



Member of the FM Global Group

Examination Standard for Clean Agent Extinguishing Systems

Class Number 5600

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Foreword

This standard is intended to verify that the products and services described will meet stated conditions of performance, safety, and quality useful to the ends of property conservation. The purpose of this standard is to present the criteria for examination of various types of products and services.

Examination in accordance with this standard shall demonstrate compliance and verify that quality control in manufacturing shall ensure a consistent and reliable product

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1. INTRODUCTION

1.1 Purpose

- 1.1.1 This standard states testing and certification requirements for fixed fire extinguishing systems that use vaporizing liquid or inert gas clean agents as the extinguishant.
- 1.1.2 Testing and certification criteria may include performance requirements, marking requirements, examination of manufacturing and filling facilities, audit of quality assurance procedures, and a surveillance program.

1.2 Scope

- 1.2.1 This standard contains requirements for vaporizing liquid and inert gas clean agent extinguishing systems for total flooding protection. Extinguishing systems shall be designed for automatic control to protect single or multiple hazard areas. The following product categories and class numbers are included in the scope of this standard.

Table 1.2.1 - *Product Categories and Class Numbers*

| Class | Product Category |
|--------------|-------------------------------------|
| 5611 | Inert Gas Extinguishing Systems |
| 5612 | Liquefied Gas Extinguishing Systems |
| 5613 | Clean Agents |

- 1.2.2 A basic vaporizing liquid or inert gas clean agent extinguishing system comprises one or more agent storage containers, discharge control valves arranged for automatic or manual/automatic control, lockout valves (when required), piping, and discharge nozzles. Compatible certified detectors and detection and release controls are required for automatic electrical operation of these systems but are not included in the scope of this standard. If a system uses an integral detection and actuation system, it may be evaluated as a part of that system, using criteria derived from those used for standalone detection and control systems.
- 1.2.3 With the exception of Class 5613 clean agents, this standard requires the examination of complete systems. Complete systems shall be submitted along with design, installation, operation, and maintenance instructions for certification. However, the manufacturer may, at any time, submit additional components or auxiliary equipment for use on the certified system. Purchased devices such as thermostats, releases, and timers shall also be submitted by the system manufacturer for evaluation as a part of the system, even though such devices may already be certified and listed by the certification agency. Incomplete systems shall not be certified.

1.3 Basis for Requirements

- 1.3.1 The requirements of this standard are based on experience, research and testing, and/or the standards of other organizations. The advice of manufacturers, users, trade associations, jurisdictions, and/or loss control specialists was also considered.
- 1.3.2 The requirements of this standard reflect tests and practices used to examine characteristics of clean agent fire extinguishing systems (hereinafter referred to as "systems") for the purpose of obtaining certification. Systems having characteristics not anticipated by this standard may be certified if performance equal or superior to that required by this standard is demonstrated.

1.4 Basis for Certification

Certification is based on satisfactory evaluation of the product and the manufacturer in the following major areas:

- 1.4.1 Examination and tests on production samples shall be performed to evaluate:
- the suitability of the product,
 - the performance of the product as specified by the manufacturer and required for certification,
 - the durability and reliability of the product.