UL 1489

STANDARD FOR SAFETY

Fire Tests of Fire Resistant Pipe Protection Systems Carrying Combustible Liquids

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UL Standard for Safety for Fire Tests of Fire Resistant Pipe Protection Systems Carrying Combustible Liquids, UL 1489

First Edition, Dated September 22, 2016

Summary of Topics

This revision of ANSI/UL 1489 dated August 19, 2026 includes the following changes in requirements:

– Figure 5.1 Modification

– Differential Pressure Measurements Revision: 5.7.1 and Appendix B

– Pressure Measurement Apparatus Revision: 5.7.2.2, Figure 5.2, and Figure 5.3.

– Hose Stream Nozzle Distance and Angle Revision: 6.3

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated June 19, 2026

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UL 1489

Standard for Fire Tests of Fire Resistant Pipe Protection Systems Carrying Combustible Liquids

First Edition

September 22, 2016

This ANSI/UL Standard for Safety consists of the First Edition including revisions through August 19, 2026.

The most recent designation of ANSI/UL 1489 as an American National Standard (ANSI) occurred on August 19, 2026. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to ULSE at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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INTRODUCTION

1 Scope

1.1 These requirements cover the investigation of products such as, but not limited to, sleeve, wrap or spray-on type fire protection systems of various materials and construction intended to protect rigid piping networks containing combustible liquids from a fire exposure, such as diesel fuel or heating oil, that are routed in buildings between the supply tank and utilizing equipment.

1.2 Under these requirements, samples of fire resistive pipe protection systems are exposed to a fire exposure for a duration based on a desired hourly rating, and then to an application of a water hose stream. The fire resistive pipe protection system will also be evaluated for its ability to resist leakage of liquid from the pipe. The following measurements and determinations are made during the fire exposure and water hose stream tests:

a) Measurement of temperature on the exposed surface of the outermost pipe of the test specimen.

b) Determination of the integrity of the fire resistive pipe protection systems during the fire exposure and water hose stream test.

c) Determination of tightness and leakage resistance of the pipe after the fire exposure and water hose stream test.

1.3 The fire exposure and water hose stream tests may not be representative of all fire conditions. Conditions may vary with changes in the amount, nature, and distribution of fire loading, ventilation, compartment size and configuration, and heat conducting and dissipating characteristics of the compartment in which the fire resistive pipe protection system is installed. These requirements provide a relative measure of fire performance of comparable assemblies under these specified fire exposure conditions. Any variation from the construction or operating condition tested, such as size, method of assembly, and materials, may substantially change the performance characteristics of the system.

1.4 The classifications for building construction and materials are intended to register performance during the period of fire exposure and are not intended to be interpreted as having determined their acceptability for use after fire exposure.

1.5 This standard does not evaluate the fuel pipe construction in terms of components or assembly techniques. This is a test to evaluate the fire protection element of the assembly. It is assumed that fuel pipe requirements (e.g. sealing compounds/lubricants etc.) that are established by other codes and standards will be satisfied outside of this test method.

1.6 These requirements do not cover:

a) Accumulation of data as to performance of fire resistive pipe protection systems constructed with components or sizes other than those tested.

b) Evaluation of the contribution of the fire resistive pipe protection systems generation of smoke, toxic gases, or other products of combustion.

c) Measurement of flame spread over the surface of the tested elements.

d) Evaluation of the firestop system in openings penetrated by the fire resistive pipe protection systems. Firestop systems for fire resistive pipe protection systems shall be evaluated to the Standard for Fire Tests of Penetration Firestops, UL 1479.

e) Evaluation of the impact of fire and elevated temperatures on the pipe and associated fittings and other construction features.

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f) Pipe systems that carry fuels with a boiling point below room temperature.

g) The compatibility, including the potential for corrosion, between the protection system and the pipe material.

1.7 The results obtained by use of this test method are intended to develop data that will assist designers, authorities having jurisdiction, end-users, installers and others in determining the acceptability, with reference to fire resistive pipe protection systems for use with specific pipe applications.

1.8 Tests for burning characteristics of building materials, based on rate of flame spread and the density of smoke developed when exposed to a standard fire, can be found in the requirements for surface burning characteristics of building materials in the Standard for Test for Surface Burning Characteristics of Building Materials, UL 723.

1.9 Tests for fire resistance of firestop systems which penetrate walls, floors and other membranes can be found in the requirements for the Standard for Fire Tests of Penetration Firestops, UL 1479.

1.10 Application of these test results to predict fire resistance of pipe protection systems in actual installations requires careful evaluation of the pipe and fire resistive pipe protection system materials under normal operating conditions.

2 Units of Measurement

2.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

3 Undated References

3.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

4 Glossary

4.1 For the purpose of this Standard, the following definitions apply.

4.2 COMBUSTIBLE LIQUID – A liquid having a closed cup flash point at or above 100°F (38°C).

4.3 FIRE RESISTIVE PIPE PROTECTION SYSTEM – A specific construction of devices, materials or protective coatings installed around (such as sleeve or wrap types), or applied to (such as spray-on types), pipe and associated components (for example pipe hangers) to maintain the integrity of the pipe subjected to a standardized fire exposure.

4.4 RIGID PIPING NETWORK – An assembly of pipe, connections, fittings and other components that when combined provide a stable and continuous channel for conveying combustible liquids. Such pipe shall meet the minimum specifications established by others for its anticipated use in the field.

4.5 TEST ASSEMBLY – The construction on to which the fire resistive pipe protection system is installed and suspended.

4.6 TEST SPECIMEN – The fire resistive pipe protection system being evaluated.

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