INTERNATIONAL STANDARD

ISO 4126-2

> Second edition 2018-12

Safety devices for protection against excessive pressure —

Part 2: Bursting disc safety devices

sécu.
ispositifs de Dispositifs de sécurité pour protection contre les pressions

Partie 2: Dispositifs de sûreté à disque de rupture



Reference number ISO 4126-2:2018(E)



© ISO 2018

plementation, no partanical, includir requested fr All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Cor	Contents				
Fore	word		v		
Intro	oduction	1	vi		
1	Scope		1		
2		native references			
3	Terms and definitions				
4	Materials				
	4.1	Selection of materials			
	4.2	Material specifications	4		
	4.3	Protection from corrosion			
5	Types of bursting discs				
	5.1 5.2	Conventional domed bursting discs (Forward acting)			
	5.3	Flat bursting discs			
	5.4	Other types and designs			
6	Burst	ing disc holders	8		
	6.1	Design			
		6.1.1 Pressure-containing capability			
	6.2	6.1.2 Other design requirements Types			
	6.3	Connections			
7	Back pressure supports				
	7.1	General	11		
	7.2	Opening back pressure supports			
_	7.3	Non-opening back pressure supports			
8	Temp	perature shields	11		
9	Stiffe	ning rings	11		
10	Gask	ets/seals	11		
11	Asser	nbly of bursting disc safety devices	11		
	11.1				
	11.2 11.3	Bursting disc safety devices with replaceable bursting disc assemblies			
12		fied bursting pressure requirements			
12					
13		ection by the manufacturer			
14	_	procedures			
	14.1 14.2	General Pressure testing			
	14.3	Pressure testing	14		
		14.3.1 General	14		
		14.3.2 Coincident temperature in the range 15 °C to 30 °C	14		
		14.3.3 Coincident temperature above or below the range 15 °C to 30 °C	14		
	14.4	Leak testing			
	··-	14.4.1 General	16		
	4	14.4.2 Selection of acceptable leakage rate			
	14.5	Non-destructive examination			
15	Certi	fication	16		
16	Produ	uct designation	17		

ISO 4126-2:2018(E)

17.1 General 17 17.2 Bursting disc or bursting disc assemblies 17 17.3 Bursting disc holders 18 17.4 Bursting disc safety devices with non-replaceable bursting disc assemblies 18 17.5 Ancillary components 19 17.6 Omission of markings 19 18 Packaging and storage 19 Annex A (informative) Packaging: marking, assembly instructions and documentation 20	17	Marking		
17.3 Bursting disc holders		17.1	General	17
17.4 Bursting disc safety devices with non-replaceable bursting disc assemblies 18 17.5 Ancillary components 19 17.6 Omission of markings 19 18 Packaging and storage 19 Annex A (informative) Packaging: marking, assembly instructions and documentation 20			Bursting discs or bursting disc assemblies	1/
17.5 Ancillary components			Bursting disc safety devices with non-replaceable hursting disc assemblies	10 18
17.6 Omission of markings 19 18 Packaging and storage 19 Annex A (informative) Packaging: marking, assembly instructions and documentation 20			Ancillary components	19
Annex A (informative) Packaging: marking, assembly instructions and documentation 20			Omission of markings	19
Annex A (informative) Packaging: marking, assembly instructions and documentation 20	18	Packa	aging and storage	19
iv © ISO 2018 – All rights reserved	iv		Ochon	rs reserved

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 185, *Safety devices for protection against excessive pressure*.

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.

This second edition cancels and replaces the first edition (ISO 4126-2:2003), which has been technically revised. The main changes compared to the previous edition are as follows:

- non-applicable references have been removed;
- material references (old <u>Annexes A</u> and B) have been removed;
- new <u>Annex A</u> has been added.

A list of all parts in the ISO 4126 series can be found on the ISO website.

5

Introduction

A bursting disc safety device is a non-reclosing pressure relief device used to protect pressure equipment such as pressure vessels, piping, gas cylinders or other enclosures from excessive pressure and/or excessive vacuum.

A bursting disc safety device typically comprises an assembly of components including a bursting disc, a bursting disc holder and, where necessary, other components such as back pressure supports, stiffening rings, etc.

sen.
essure.
cant mate.
and tempera. The bursting disc is the pressure-sensitive part of the bursting disc safety device and is designed to open by bursting at a specified pressure. 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.

Safety devices for protection against excessive pressure —

Part 2:

Bursting disc safety devices

1 Scope

This document specifies the requirements for bursting disc safety devices.

It includes the requirements for the design, manufacture, inspection, testing, certification, marking, and packaging.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

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

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

3.1

bursting disc safety device

non-reclosing pressure relief device actuated by differential pressure and designed to function by the bursting of the $bursting\ disc(s)\ (3.3)$, and which is the complete assembly of installed components including, where appropriate, the $bursting\ disc\ holder\ (3.4)$

3.2

bursting disc assembly

complete assembly of components which are installed in the *bursting disc holder* (3.4) to perform the desired function

3.3

bursting disc

pressure-sensitive component(s) of a *bursting disc safety device* (3.1), designed to open by bursting at a *specified bursting pressure* (3.11)

Note 1 to entry: It is not considered a pressure-containing part with respect to 4.2.

3.4

bursting disc holder

part of a bursting disc safety device (3.1) which retains the bursting disc assembly (3.2) in position

Note 1 to entry: It is considered a pressure-containing part with respect to 4.2.