LEARNING OBJECTIVES

• Clarifying the function of a risk engineer.

• Understanding the curbs of the widespread of the water mist industry within the insurance industry.

• Being able to propose or identify ideas to better promote the water mist technology in the insurance industry.

• Bear in mind,
  • Risk engineer → prescription
  • Limited experience even if global print foot
RISK ENGINEER

• Insurance companies
  • When you buy insurance, you're buying a promise.
  • Intangible product till you need it.

• There are various forms of insurance depending on
  • Local needs
  • Financial development

• Insurance business is split in 3 parts
  • Life
  • Health
  • P&C; P&C is divided in industrial and mass

• LET'S FOCUS ON INDUSTRIAL INSURANCE
RISK ENGINEER

- Traditional INSURANCE INDUSTRIES
  - Middle market – location between 5 M€ - 50 M€ of capacity – local print foot
  - Corporate clients – location between 5 M€ - 2000 M€ - global or complex print foot

- Corporate insurance companies are driven technically
  - Risk consulting
  - Underwriting
  - The underwriting terms (captive, deductible, reinsurance) and the risk assessment will determine the loss exposure / risk quality → quote

- Corporate insurance need one way or another good risk engineers and underwriters
  - Find solutions
  - Assess the risk → rating internal or external
  - Calculate the exposure → depending on guidelines and systems set-up: EML / MFL

- But for which products?
  - Line of Business
  - Let’s focus on Property / Machinery breakdown and Energy
RISK ENGINEER

- Fire
- Explosion
- Natural Hazards
- Business Interruption
- CBI / BCP / Interdependencies

PROPERTY HAZARDS

- Occupancies – Process or storage – Automotive – Pharmaceutical – F&B – Chemical – Semi - DC
- Utilities
- Special hazards FL/CL
- Aerosols

PROCESS HAZARDS

PRINT FOOT - EXPERIENCE

- Construction
- Fire protection systems
- Prevention measures
- Human element

MITIGATION MEASURES

- 2 types of engineers
  - Those who manage the clients and define the strategy: Account Engineer
  - Those who are on the field: Consulting Engineer or Field Engineer

- Being a good Risk Engineer require technical skills, soft skills but there is no template:
  - Sensitivity
  - Opportunities
  - Speciality - expertise
  - Limited understanding of the local, Regional or International codes/standards

- Local
- Regional
- Global
THE GAPS FOR A BETTER UNDERSTANDING

- Risk Engineer likes when it is simple, technologically understandable and when they trust the players.

- So now, let’s think about the water mist industry:
  - How clear is your technology?
  - How understandable is an installation?
  - How repeatable is the material from one supplier to another one?
THE GAPS FOR A BETTER UNDERSTANDING

Sinorix H20 Jet
Siemens ©

Hi-Fog references
Marioff®

Danfoss references
Danfoss©
THE GAPS FOR A BETTER UNDERSTANDING

NFPA 750:2019 1.1 Scope.

*This standard contains* the minimum requirements for the design, installation, maintenance, and testing of water mist fire protection systems. *This standard does not provide definitive fire performance criteria,* nor does it offer specific guidance on how to design a system to control, suppress, or extinguish a fire. Reliance is placed on the procurement and installation of *listed water mist equipment or systems* that have demonstrated performance in fire tests as part of a listing process.

NFPA 750:2019 1.1: 该标准包括对细水雾系统设计、安装、维护和试验方面的最低要求。

**FM5560:2016**
**BS8489-1 to 7: 2016**
**BS8485:2015**
**CEN/TS 14972:2018/19**
**VDS 3188**
**CCCF / CCS**
**CNPP, CNBOP**
**IMO MSC 265/84, MSC/Circ.1165**
...others...

*These standards are performance based.*

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6.9 Pump Systems.

6.9.1 Pumps.


6.9.3 Controllers.

6.9.3.1 Listing. Controllers for pumps shall be listed fire pump controllers and be installed in accordance with NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection.*
THE GAPS FOR A BETTER UNDERSTANDING

- VdS 3188
- CEN TS14972 • Still a draft
- FM Approval Standard - 5560 • How many appendices?
  - How can we read the certificates?
- FM Global Data Sheet 4-2 • Water Mist Systems
- NFPA 750 • Standard on Water Mist Fire Protection Systems
- Local test protocol for local markets
- Various approach for open space • American POV
  - European POV with VdS
THE GAPS FOR A BETTER UNDERSTANDING
Not all companies have the time and the will to educate their engineer on all topics.

Water mist systems are fire protection system with less applications than others that are well known.

Don’t expect the risk engineer community to educate itself regarding this technology.

Popularize / disseminate with education sessions.
### EXAMPLES - PROPOSALS

#### 1 - EDUCATION

#### 2 - READABLE
EXAMPLES - PROPOSALS

• Personal experience
  • Some players are clearly open to the discussion and understand the gaps for any risk engineer. Some other players don’t.
  • It is difficult to get information from suppliers regarding:
    • Tests results and installation requirements
  • At AGCS we provide a list upon request to our clients of companies
  • Offer is not very clear for non-expert or experienced engineer
    • Client: it is very rare there is such a knowledge regarding fire protection system
    • Insurer: Water Mist system does not have the best reputation due to previous insurer experience

• It is unacceptaable to observe players that use their VdS or FM Approval to answer for any kind of project
TAKE AWAY

• The room for water mist is there:
  • When there is no alternative
  • When there is no adequate water supply
  • When it is cheaper or makes more sense: DC / EXISTING / EQPT / HRB …. 

• But to have a larger room, don’t underestimate how the prescriptive approach works.

• Take action together as a community. The knowledge only makes sense when it is shared.

• Training, education sessions.

• Clean-up the players
THERE ARE WORSE THINGS IN LIFE THAN DEATH. HAVE YOU EVER SPENT AN EVENING WITH AN INSURANCE SALESMAN?

WOODY ALLEN
THERE ARE WORSE THINGS IN LIFE THAN DEATH. HAVE YOU EVER SPENT AN EVENING WITH AN INSURANCE SALESMAN?

MY WIFE
BY CHANCE I’M IN THE RISK CONSULTING INDUSTRY