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# GB 50898-2013

## Technical Code for Water Mist Fire Extinguishing System

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### 1.0.1 This Standard was drafted in order to design the water mist fire extinguishing

system in an appropriate way, ensure its construction quality, standardize its acceptance, maintenance and management, reduce fire hazard and protect personal and property security.

### 1.0.2 This Standard applies to the design, construction, acceptance and

maintenance and management of water mist fire extinguishing system provided for construction projects.

### 1.0.3 The water mist fire extinguishing system applies to the extinguishing of

combustible solid surface fire, combustible liquid fire and live equipment fire in a relatively enclosed space.



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The water mist fire extinguishing system does not apply to the extinguishing of the following fires.

**1.0.4 The design of the water mist fire extinguishing system shall be based on the**

functions and fire characteristics of the protection objects; effective technical measures shall be taken in order to make it safe and reliable, advanced and economic.

**1.0.5 The design, construction, acceptance and maintenance and management of**

the water mist fire extinguishing system shall be as specified in relevant national standards.

**2.1.1 water mist**

the water droplets of which the diameter Dv0.50 less than 200 um and Dv0.99 less than 400 um formed by the water sprayed by the nozzle under minimum design working pressure on the plane 1.0 m under the nozzle axis

**2.1.2 water mist fire extinguishing system**

a fixed fire extinguishing system which consists of water supply unit, filter unit, control valve, water mist nozzle and other components and water supply pipe, and is capable of automatic and manual activation to spray water mist to extinguish fire or control fire (hereinafter referred to as the system)

**2.1.3 enclosure**

a confined space which meets the system application conditions

**3.1.1 The products and components for the system design shall be as specified in**

the current national standard, GB/T 26785, General specification for water mist fire extinguishing system and components.

**3.1.4 It is preferable to use the pump supply system for the system; the self-contained**

system shall not be used for the close-type system.

**3.2.3 The nozzle layout of the open-type system shall ensure water mist is sprayed**

uniformly and fully cover the enclosure, and meet the following provisions.



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**3.2.6 The spare nozzles shall be stored for the system in accordance with the type**

and specification of the nozzles, whose quantity shall not be less than 1% of the actual design use amount of the nozzles of the same type and specification and not less than

5 pcs each.

**3.3.1 The main components of the system shall be provided where it can avoid**

mechanical bruise; when it is unavoidable, take measures to prevent damages such as mechanical bruise.

**3.3.5 The air release valve is preferably provided on the highest point of the close-**

type system; a water testing valve shall be provided for the pipe network behind each partition control valve; they shall meet the following provisions.

**3.4.2 The mist spray intensity of the close-type system and the layout spacing and**

installation height of the nozzles can be preferably determined by the simulated fire test.

**3.4.6 When the open-type system with the local application method is used to protect**

a site with combustible liquid fire risks, the design parameters of the system shall be determined in accordance with the test data obtained from the certification test conducted by a state-authorized certification body in accordance with GB/T 26785, General specification for water mist fire extinguishing system and components, during the product certification test; the design parameters shall not exceed the conditions defined for the test.

**4.1.1 The system construction can be divided into 4 sub projects including receiving**

inspection, system installation, system debugging and system acceptance and shall be as specified in Annex B of this Standard.

**4.1.5 The safety protection measures shall be taken during the installation process**

of the system.

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**4.2.1 The records shall be kept for the receiving inspection of the materials and**

system components in accordance with Table D.0.1 of this Standard.

**4.2.2 The materials, specifications, types and quality of the pipes and fittings shall**

meet the design requirements and the relevant provisions in the current national standards GB/T 14976, Seamless stainless steel pipes for fluid transport, GB/T 12771, Welded stainless steel pipes for liquid delivery, and GB 50235, Code for construction of industrial metallic piping engineering.

**4.2.4 The specifications, dimensions and wall thicknesses as well as tolerances of**

the pipes and fittings shall meet the relevant current national product standards and the design requirements.

**4.2.6 The receiving inspection of the water mist nozzles shall meet the following**

provisions.

**4.3.2 The construction process records and the concealed work acceptance records**

shall be kept for the installation of the system in accordance with Table D.0.2 to D.0.5 of this Standard.

**4.3.3 The installation of the water storage cylinder set and gas storage cylinder set**

shall meet the following provisions.

**4.3.6 The installation of the pump set shall meet the following provisions in addition**

to the current national standard GB 50235, Code for construction of industrial metallic piping engineering.

4.4.9 When the system needs to be in linkage with the automatic fire alarm system, the simulated fire signals can be used to carry out the test. Under the simulated fire signals, the fire alarm device shall be capable of giving alarm signals, the system shall operate, the relevant linkage control devices shall be capable of giving automatic turnoff commands and the relevant facilities supplying combustible gas or liquid which need to be closed during a fire shall be turned off in linkage.



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