



Update

EN14972 & EN17450

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IWMC Copenhagen

11. & 12. October 2023

Agenda:

Water Mist Protection in accordance with EN14972 - Update

1) EN14972-1

2) Fire Test Protocols: EN14972-2...17

- Building Protection Overview
- Industrial Protection Overview

3) Status Overview

- Published standards EN 14972 and EN17450
- Work Item Overview EN14972 and EN17450

4) EN14972-1 Amendment 1

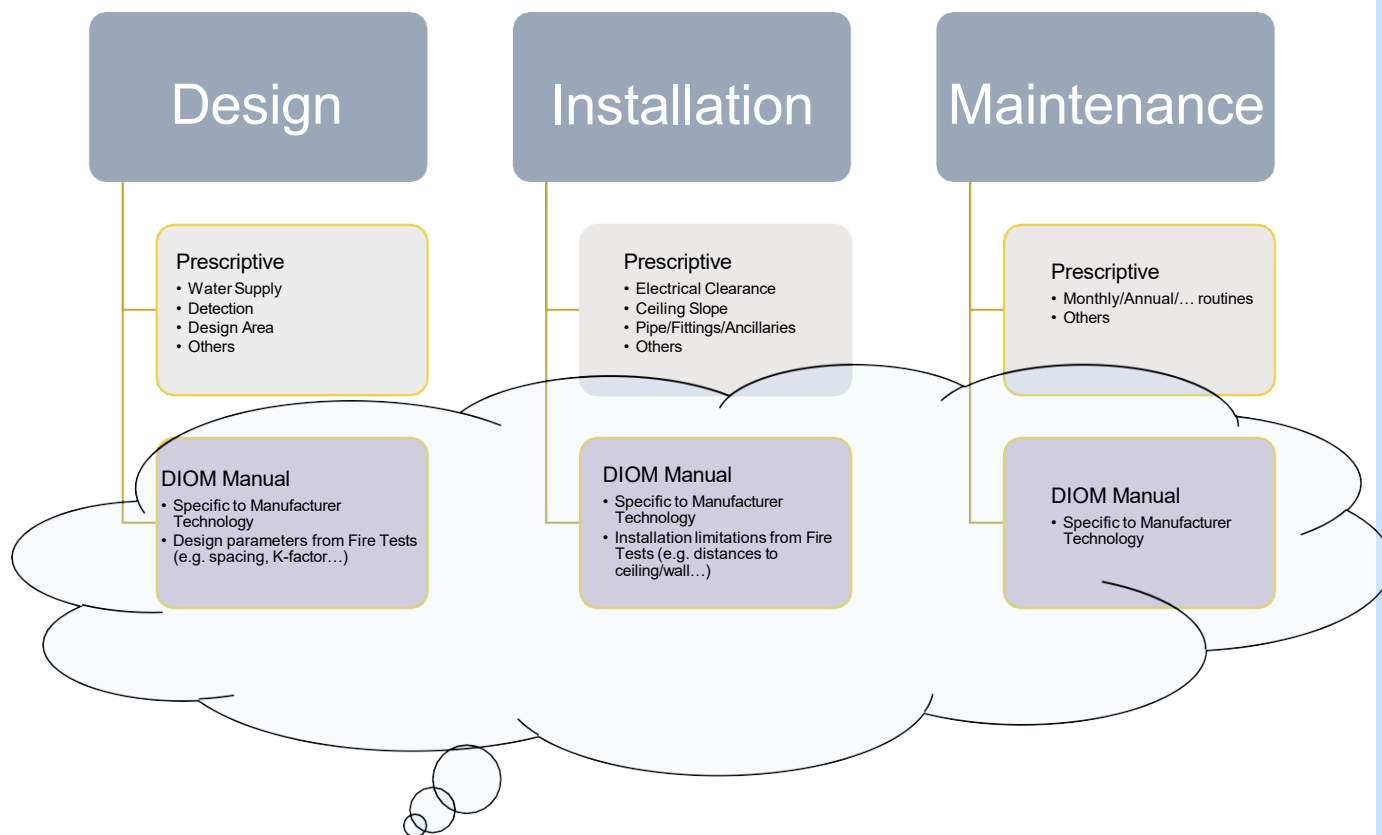
EN14972 part 1

- The standard specifies requirements and gives recommendations for the design, installation, inspection and maintenance of all types of fixed land-based water mist systems.
- The standard requires that water mist systems shall be designed for specific hazards or occupancies covered by EN 14972 series (parts 2-17) fire test protocols and in accordance with information and limitations obtained from these fire test protocols and the manufacturers DIOM manual

EN14972 part 1

Published 03-2021

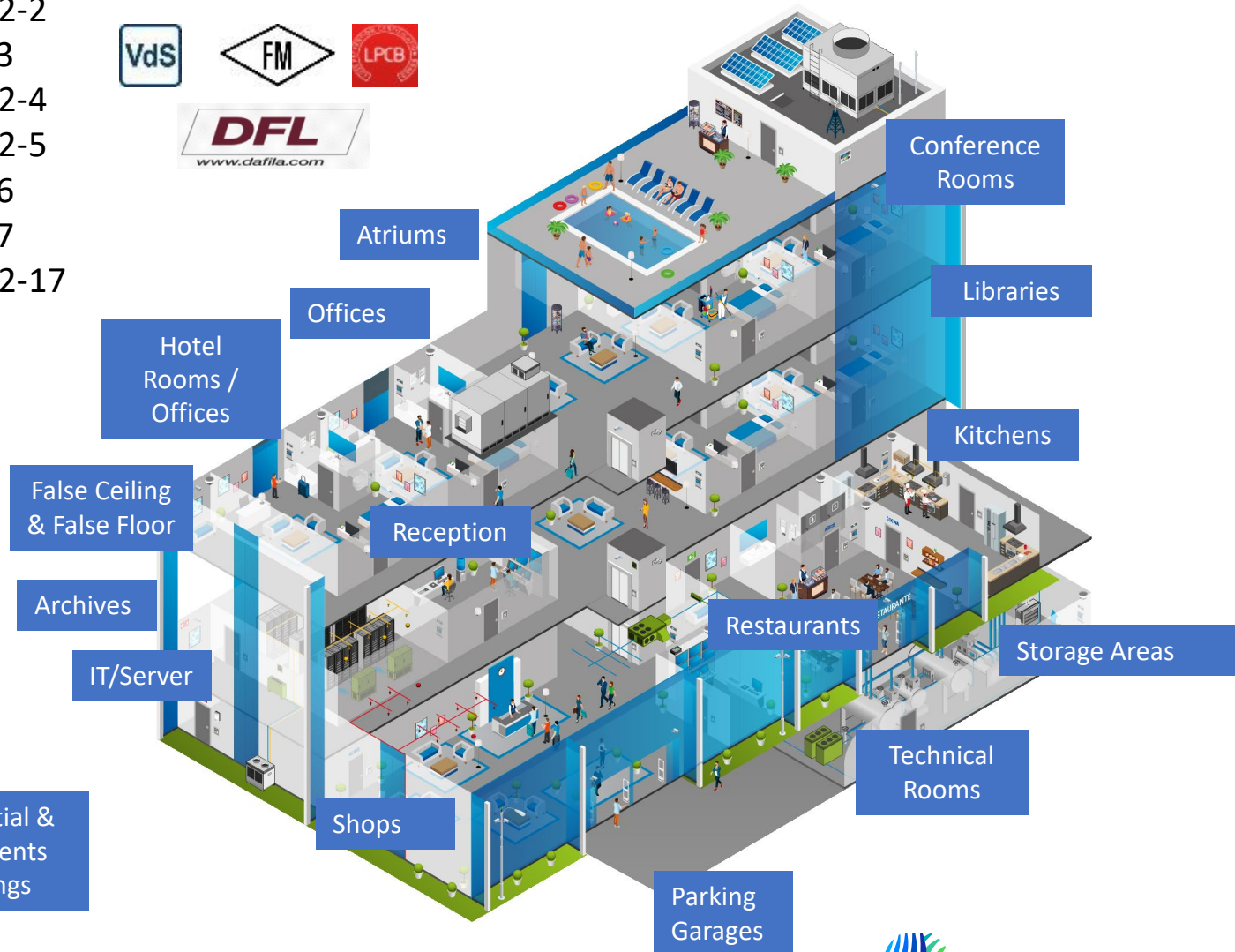
→ Implemented at National Level June 30th 2021!



Notified Body / 3rd Party (?)

EN14972 parts 2,3,4,5,6,7,17 – Building Protection

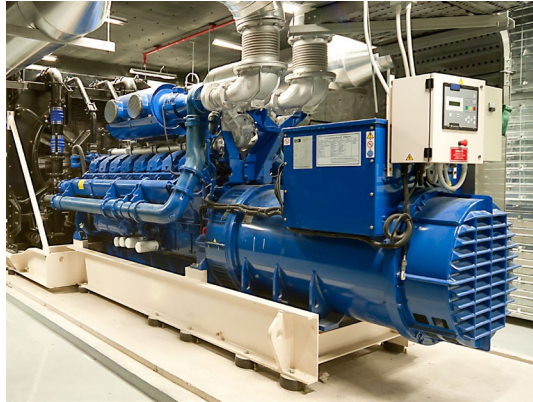
prEN14972-2
 EN14972-3
 prEN14972-4
 prEN14972-5
 EN14972-6
 EN14972-7
 prEN14972-17



EN14972 parts 8,9,14,15 Industrial Applications Machinery Spaces & Combustion Turbines



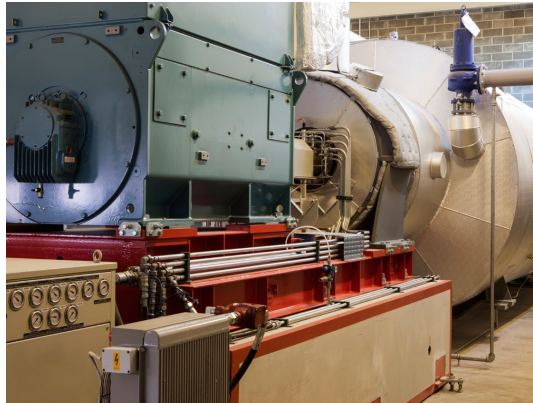
EN14972-8
EN14972-9
EN14972-14
EN14972-15



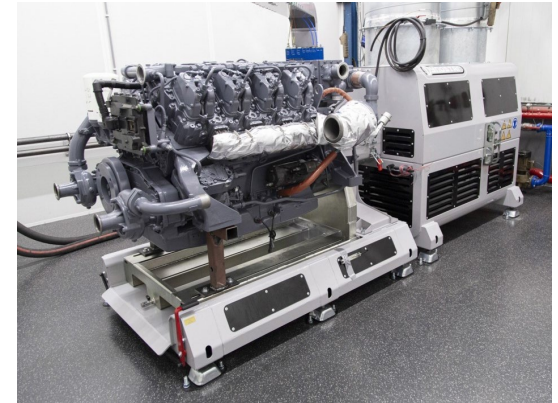
DRUPS Generator & MS Rooms



Transformer Rooms



Combustion Turbines

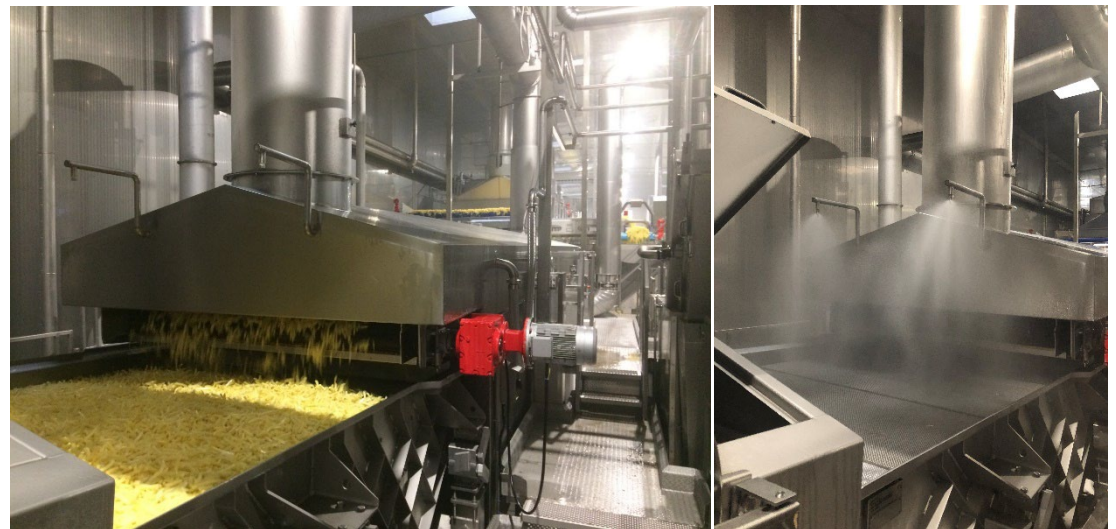


Engine Test Cells

EN14972 parts 12,16 Oil Cooking Fryers (Commercial and Industrial)



EN14972-12
prEN14972-16



EN14972 part 11

Industrial Application - Cable Tunnels



EN14972-11



EN14972 part 13 Industrial Application – Wet Benches



prEN14972-13



Published standards

Standard	Name	Published
EN 14972-1	Design, installation, inspection and maintenance	2020-12-23
EN 14972-3	Office, school classrooms and hotel	2021-08-04
EN 14972-6	False floors and false ceilings	2023-05-24
EN 14972-7	Commercial low hazard occupancies	2023-07-26
EN 14972-8	Machinery in enclosures exceeding 260 m ³	2020-01-22
EN 14972-9	Machinery in enclosures not exceeding 260 m ³	2020-01-22
EN 14972-10	Atrium protection with sidewall nozzles	2022-04-06
EN 14972-11	Cable tunnels	2023-05-24
EN 14972-14	Combustion turbines in enclosures exceeding 260 m ³	2021-09-15
EN 14972-15	Combustion turbines in enclosures not exceeding 260 m ³	2021-09-15
EN 14972-16	Industrial oil cookers	2019-08-28
EN 17450-1	Strainer and filter components	2021-02-24

Work Items EN14972 & EN17450

Work items	Title	Public Enquiry	Formal Vote	Publication
EN 14972-1/A1	Design, installation, inspection and maintenance; Amendment A1	Request for Public Enquiry	-	-
EN 14972-2	Shopping areas	Request for Public Enquiry	-	-
EN 14972-4	Non-storage occupancies	2023-02-09	2023-11-02	2024-02-22
EN 14972-5	Car garages	2023-05-18	*	*
EN 14972-12	Commercial deep fat cooking fryers	2023-02-09	2024-05-27	2024-09-16
EN 14972-13	Wet benches and similar processing equipment	-	-	-
EN 14972-17	Residential occupancies	2022-07-14	2024-04-05	2024-07-26
EN 17450-2	Nozzles	2023-04-20	2024-12-25**	2025-04-16**
EN 17450-3	Check valves	Request for Public Enquiry	-	-
EN 17450-4	Control deluge valves and actuators	WG task will start in February 24	-	-
EN 17450-5	Pressure switches	-	-	-

* 2025 via CEN-Projex. Realistic estimate FV: 2024-05-26, PUB: 2024-09-15

** Date via CEN-Projex. Realistic estimate FV: 2024-02, PUB 2024-06

EN14972 Amendment 1

- Ammendment 1 = New Annexes for Scope/Design Limitations of Fire Test Protocols only (parts 2-17, not part 1 body text)

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EN14972-1 Amendment 1 (A1)

Example 1 (Annex C – for EN14972-2)

Annex C (normative)

Limits of applicability for water mist systems tested in accordance to EN 14972-2

C.1 → General

Systems tested according to EN 14972-2 are limited to the maximum ceiling height tested with a minimum ceiling height of 2.6m.

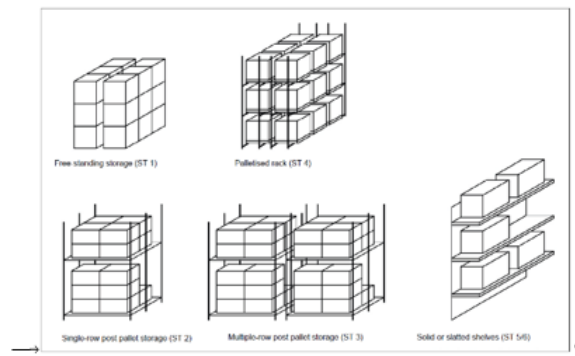
The minimum distance between the storage height and the ceiling shall be 0.5m.

If the glass bulb temperature used in the fire test is less than 68°C, the fire test protocol is only applicable to that glass bulb temperature.

C.2 → Regarding the scope of the water mist system

A water mist system successfully tested according to the test protocol EN 14972-2 is applicable to the following areas:

- Sales areas.
- Storage areas adjacent to sales areas (excluding flammable liquids, gases and other highly flammable areas).
- Archives.
- Libraries.
- Technical areas.
- or similar.
- Typical examples of storage types are shown in Figure C.0. Limitations are given in Table C.0. The maximum total protected area for combined storage areas is 500m².



→ Figure C.0 → Storage types

Important Note:

This screenshot is showing a preliminary text, drafted by CEN TC191 WG10 (09/23). It did not go through the CEN norming process right now.

Text may be subject to change when published

EN14972-1 Amendment 1 (A1)

Example 2 (Annex O – for EN14972-14)

Annex O (normative)

Limits of applicability for water mist systems tested in accordance to EN 14972-14

0.1 General

Systems tested according to EN 14972-14 are limited to the maximum ceiling height and maximum volume tested.

0.2 Regarding the scope of the water mist system

Water mist systems tested in accordance to EN 14972-14 also apply to steam turbines in enclosures and accessories like oil pumps, oil tanks, fuel filters, generators and hydraulic aggregates.

There shall be no forced ventilation and any openings shall be closed upon system actuation; doorway screening spray heads may not be used in lieu of automatic closing devices.

Only water mist systems that have passed the saturated mat test can be applied for thermally insulated turbine protection.

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Thanks for your attention !

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