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Examination Standard for Foam Extinguishing Systems

Class Number 5130

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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 describes requirements for fixed fire extinguishing systems that use an aqueous foam as the extinguishant.

1.1.2 Testing and certification criteria may include, but are not limited to, performance requirements, marking requirements, examination of manufacturing facility(ies), audit of quality assurance procedures, and a surveillance program.

1.2 Scope

1.2.1 This standard applies to low expansion (including CAF) and high expansion foam fire extinguishing systems for use in Class B applications and which are designed for manual or automatic control. Medium expansion foam systems and the Class A applications with high expansion foam systems are excluded from the scope of this standard. Compatible Certified detectors and detection and release controls are required for automatic operation of these systems but are not included in the scope of this standard.

1.2.2 A basic foam fire extinguishing system comprises at least the following three aspects; a concentrate, a device to proportion the concentrate in the proper ratio into water, and a discharge device to deliver the foam to a burning liquid surface. A discharge device may assume the entire task of expanding the foam, or function primarily to distribute foam which has been partially or completely expanded by an upstream device, such as a foam maker. Compatible certified detectors and detection and release controls are required for automatic operation of these systems, but are not included in the scope of this standard

With the exception of variable viscosity proportioners outlined in 1.2.3, this standard requires the examination of complete foam fire extinguishing systems. Incomplete systems (i.e. foam concentrates without associated system hardware or. system hardware components without a specified foam concentrate) shall not be evaluated.

1.2.3 Variable viscosity proportioners shall be certified for use with certified foam concentrates having viscosities that are within the variable viscosity proportioners certified range, and as part of a complete certified foam fire extinguishing system including its associated discharge devices. Use of these products with foam concentrates or as part of foam fire extinguishing systems, including discharge devices, that are not certified shall not be considered a certified foam Extinguishing System.

1.2.4 It is the responsibility of the manufacturer to ensure that the submitted system is complete and suitable for the proposed application(s) in the field. To be considered complete, a system shall consist of at least the component parts and auxiliary equipment arrangements detailed in Appendix K, these being the minimum considered necessary for the system to be viable and operate satisfactorily, as well as at least one specified concentrate.

1.2.5 Any purchased devices which form part of the complete system such as pumps, tanks, control valves, and sprinklers, must be submitted by the system manufacturer for evaluation as a part of their system along with design, installation, operation, and maintenance instructions. Following initial certification, the manufacturer may submit additional separate component parts or auxiliary equipment for use on their system for assessment.