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**Code of design for carbon dioxide fire extinguishing systems
(English Translation)**

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1 General Provision	
1.0.1 This code is formulated with a view to reasonably designing carbon dioxide extinguishing	

2 Because the products and accessories made by different manufacturers are diverse from each

other in hydraulic equivalent loss length, the equivalent lengths of pipe accessories, determined according to the requirements of Appendix B in This code will be greatly

different from the ones in practical situation;

3 The standard has not specified that mechanical air exhaust devices shall be arranged between storage containers, so leaks may be serious threat to the lives of staff in the rooms and rooms nearby;

4 The specific requirements are proposed in the shunt design of carbon dioxide gas transfer lined, for improving the pressure equalization of the pipe network.

The articles underline in This code are ones revised.

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1 General Provision

1.0.1 This code is formulated with a view to reasonably designing carbon dioxide extinguishing system, reducing fire hazards, and protecting and the safety of people and property.

1.0.2 This code is applicable to the designs of carbon dioxide extinguishing systems arranged in new, rebuild and extended engineering and storage systems.

1.0.3 The design of carbon dioxide extinguishing system shall actively adopt new technique, process and equipment, and be of safety and application, state-of-the-art, and economic feasibility.

1.0.4 Carbon dioxide extinguishing systems may be used for extinguishing the following fires.

1.0.4.1 Gas fire, which the gas source can be Cutting off before fire extinction.

1.0.4.2 Liquid fire or meltable solid (like paraffin and asphalt) fire.

1.0.4.3 Solid surface fire and solid deep-seated fire (like cotton wool, fabric and paper).

1.0.4.4 Electric fire .

1.0.5 Carbon dioxide extinguishing systems must not be used for extinguishing the following fires.

1.0.5.1 Fires of chemicals (like nitrocellulose and blasting powder) containing oxidants.

1.0.5.2 Fires of active metals like kalium, sodium, magnesium, titanium and zirconium.

1.0.5.3 Fires of metal hydrides like potassium hydride and sodium hydride.

1.0.5A Total flooding carbon dioxide extinguishing system shall not be applied at the places where staffs stay often.

1.0.6 The design of carbon dioxide extinguishing system, besides the requirements of this code, shall also meet the requirements of the current related national standards.

2 Term and Symbol

2.1.1 Total flooding extinguishing system

Fire extinguishing system which can eject carbon dioxide of finite concentration into a protected area within a specified time, and fully fill the whole protected area with carbon dioxide.

2.1.2 Local application extinguishing system

Fire extinguishing system which directly ejects carbon dioxide onto protected object at the design ejection rate; and lasts for a certain time.

2.1.3 Protected area

Close space meeting the application conditions of a total flooding carbon dioxide extinguishing system; and protected by the system.

2.1.4 Combined distribution systems

Fire extinguishing system in which a suit of carbon dioxide storage device is used to protect two or more protected areas/protected objects.

2.1.5 Flame extinguishing concentration

Minimum volume percentage (in a mixture of air and carbon dioxide) of carbon dioxide required to extinguish a certain fire, under the atmosphere 101 kPa and at the specified temperature.

2.1.6 Inhibition time

Time to keep the designed carbon dioxide concentration and extinguish solid deep-seated fire fully.

2.1.7 Pressure relief opening

An opening arranged on the exterior wall or top of a protected area to discharge internal super pressure of the protected area.

2.1.8 Equivalent orifice area

Converted orifice area of a standard nozzle with the water flow rate coefficient of 0.98.

2.1.9 Filling factor

Ratio of the mass of carbon dioxide stored in high pressure system container and the container volume.

2.1.9A Loading factor Ratio of the mass of liquid carbon dioxide stored in low-pressure system container and the container volume.

2.1.10 Material factor

Reduction coefficient of the design carbon dioxide concentration of combustible substance corresponding to 34% carbon dioxide concentration.

V_v--Volume of a protected area;