



Member of the FM Global Group

Examination Standard for Sight Drains for Automatic Sprinkler Systems

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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.

Table of Contents

1. INTRODUCTION	1
1.1 PURPOSE	1
1.2 SCOPE	1
1.3 BASIS FOR REQUIREMENTS.....	1
1.4 BASIS FOR CERTIFICATION.....	1
1.5 BASIS FOR CONTINUED CERTIFICATION	1
1.6 EFFECTIVE DATE	2
1.7 SYSTEM OF UNITS	2
1.8 NORMATIVE REFERENCES.....	2
1.9 TERMS AND DEFINITIONS	2
2. GENERAL INFORMATION	4
2.1 PRODUCT INFORMATION	4
2.2 CERTIFICATION APPLICATION REQUIREMENTS.....	4
2.3 REQUIREMENTS FOR SAMPLES FOR EXAMINATION	4
3. GENERAL REQUIREMENTS	5
3.1 REVIEW OF DOCUMENTATION.....	5
3.2 PHYSICAL OR STRUCTURAL FEATURES	5
3.3 MATERIALS	5
3.4 MARKINGS.....	5
3.5 MANUFACTURER'S INSTALLATION AND OPERATION INSTRUCTIONS	6
3.6 CALIBRATION	6
3.7 TOLERANCES	6
4. PERFORMANCE REQUIREMENTS	7
4.1 EXAMINATION	7
4.2 HYDROSTATIC INTEGRITY.....	7
4.3 VISIBILITY	7
5. MANUFACTURER'S REQUIREMENTS.....	8
5.1 DEMONSTRATED QUALITY CONTROL PROGRAM.....	8
5.2 SURVEILLANCE AUDIT PROGRAM.....	9
5.3 PRODUCT MODIFICATION.....	9
5.4 MANUFACTURING AND PRODUCTION TESTS.....	9
6. BIBLIOGRAPHY	9
APPENDIX A: TOLERANCES	10
APPENDIX B: SAMPLE LISTING	11

1. INTRODUCTION

1.1 Purpose

- 1.1.1 This standard states testing and certification requirements for sight drains for use in automatic sprinkler systems. They are used to allow visual verification that water is flowing through a pipe. Typical installations include main drain lines and in close proximity to inspector's test devices when discharge flow is not readily visible.
- 1.1.2 Testing and certification criteria may include 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 encompasses the design and performance requirements for sight drains. In cases where metric sized products are to be examined for certification, test criteria comparable to the equivalent or nearest nominal inch size shall be used.

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 may also be considered.
- 1.3.2 The requirements of this standard reflect tests and practices used to examine characteristics of sight drains for the purpose of obtaining certification.

1.4 Basis for Certification

Certification is based upon 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; and as far as practical,
 - the durability and reliability of the product.
- 1.4.2 An examination of the manufacturing facilities and audit of quality control procedures may be conducted to evaluate the manufacturer's ability to consistently produce the product, which is examined and tested, and the marking procedures used to identify the product. Subsequent surveillance may be required by the certification agency in accordance with the certification scheme to ensure ongoing compliance.

1.5 Basis for Continued Certification

The basis for continual certification may include the following based upon the certification scheme and requirements of the certification agency:

- production or availability of the product as currently certified;
- the continued use of acceptable quality assurance procedures;
- compliance with the terms stipulated by the certification;

- satisfactory re-examination of production samples for continued conformity to requirements; and
- satisfactory surveillance audits conducted as part of the certification agency's product surveillance program.

1.6 Effective Date

The effective date of this examination standard mandates that all products tested for certification after the effective date shall satisfy the requirements of this standard.

The effective date of this standard is eighteen (18) months after the publication date of the standard for compliance with all requirements.

1.7 System of Units

Units of measurement used in this standard are United States (U.S.) customary units. These are followed by their arithmetic equivalents in International System (SI) units, enclosed in parentheses. The first value stated shall be regarded as the requirement. The converted equivalent value may be approximate. Conversion of U.S. customary units is in accordance with ANSI/IEEE/ASTM SI 10.

Two units (liter and bar), outside of but recognized by SI, are commonly used in international fire protection and are used in this standard.

1.8 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the cited edition applies:

ANSI/ASME B1.20.1, *Pipe Threads, General Purpose (Inch)*

ANSI/IEEE/ASTM SI, *American National Standard for Metric Practice*

BS 21, *Pipe Threads for Tubes and Fittings Where Pressure-Tight Joints Are Made On the Threads (Metric Dimensions)*

ISO 7-1, *Pipe Threads Where Pressure-Tight Joints are made on the Threads Part 1: Dimensions, Tolerances and Designation*

1.9 Terms and Definitions

For purposes of this standard, the following terms apply:

Accepted

This term refers to installations acceptable to the authority enforcing the applicable installation rules. Acceptance is based upon an overall evaluation of the installation. Acceptance is not a characteristic of a product. It is installation specific. A product accepted for one installation may not be acceptable elsewhere.

Cut Groove

A groove that is machined in the outside diameter of a pipe, valve, or fitting near the end to allow joining by means of a gasketed grooved pipe coupling.

End Connections

The term "End Connections" refers to the method of connecting components of a fire protection system. Typical end connections in a fire protection service are grooved, threaded, plain end, flanged and welded end.