



Standard Test Method for Shipboard Fixed Foam Firefighting Systems¹

This standard is issued under the fixed designation F1994; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method covers shipboard, fixed (installed) foam/sprinkling firefighting systems.

1.2 Satisfactory completion of these tests indicates functional performance of the fixed foam firefighting system and may be used to demonstrate the system installation's compliance with the design characteristics of the system.

1.3 Tests made in conformity with this test method are intended to demonstrate the installation and operation of an installed, fixed foam firefighting system. As it includes regulatory requirements, this standard addresses those vessels subject to regulations and ship classification rules. However, the methods stated herein are suitable for unregulated commercial vessels, pleasure craft, military vessels, and similar vessels that are not required to meet regulations for firefighting systems.

1.4 Limitations:

1.4.1 International requirements, national regulations, and ship classification rules must be consulted. The following regulatory requirements and classification society rules were considered in the preparation of this test method:

1.4.1.1 International Convention for the Safety of Life at Sea (SOLAS), 1974 SOLAS Convention, 1978 SOLAS Protocol, and the 1981 and 1983 SOLAS Amendments, II-2/8, "Fixed low-expansion foam extinguishing systems in machinery spaces,"

1.4.1.2 U.S. Government regulations included in 46 CFR 76, 46 CFR 95, and 46 CFR 108 as those regulations are written and enforced by the United States Coast Guard, and

1.4.1.3 The American Bureau of Shipping (ABS) *Rules for Building and Classing Steel Vessels*. However, the owner will designate the specific classification society which is to be used to classify a particular vessel.

1.4.2 The requirements, regulations, and rules for a specific design must be selected by the owner based on the planned operating profile for the vessel.

1.4.3 This test method reflects international requirements, U.S. Government regulations, and ABS rules in effect at the time it was prepared, and may not include requirements adopted subsequent to the effective date of this test method.

1.4.4 This test method does not include requirements for the selection, design, installation, and maintenance of foam firefighting systems. It applies to installed systems whose designs meet all applicable international requirements, national regulations, and ship classification rules.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 The following documents apply to this test method only to the extent referenced herein. However, they may be further invoked by the ship owner as part of the design requirements for the vessel.

2.2 ASTM Standards:²

- A795/A795M Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use
- F998 Specification for Centrifugal Pump, Shipboard Use
- F1030 Practice for Selection of Valve Operators
- F1155 Practice for Selection and Application of Piping System Materials
- F1198 Guide for Shipboard Fire Detection Systems
- F1333 Specification for Construction of Fire and Foam Station Cabinets
- F1370 Specification for Pressure-Reducing Valves for Water Systems, Shipboard
- F1508 Specification for Angle Style, Pressure Relief Valves for Steam, Gas, and Liquid Services
- F1510 Specification for Rotary Positive Displacement Pumps, Ships Use
- F1547 Guide Listing Relevant Standards and Publications

¹ This test method is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.07 on General Requirements.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.