
**Safety devices for protection against
excessive pressure —**

Part 6:
**Application, selection and installation of
bursting disc safety devices**

*Dispositifs de sécurité pour la protection contre les pressions
excessives —*

*Partie 6: Application, sélection et installation des dispositifs de sûreté à
disques de rupture*



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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

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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 4126-6 was prepared by the European Committee for Standardization (CEN) in collaboration with Technical Committee ISO/TC 185, *Safety devices for protection against excessive pressure*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Throughout the text of this document, read “...this European Standard...” to mean “...this International Standard...”.

ISO 4126-6 consists of the following parts, under the general title *Safety devices for protection against excessive pressure*:

- *Part 1: Safety valves*
- *Part 2: Bursting disc safety devices*
- *Part 3: Safety valves and bursting disc safety devices in combination*
- *Part 4: Pilot-operated safety valves*
- *Part 5: Controlled safety pressure relief systems (CSPRS)*
- *Part 6: Application, selection and installation of bursting disc safety devices*
- *Part 7: Common data*

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Foreword

This document (EN ISO 4126-6:2003) has been prepared by Technical Committee CEN/TC 69 "Industrial valves", the secretariat of which is held by AFNOR, in collaboration with Technical Committee ISO/TC 185 "Safety devices for protection against excessive pressure".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2004 and conflicting national standards shall be withdrawn at the latest by April 2004.

This standard for safety devices for protection against excessive pressure consists of seven parts of which this is Part 6. The various parts are :

- *Part 1 : Safety valves*
- *Part 2 : Bursting disc safety devices*
- *Part 3 : Safety valves and bursting disc safety devices in combination*
- *Part 4 : Pilot operated safety valves*
- *Part 5 : Controlled safety pressure relief systems (CSPRS)*
- *Part 6 : Application, selection and installation of bursting disc safety devices*
- *Part 7 : Common data*

Part 7 contains data which is common to more than one of the parts of this standard to avoid unnecessary repetition.

Annexes A to E are informative.

This document includes a Bibliography.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

Safety devices for the protection of pressure equipment against excessive pressure include pressure relief devices such as safety valves and bursting disc safety devices which, dependent upon the application, may be used either as the sole pressure relieving devices or in conjunction with each other.

Operating problems frequently arise due to the use of pressure relieving devices not having been properly selected for the intended service or properly selected but whose performance is adversely affected by improper handling, wrong installation or lack of maintenance, any of which may affect the safety of the pressure equipment being protected.

It is important to consider not only the pressure relief devices but also the whole of the pressure relief system so as not to reduce the relieving capacity below that required or adversely affect the proper operation of the pressure relieving devices.

A bursting disc safety device is a non-reclosing pressure relief device which typically comprises a bursting disc, which is a pressure-containing and pressure-sensitive part designed to open by bursting at a predetermined pressure, and a bursting disc holder. There are many different types of bursting disc safety devices manufactured in corrosion resistant materials, both metallic and non-metallic, to cover a wide range of nominal sizes, burst pressures and temperatures. They are used to protect pressure equipment such as vessels, piping, gas cylinders or other enclosures from excessive pressure and/or excessive vacuum.

This standard covers the important considerations necessary in the application, selection and installation of bursting disc safety devices to give the required protection against excessive pressure and/or excessive vacuum.

1 Scope

This standard gives guidance on the application, selection and installation of bursting disc safety devices used to protect pressure equipment from excessive pressure and/or excessive vacuum.

Annex A provides a checklist for the information to be supplied by the purchaser to the manufacturer.

Annex B gives guidance on the replacement period of a bursting disc and annex C guidance on determining the mass flow rate, for single phase fluids, of a pressure relief system that contains a bursting disc safety device

Annex E is a non-mandatory procedure for establishing the flow resistance of a burst bursting disc assembly.

The requirements for the manufacture, inspection, testing, marking, certification and packaging of bursting disc safety devices are given in Part 2 of EN ISO 4126.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 4126-1:2003, *Safety devices for protection against excessive pressure — Part 1 : Safety valves (ISO 4126-1:2003)*.

EN ISO 4126-2:2003, *Safety devices for protection against excessive pressure — Part 2 : Bursting disc safety devices (ISO 4126-2:2003)*.

EN ISO 4126-4, *Safety devices for protection against excessive pressure — Part 4 : Pilot operated safety valves (ISO 4126-4:2003)*.

EN ISO 4126-5, *Safety devices for protection against excessive pressure — Part 5 : Controlled safety pressure relief systems (CSPRS) (ISO 4126-5:2003)*.

EN ISO 4126-7:2003, *Safety devices for protection against excessive pressure — Part 7 : Common data (ISO 4126-7:2003)*.

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN ISO 4126-1:2003 and the following apply.

3.1

bursting disc safety device

non-reclosing pressure relief device actuated by differential pressure and designed to function by the bursting of the bursting disc(s)

NOTE It is the complete assembly of installed components, including where appropriate, the bursting disc holder.

3.2

bursting disc assembly

complete assembly of components, which are installed in the bursting disc holder to perform the desired function

3.3

bursting disc

pressure-containing and pressure-sensitive component of a bursting disc safety device