





Content

- Who is VdS?
- Integrated concept for reliable and effective water mist systems
- Application of approved products in other planning and installations standards





Profile

- VdS is an independent institution which has been ensuring safety and trust in the fields of fire protection and security for many decades.
- Its customers include industrial and commercial enterprises, leading manufacturers and systems houses, service providers, specialist firms and insurance companies.
- VdS is the preferred partner in matters of fire protection and security.







Areas of expertise

- Fire protection
- Security
- Electrical engineering
- Management and information systems
- Cyber security





Fields of activity in fire protection

- Inspection of fire protection facilities on site
- Testing and certification of products and systems
- Certification of service providers, experts and management systems
- Training courses, conferences and publications





Integrated concept for reliability and efficiency

Reliable and state-of-the art guidelines for planning and installation



Approved and experienced installers







Folie 6

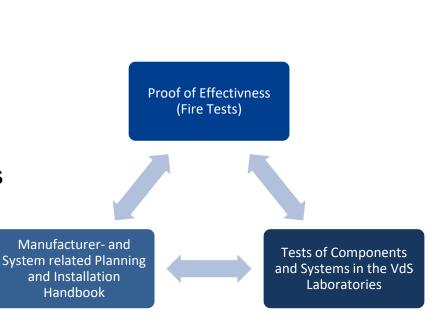


"New" Fire Fighting Systems (Water Mist Systems)



 Evaluation of new technologies according effectivness, safety and reliability

 Proofen VdS procedures and test methods are adapted to new technologies







Types of Approvals

- Cable Tunnels
- Machinery Spaces / Engine Test Rooms
- Paint Cabins / Paint Storage / Storage of burnable Liquids
- Office and Accomodation Areas / Selected Storage Areas
- Parking Garages
- Local Protection
- Special Case approvals....







Office and Accomodation areas

Office Areas (former called OH1)
Extension for accomodation
areas:

- Hotel and Accomodation Areas
- Hospitals,
- Conference Areas
- ...

Extension for Suspended Ceiling /Floors













Selected Storage Areas

Selected Storage Areas (Racks and Block Storage):















Machinery / Generator Spaces (no storage)

- **Engine and Machinery Spaces**
- Transformers (housed)
- **Engine Test Cells**
- **Turbines**













Cable Tunnels

Cable Tunnels











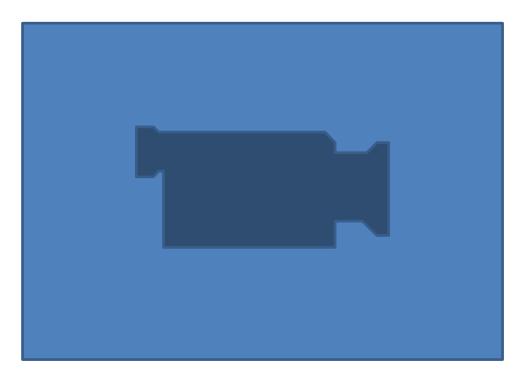




Painting & Adjacent Areas

- Painting Booths
- Paint Mixing Areas
- Paint Storage Areas









How to recognize approved products

- Valid certificate
- All approval bodies publish approved products: e.g. http://vds.de/en/certifications/lists/
- Products are marked with the lable of the approval body:







Initial and follow-up

inspections

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Approved products and systems





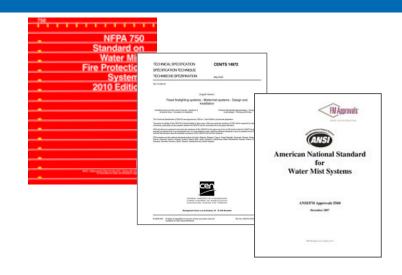


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Guidelines for Watermist Systems

- NFPA 750 (Edition 2018)
- EN TS 14972:2011
- IMO (A 800 and MSC 1165)
- APSAD D2
- British Standard: DD 8489:2011





The need of own VdS guidelines for planning and installtion:

VdS 3188 – Watermist sprinkler and extinguishing systems – planning and installation



VdS 3188

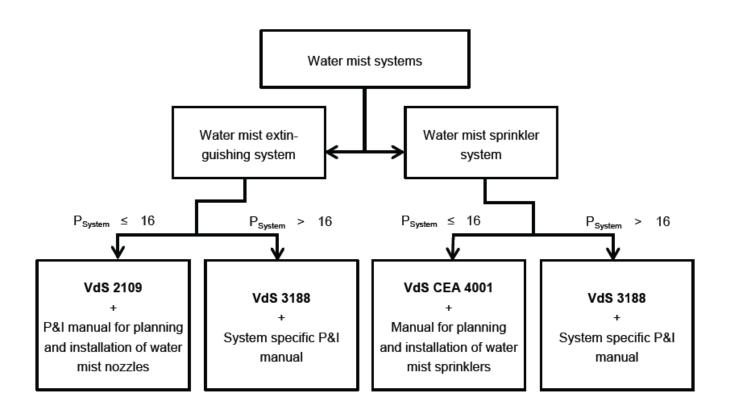
VdS 3188 – VdS guideline for planning and installation: water mist sprinkler and fire extinguishing systems

- Same schematic setup as VdS CEA 4001 (EN12845) or VdS 2109
- VdS 3188 covers requirements of the future EN 14972
- For specific applications: Approved water mist systems are consindered as equal to sprinkler-, deluge-, or gas exintinguishing systems.

Avaiable at www.vds.de in German and English.



Watermist systems at VdS







VdS 3188: Major Content

Main part:

- Basic requirements
- Layout criteria and hydraulic dimensioning.
- Water- and power supply
- Requirements on system to generate the pressure (e.g. pumps or cylinder systems)
- Placement of water mist sprinklers and nozzles, Obstuctions
- Control and alarming systems
- Maintenance



Annex K: Proetction concepts

- Areas of application
- Limitations
- Basic Layout Parameters

Further annexes for

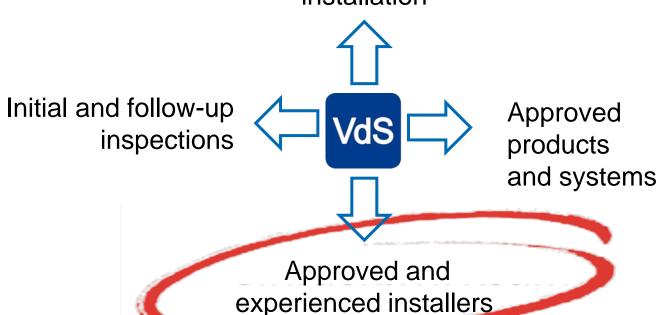
- System specific handbooks for planning & installtion (data sheets for sprinkler and nozzles)
- Addition of foam agents
- Hydraulic calculations
- ...





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Qulified Installer Companies

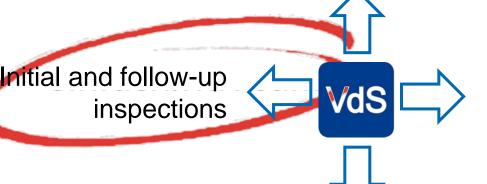
Typical content of an approval for installers:

- Requirements on company, staff and minimum installed systems
- Examination of designers, installers, etc.
- Periodical audits of the company (staff, premesis)
- Periodical quality check of installations



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experienced installers

Approved products and systems







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First & Periodical Inspections

Who does require inspections:

- Authorities
 - E.g. as part of the building permit
- Insurance Companies:
 - Requirement or cost reduction
- Client / Operator:
 - To reduce the risk of damages and interruption of operation.
 - Quality of installation







First & Periodical Inspections

The aim of inspections:

The system is inspected for effectiveness and reliability of operation

- Check if specified guidelines are fullfilled (e.g. VdS 3188, EN 14972, NFPA 750).
- Check if special requirements of the building permit or requirements by authorities are fullfilled.
- Check if changes of the risk are consideres and maintenance is carried out.

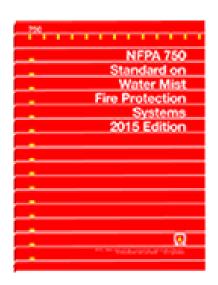




Approved systems according NFPA 750

- Most components to be used in systems according to NFPA 750 shall be listed
- Approved or certified is also often used as "listed"
- Listed:

3.2.3° Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.



VdS approved products and systems can be applied to NFPA 750 design

