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

Part 9:

**Application and installation of safety
devices excluding stand-alone bursting
disc safety devices**

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

*Partie 9: Application et installation des dispositifs de sécurité autres que
les dispositifs à disque de rupture installés seuls*



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Contents

Page

Foreword.....	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions.....	1
4 Risk consideration.....	3
5 Pressure limitation.....	4
5.1 General.....	4
5.2 Setting of safety devices.....	5
6 Inlet line	6
7 Outlet line	6
8 Installation	8
8.1 General.....	8
8.2 Installation of safety valves or the main valve of a CSPRS or a POSV.....	8
8.3 Installation of safety valves and bursting disc safety devices in series or parallel	9
8.4 Isolation of safety devices	10
9 Lifting device.....	11
Annex A (informative) Safety device applications	12
Annex B (informative) Sizing of multiple safety devices.....	15
Annex C (informative) Sizing of inlet lines.....	17
Annex D (informative) Calculation of built-up back pressure.....	22
Annex E (informative) Calculation of reaction forces.....	29
Annex F (informative) Calculation of noise level	30
Bibliography	31

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 4126-9 was prepared by Technical Committee ISO/TC 185, *Safety devices for protection against excessive pressure*.

ISO 4126 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*
- *Part 9: Application and installation of safety devices excluding stand-alone bursting disc safety devices*
- *Part 10: Sizing of safety valves and connected inlet and outlet lines for gas/liquid two-phase flow*

Introduction

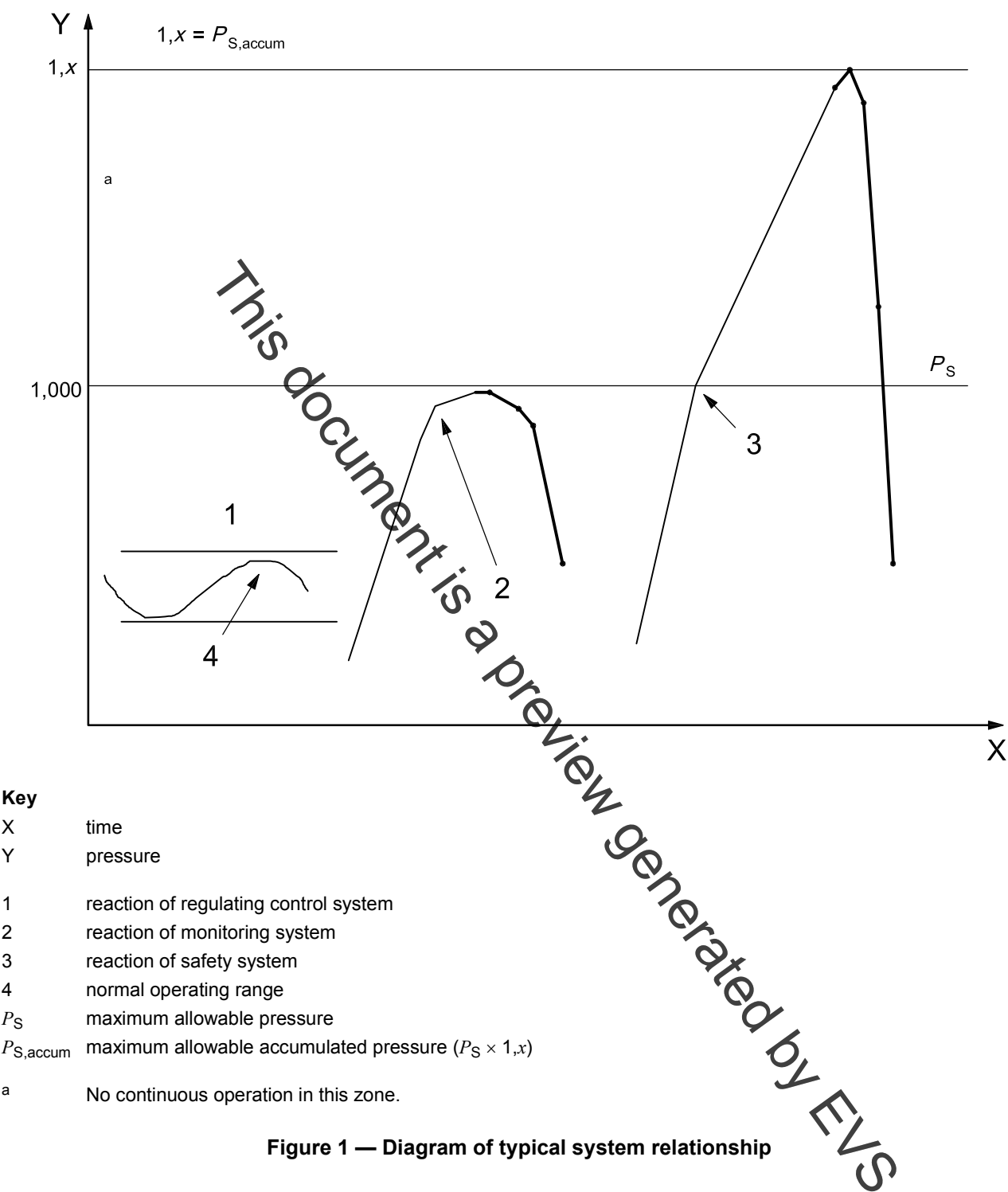
A safety device or system is the final element to protect pressure equipment from exceeding its allowable limits. Regulating and/or monitoring devices are not ultimate safety devices in the meaning of this International Standard. They become active in advance of an ultimate safety device (see Figure 1).

It is important to consider not only the pressure-relieving device but also the whole of the equipment protected, so as not to reduce the relieving capacity or adversely affect the proper operation of the pressure-relieving devices, in order to ensure that the relieving pressure is not exceeded. The value of the relieving pressure is $1, x$ times the maximum allowable pressure, P_S , where x is defined by a directive or national regulation. Operating problems can occur in pressure relief because of the selection of an inappropriate device or because a correctly selected device is adversely affected by improper handling, wrong installation or lack of maintenance.

In some cases, it can be necessary to determine the basic details of the equipment protected so as to ensure that the maximum relieving pressure is not exceeded.

NOTE 1 There can be requirements in a number of regulations to be respected and it is the responsibility of the user of this part of ISO 4126 to ensure compliance with these requirements. This part of ISO 4126 is also intended to draw attention to subjects that are not within its scope, but which are relevant to safety devices.

NOTE 2 To cover the essential requirements of the various regulations, a safety device needs to incorporate a whole range of products. Many of these products are covered by International Standards, but there are others that will either never be standardized or that will not be standardized within the foreseeable future. Where standards have already been produced, where work is known to be proceeding or where there is the intention of producing an applicable standard, reference is made to the standard concerned. Where there is no standard to which to refer, this part of ISO 4126 merely specifies the essential requirements of the device.



Safety devices for protection against excessive pressure —

Part 9:

Application and installation of safety devices excluding stand-alone bursting disc safety devices

1 Scope

This part of ISO 4126 covers the application and installations of safety devices such as safety valves, safety valves and bursting disc safety devices in combination, pilot-operated safety valves and controlled safety pressure-relief systems for the protection of pressure equipment. ISO 4126-6 covers the selection, application and installation of bursting disc safety devices.

This part of ISO 4126 describes the normative requirements for applications and installations of safety devices to protect static pressure equipment. The information contained in this part of ISO 4126 assumes single-phase flow of the fluid discharged from the safety device. ISO 4126-10 provides guidance specific to two-phase flow conditions.

Equipment connected together in a system by piping of adequate capacity, which is free from potential blockages and does not contain any valve that can isolate any part, can be considered to be a safety system for the application of pressure relief.

This part of ISO 4126 does not deal with other safety devices, such as safety related monitoring, control and regulation devices and other limiting devices allowed by some national regulations.

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 4126-6, *Safety devices for protection against excessive pressure — Part 6: Application, selection and installation of bursting disc safety devices*

3 Terms and definitions

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

3.1

safety device

device that serves as the ultimate protection to ensure that the maximum allowable accumulated pressure is not exceeded

EXAMPLE Safety valves, bursting disc safety devices, etc.