The Isala Hospital

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sam en maken we de toekomst
Unica:

- Installer; Family business for > 80 years
- Several establishments all over the country
- Some specialized business units < incl. high pressure water mist >
- 2000 employees
- Most national and some international projects
High pressure watermist installer

For fire alarm- and watermist systems in one hand:

- Design
- Engineering
- Prefabrication
- Erection
- Commissioning
The Isala Hospital
The Isala Hospital, some facts.....

- Building period: 2009 – 2013
- Area: 108,000 m²
- Architect: Alberts & Van Huut, The Netherlands
- Advisor fire safety: Deerns, The Netherlands
- Inspection body: R2B, The Netherlands
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Challenges:

Several different hazard classifications:
- Lh / OH1: high rooms and atria
- Storage of clothes and nursing materials
- OH3: supermarket

Extra costs? € versus benefits…
ISALA Hospital Zwolle

- Initial plan: conventional sprinkler systems
If you can’t beat the fire, than drown it
Arguments for watermist as alternative

- No large water buffer
- No big pipes
- Pipes are easier to bow
- Small installation space
- Less and smaller feed through passages in walls and floors
- In case of fire: less water damage (very expensive equipment)
- Sustainability
- Less chance of injury
- No separate system needed for computer rooms
Total costs of ownership

- TCO English IWMA.xlsx
Technical data

- Risk classification
  - Ordinary Hazard 1 for most areas
  - Ordinary Hazard 1 with 8m ceiling
  - Ordinary Hazard 3 for shopping areas
  - Ordinary Hazard 3 pre-action with automatic fire detection for special rooms
  - Deluge system with open nozzles and automatic fire detection for atria
Technical data

- Water supply;
- 2 Diesel driven pump sets, each delivering 700L/min (2x100% capacity)
- Each set consisting of 4 pumps (175L/min/pump gives 700l/min)
Technical challenges.....

- OH3 shopping area with ST5 storage
OH3 test programme: Before the test
After the test

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Technical challenges.....

- OH1 8 mtr high
OH1- 8m test

- Trondheim Norway
Technical challenges…..

- Cold storage area >> freezing conditions
Solution:

- Non toxic, non flammable anti freeze solution upto – 50 Celcius
Technical challenges.....

- MRI Room: Faraday cage with high stray currents
Solution:

- High current resistance, 240 bar tested hose connection
Thanks for your attention!

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