Buildings & Industrial

Fire safety consultancy and design

Expert statement

- Planning of water-mist fire-fighting system for a converted transformer plant as art gallery (Neue Gruenstraße, Berlin)
- Determination of the interrelation of high pressure water mist and mechanical smoke extraction (Berlinsche Galerie, Germany)
- Fire protection assessment of materials according to EN13501
- Protection of glass facades alone escape and rescue routes in a hospital of Arhus Denmark
- Protection of cable routes in server rooms
- Determination of the influence of large ceiling heights on the efficiency of automatically activated water mist systems in parking lots and industrial plants
- Transferability of test results on the real situation in a creep of the Roseberry Park Hospital, Middlesbrough
- Transferability of test results for the protection of a large transformer onto other large objects with different sizes
- Determination of the influence of the ceiling height on the efficiency of automatically activated water mist systems in OH1-applications
- Usage of water mist system for the protection of water soluble substances in the museum of natural history in Kopenhagen

Fire safety concepts

- for a rectifier plant of the public transport company of Berlin (BVG)
- for the conversion of an existing building to a reprocessing and recycling facility for Li-ion batteries (Nickelhütte Aue)
- for a new Li-ion batteries dismantling/disassembly facility (Nickelhütte Aue)
- for a conversion project of the Kaiserliche Matrosenstation Kongaes in Potsdam
- for a conversion project of a rent multiple purpose storage hall in Brandenburg
- for a conversion project of an industrial building into a school canteen kitchen in Berlin (Großküche Spandau)
- various apartment buildings

Plant design for a water mist system for the fire protection

- Review of a fire safety plant concept for a nuclear power plant
- of an engine test fire protection concept (FEV Europe GmbH)
- of coal conveyor belts in the power station of Evonik Industries AG
- in a furniture market Hardeck Bochum
- for variable ceiling heights in Hotel Rokin Amsterdam
- for server areas of the Paribas Bank Paris
- for machinery spaces on inland passenger vessels
- Plant design and evidence of fire safety
- for the compensations measures of the structural fire safety with water mist fire-fighting systems in the Elbewerkstätten in Hamburg
- for the compensations measures of the structural fire safety with water mist fire-fighting systems for a visitor center “Kornspeicher Hobrechtsfelde”, community of Panketal
- Development of a fire test concept for high rise buildings (Turmcenter in Frankfurt/Main)
- Independent assessment about the execution of fire testing of another test institute for office applications
- Verification of the fire safety concept and of the realization of the fire precautions of a Hotel in Potsdam (Hotel Villa Monte Vino)
- Preparation of tender documents for a water mist system provided for the high-rise building of Charité Universitätsmedizin Berlin (university hospital of Berlin)
- Research in standards for the planning of a water mist system provided for the high-rise building of the Charité Universitätsmedizin Berlin (university hospital of Berlin)
- Basic design and execution planning for a water mist system in order to protect coal conveyor belts in the power station of “Chemiepark Marl” Evonik GmbH
- Research on approval standards on the procedures for water mist systems in ordinary hazard applications on behalf of IWMA (International Water Mist Association)
- Fire safety planning of a fire-fighting system of the Royal Mecca Clock Tower as an high-rise building
- Patent research about water mist technologies

Smoke and fire tests

For the approval of fire-fighting systems of the manufacturer

- Fire tests for the protection of data centers (FM 5560, Annex M, N)
- Fire tests for the protection of machinery in enclosures > 260 m^3 (FM 5560, Annex E, F)
- Fire tests for the protection of general storages (OH3 according to VdS standards)
- Fire tests for the protection of parking decks onboard of RO-RO passenger ferries (IMO)
- Fire tests for the protection of office applications (OH1 according to VdS standards)
- Fire tests for approval of sidewall nozzles according to VDS regulations

For the approval of an specific application of a fire-fighting systems

- Fire tests for the protection of energy storage containers with Li-ion-batteries
- Fire tests for the protection of an underground baggage handling-system of an airport
- Fire tests for the protection of a test cells for electric vehicles with Li-ion-batteries
- Fire tests for the protection of a parking garage with an aluminium structure and parking spaces for electric vehicles
- Hot smoke tests to visualize the smoke extraction in an atrium of an office building (Energieforum Stralauer Platz, Berlin)
- Investigations on gas and temperature development during thermal runaways of lithium-ion batteries from car industries (BMW)
- Fire tests for the protection of plastic producing industries (Thule GmbH)
- Fire tests for the protection of shipboard presses (Fagus-Grecon)
- Fire tests for the protection of large transformers for an operator in Singapore (Deluge Fire Protection)
- Fire tests for the protection of large cable tunnels for an operator in Singapore (AECOM)
- Fire tests for the protection for the national archive of France (l'Établissement public de maîtrise d'ouvrage des travaux culturels [EMOC])

Misc

- Determination of heat release rate (HRR) and other parameters during the fire tests with Li-ion-batteries of the car industry (F&E-Projekt SUVEREN https://www.suveren-nec.info/)
- Determination of the effectiveness of extinguishing against for the fire protection of Li-ion-batteries
- Determination of detection system concerning an earliest fire detection of fires with Li-ion-batteries
- Hot smoke tests as an approval of effectiveness of the smoke extraction and ventilation concept (Energieforum Berlin)
- Hot smoke tests in a school in Wetzlar to validate flawless functionality of installed fire detection system
- Fire resistance testing of Li-ion-batteries for the car industry

Simulations & calculations

- CFD simulations for the preparation of ventilation concept considering the smoke distribution during fires with Li-ion-batteries
- Verification of a fire detection system in metro wagons (LA Metro)
- Verification of the smoke extraction measures in the Indonesian embassy and of the und Axel Springer Passage, both in Berlin
- Expert statement and CFD simulation for Hotel Fontenay (Hamburg) to evaluate the performance of a fixed water mist system to protect the glazing in the atrium
- Evidence of smoke extraction measures of a retirement home (Wasserstadt Oberhavel)
- Evidence of smoke extraction measures of the refurbishment of an airplane hangar of the airport in Hannover/Langenhagen

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