
**Fire test procedures for divisional
elements that are typically used in oil,
gas and petrochemical industries —**

**Part 2:
Additional procedures for pipe
penetration and cable transit sealing
systems**

*Méthodes d'essais au feu des éléments de séparation habituellement
utilisés dans les industries pétrolières, gazières et pétrochimiques —*

*Partie 2: Modes opératoires supplémentaires pour les systèmes de
calfeutrement de traversées de câbles et de trémies de tuyaux*



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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 92, *Fire safety*, Subcommittee SC 2, *Fire containment*.

A list of all parts in the ISO 20902 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document describes a test procedure to assess the protection afforded by fire protection materials and systems to divisional elements. It gives an indication of how fire protection materials will perform when exposed to a set of specified fire conditions.

The classification of divisional elements (bulkheads and decks) in the marine industry [i.e. ships as defined by the International Maritime Organisation (IMO) and Safety of Life and Sea (SOLAS) convention] is primarily undertaken in accordance with classification society procedures through testing to the fire test procedures (FTP) codes IMO resolution 307(88), formerly IMO A.754(18). Historically, FTP-code-compliant test evidence has been used to support non-marine applications by implementing hydrocarbon time temperature regime profiles. To reduce the burden on industry, this document is compatible with FTP codes IMO resolution MSC 307(88) where relevant, allowing the use of both IMO and ISO test procedures for specific classification ratings.

Fire test procedures for divisional elements that are typically used in oil, gas and petrochemical industries —

Part 2:

Additional procedures for pipe penetration and cable transit sealing systems

1 Scope

ISO 20902-1 specifies a test methodology for determining the fire resistance of divisional elements with a fire protection system when subjected to cellulosic or hydrocarbon-pool type fire exposure conditions. This document describes additional test procedures for penetration and cable transit sealing systems intended for non-marine applications but suitable for offshore fixed and mobile installations. The test data thus obtained enables subsequent classification on the basis of the duration for which the performance of the divisional element under these conditions satisfies specified criteria.

2 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 edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 834-1, *Fire-resistance tests — Elements of building construction — Part 1: General requirements*

ISO 20902-1:2018, *Fire test procedures for divisional elements that are typically used in oil, gas and petrochemical industries — Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

penetration

aperture within a fire separating element usually present to accommodate the passage of a service through that element

[SOURCE: ISO 10295-1:2007, 3.2]

3.2

penetration seal

single component or system used to maintain the fire resistance of the fire-separating element at the position where services pass through the element

[SOURCE: ISO 10295-1:2007, 3.4]