PD ISO/TR 22899-2:2013



BSI Standards Publication

Determination of the resistance to jet fires of passive fire protection

Part 2: Guidance on classification and implementation methods

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National foreword

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Determination of the resistance to jet fires of passive fire protection —

Part 2: Guidance on classification and implementation methods

Détermination de la résistance aux feux propulsés de protection passive contre l'incendie —

Partie 2: Directives relatives à la classification et aux méthodes de mise en oeuvre

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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. www.iso.org/directives

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The committee responsible for this document is ISO/TC 92, *Fire safety*, Subcommittee SC 2, *Fire containment*.

ISO 22899 consists of the following parts, under the general title *Determination of the resistance to jet fires of passive fire protection materials* —:

— *Part 1:General requirements*

— *Part 2: Guidance on classification and implementation methods* [Technical Report]

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Introduction

The jet fire test described in ISO 22899-1 is one in which some of the properties of passive fire protection materials can be determined. The test specified in ISO 22899-1 is designed to give an indication of how passive fire protection materials will perform in a jet fire. Although the test method has been designed to simulate some of the conditions that occur in an actual jet fire, it cannot reproduce them all exactly and the thermal and mechanical loads do not necessarily coincide. The results of the jet fire test do not guarantee safety but may be used as elements of a fire risk assessment for structures or plant. One should also take into account all the other factors that are pertinent to an assessment of the fire hazard for a particular end use. The jet fire test is not intended to replace the hydrocarbon fire resistance test (ISO/TR 834-3; EN 1363) but is seen as a complementary test.

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TECHNICAL REPORT **ISO/TR 22899-2:2013(E)**

Determination of the resistance to jet fires of passive fire protection —

Part 2: Guidance on classification and implementation methods

1 Scope

The test specified in ISO 22899-1 is designed to give an indication of how passive fire protection materials will perform in a jet fire.

This part of ISO 22899 provides:

— background information on the applicability and validation of the jet fire test;

— further details on testing pipe penetration seals;

— guidance on the interpretation of the tests results and on an optional classification system;

— guidance on the combination of results from hydrocarbon furnace tests and resistance to jet fire tests.

ISO 22899-1 describes the thickness of fire protection material (sometimes referred to as passive fire protection; PFP) required to resist the application of a 'jet fire'. This part of ISO 22899 provides information on the 'erosion factor' which is the additional thickness required above and beyond that required to satisfy the relevant criteria of ISO 834 (or other national or regional standards designed to evaluate the fire resistance with respect to a fully developed fire) for the element/construction under test.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 22899-1, *Determination of the resistance to jet fires of passive fire protection materials — Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 22899-1 and the following apply.

3.1
critical temperature
maximum temperature that the equipment, assembly or structure to be protected may be allowed to reach

3.2
critical time
minimum time required to reach the critical temperature

3.3
erosion factor
extra thickness of passive fire protection required when comparing the results from a jet fire test with those from a furnace test on specimens with a similar section factor (e.g. 100 m^{-1}) and period of fire resistance, the critical temperature or critical time or both

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