INTERNATIONAL STANDARD

ISO 6182-4

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Fire protection — Automatic sprinkler systems —

Part 4:
Requirements and test methods for quick-opening devices

Protection contre l'incendie — Systèmes d'extinction automatique du type sprinkler —

Partie 4: Prescriptions et méthodes d'essai des dispositifs à ouverture rapide

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Contents

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 6182-4 was prepared by Technical Committee ISO/TC 21, *Equipment for fire protection and fire fighting*, Sub-Committee SC 5, *Fixed fire-extinguishing systems*.

ISO 6182 consists of the following parts, under the general title *Fire protection — Automatic sprinkler systems*:

— *Part 1: Requirements and test methods for sprinklers*

— *Part 2: Requirements and test methods for wet alarm valves, retard chambers and water motor alarms*

— *Part 3: Requirements and test methods for dry pipe valves*

— *Part 4: Requirements and test methods for quick-opening devices*

— *Part 5: Requirements and test methods for deluge valves*

Introduction

ISO 6182 comprises several parts prepared by ISO/TC 21 covering components for automatic sprinklers systems.

ISO 6182 is included in a series of International Standards planned to cover:

— carbon dioxide systems (ISO 6183);

— explosion suppression systems (ISO 6184);

— foam systems (ISO 7076).

Fire protection — Automatic sprinkler systems —

Part 4:
Requirements and test methods for quick-opening devices

1 Scope

This part of ISO 6182 specifies the performance and testing requirements for quick-opening devices used with dry pipe valves in fire protection systems to hasten the operation of the valves when one or more sprinklers operate. The quick-opening devices include accelerators and exhausters for use with specific dry pipe valves.

All pressure data in this part of ISO 6182 are given as gauge pressure in bar[1].

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 6182. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 6182 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7-1:1982, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Designation, dimensions and tolerances.*

ISO 37:1977, *Rubber, vulcanized — Determination of tensile stress-strain properties.*

ISO 49:1983, *Malleable cast iron fittings threaded to ISO 7/1.*

ISO 188:1982, *Rubber, vulcanized — Accelerated ageing or heat-resistance tests.*

ISO 898-1:1988, *Mechanical properties of fasteners — Part 1: Bolts, screws and studs.*

ISO 898-2:1992, *Mechanical properties of fasteners — Part 2: Nuts with specified proof load values — Coarse thread.*

ISO 6182-1:1993, *Fire protection — Automatic sprinkler systems — Part 1: Requirements and test methods for sprinklers.*

3 Definitions

For the purposes of this part of ISO 6182, the following definitions apply.

3.1 accelerator: Quick-opening device which hastens the operation of a dry pipe valve using mechanical means other than by reducing installation pipework pressure.

3.2 antiflooding device: Device intended to prohibit excessive water or other foreign matter from entering any relevant part or parts of the quick-opening device where this might prevent subsequent operation.

3.3 corrosion-resistant material: Corrosion-resistant materials shall be either:

— bronze, brass, Monel metal or austenitic stainless steel, or equivalent; or

— plastics conforming with the requirements of 4.6.

3.4 exhauster: Quick-opening device intended to discharge dry pipe system air directly to atmosphere to reduce valve trip time.

1) 1 bar = 10^5 Pa = 0,1 MPa