



Examination Standard for Liquid Leak Detectors

Class Number 7745

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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 hydrocarbon leak detectors and water leak detectors.
- 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 states testing and certification requirements for the following applications:
- hydrocarbon liquid leak detectors for above ground
 - hydrocarbon liquid leak detectors for below ground
 - water leak detectors
 - water leak detectors based on water usage pattern
 - water leak detectors for roof assemblies
 - water supply shutoff valves based on leak detection
 - water supply shutoff valves based on water usage pattern
- 1.2.2** This standard includes design and performance requirements for hydrocarbon leak detectors that can provide point, linear, or area detection of hydrocarbon liquid floating on the surface of water or pooling on a flat surface. The hydrocarbon leak detector shall be certified for the specific hydrocarbon liquid that it is claimed to be capable of detecting. Alternate test liquids (if any) will be determined as part of the certification examination.
- 1.2.3** This standard includes design and performance requirements for water leak detectors that can provide point, linear, or area leak detection for water pooling on flat surfaces or within the insulation surrounding pipes. Leak detectors can also be based on a meter that measures and profiles water usage. In addition, leak detector systems that include an optional valve to shut off water flow may also be evaluated with this standard.
- 1.2.4** This standard includes design and performance requirements for water leak detectors used in roof assemblies. This standard applies to two types of detection systems to detect water leakage through the roof membrane of a roof assembly. One type is constantly monitored using a control panel with sensors built into the roof assembly. The second type is performed by a technician conducting a scan of the roof surface using a low or high voltage electronic scanning system over the surface of the roof membrane. The manual scanning device is used to measure the electrical path between the wetted membrane and a conductive layer under the membrane.

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, and loss control specialists was also considered.
- 1.3.2** The requirements of this standard reflect tests and practices used to examine characteristics of hydrocarbon or water leak detectors for the purpose of obtaining certification. Hydrocarbon or water leak detectors having characteristics not anticipated by this standard may be certified if performance equal, or superior, to that required by this standard is demonstrated.