>
<tr>
<td>Netherlands</td>
<td>35</td>
</tr>
<tr>
<td>Belgium</td>
<td>35</td>
</tr>
<tr>
<td>UK</td>
<td>28</td>
</tr>
<tr>
<td>France</td>
<td>24</td>
</tr>
<tr>
<td>Spain</td>
<td>17</td>
</tr>
<tr>
<td>Italy</td>
<td>10</td>
</tr>
</tbody>
</table>

*We have a lot to do!*
## European Sprinkler Market

<table>
<thead>
<tr>
<th>Country</th>
<th>Sprinklers in millions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IFSA 2007</td>
</tr>
<tr>
<td>Germany</td>
<td>2.8</td>
</tr>
<tr>
<td>Russia &amp; Eastern Europe</td>
<td>2.5</td>
</tr>
<tr>
<td>United Kingdom &amp; Ireland</td>
<td>2.2</td>
</tr>
<tr>
<td>France</td>
<td>1.6</td>
</tr>
<tr>
<td>Nordic</td>
<td>1.4</td>
</tr>
<tr>
<td>Benelux</td>
<td>1.3</td>
</tr>
<tr>
<td>Spain &amp; Portugal</td>
<td>1.2</td>
</tr>
<tr>
<td>Italy</td>
<td>0.9</td>
</tr>
<tr>
<td>Austria &amp; Switzerland</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>14.6</strong></td>
</tr>
</tbody>
</table>
European Construction Activity

Sprinkler market ↓6% but construction activity ↓25%
European Sprinkler Market

- Set to grow as construction picks up
- More new code requirements for sprinklers expected in next few years and will produce further growth
- Residential market showing very strong growth now but from a small base
- Water mist should take a share of this market growth
Sprinkler Market Structure

Four or five Manufacturers

Limited distributor sales

Hundreds of installers

Intellectual Property
European Sprinkler Market Value

Components €250M

Pumps & tanks €150M

Pipe €400M

Installations €3B
A Sprinkler Project

Conceptual Building Design

Sprinkler system need identified

Sprinkler System specified

Manufacturers

Installer quotes

EN 12845
CEA 4001
NFPA 13 / FM
Water Mist Markets
Water Mist Markets - Marine

- Standard throughout passenger vessels and in cargo ship machinery spaces
- Has displaced sprinklers and carbon dioxide
- Less weight, space and free water than sprinklers
- Faster action on fire, safer and cheaper than CO$_2$
Water Mist Markets - Gas

- Applications such as IT suites, telecoms, archives
- Water mist is competitive with gas
- No issue with “leaky” rooms – more robust solution
- Great for local application
- But cannot penetrate cabinets like gas
- And some customers still concerned about water

➢ Probably not much more market growth here
Water Mist Markets – Sprinkler

- Applications are industrial, commercial buildings, schools, hospitals, housing… => the largest market
- Sprinkler systems are required by codes or insurers but some codes and insurers do not recognise water mist
- Acceptance in codes and by insurers will grow as CEN standards are developed – but this will still take years
- Water mist cannot compete with mains-fed sprinklers nor usually with sprinklers + pump + tank
- No water mist solution for warehouses
Water Mist Markets – Sprinkler

- For each project water mist has to be explained and sold to end users, officials, and insurers.

- Water mist has an advantage where there is:
  - A lack of space for pumps and tanks
  - Concern about water damage

- Vertical integration of water mist suppliers and their differentiated technology hinders competitive tendering.

⇒ Water mist has perhaps 3% of sprinkler market.
Water Mist Markets – Foam

Applications such as oil, chemical, petrochemical pharmaceutical and airports

- Negligible impact – water mist rarely used
Water Mist Market Structure

Four or five Manufacturers

Manufacturer = installer

Distributor = installer

Relatively few suppliers

Intellectual Property
European Water Mist Market Value

Components, pumps €20M

Pipe €15M

Land-Based Installations €80M
A Water Mist Project

Conceptual Building Design

Sprinkler system need identified

Water Mist specified as alternative

Manufacturer is also installer

Systems cannot be designed from standards

Each quote based on a different design

Relatively few possible quotes
The Future
The Future

- Complete the work on standards to ease specification
- Widen access to technology – license more installers
- Cost is the deciding factor for most projects

⇒ Identify and pursue applications where water mist can compete on cost with sprinklers

⇒ Water mist can take more than 3% of sprinkler market!
Thank you for your attention

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