
**Ships and marine technology — Fire
resistance of metallic pipe components
with resilient and elastomeric seals —
Test methods**

*Navires et technologie maritime — Résistance au feu des composants
de tuyaux métalliques avec joints élastiques ou élastomères —
Méthodes d'essai*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 19921 was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 3, *Piping and machinery*.

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Introduction

The purpose of this International Standard is to establish whether a metallic valve, fitting, coupling or similar piping component that contains a resilient or elastomeric seal can be exposed to fire without losing its function, i.e. without leaking when exposed to normal operating pressure.

Only water is permitted as the test medium. The use of combustible test media is prohibited in order to ensure the safety of operators and the test bench.

The test method in this International Standard is intended to provide reproducible results when combined with the test bench in accordance with ISO 19922.

In case of a request for a flame test under different test conditions, e.g. flame temperature, working pressure or duration of flame application, the test is carried out in accordance with this International Standard with the test bench in accordance with ISO 19922, but under the specific conditions requested.

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Ships and marine technology — Fire resistance of metallic pipe components with resilient and elastomeric seals — Test methods

1 Scope

This International Standard specifies test procedures for determining the fire resistance of metallic valves, pipe couplings, and similar pipe components which contain a resilient or elastomeric seal and which are used in ship engineering systems.

The purpose of this International Standard is to determine whether, after the period of fire testing on a test bench which fulfils the requirements of ISO 19922, pipeline components remain tight, and without any failure which could affect their function, even when subjected to proof pressure.

2 Normative references

The following referenced documents are indispensable for the application 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 19922, *Ships and marine technology — Fire resistance of metallic pipe components with resilient and elastomeric seals — Requirements imposed on the test bench*

3 Designation

The designation of the test for determining the fire resistance is composed of the elements quoted in the example below:

Test ISO 19921 — 30 — 5 — 24 — F

In this designation the elements have the following meaning:

Test:	designation.
ISO 19921:	number of this International Standard.
30:	test duration in minutes.
5:	working pressure during flame application, in bar.
24:	proof pressure following flame application, in bar.
F:	test piece with fire sleeve.