



BSI Standards Publication

Pressure equipment and assemblies

Part 8: Proof test

National foreword

This Published Document is the UK implementation of CEN/TS 764-8:2016.

The UK participation in its preparation was entrusted to Technical Committee PVE/1, Pressure Vessels.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2016.

Published by BSI Standards Limited 2016

ISBN 978 0 580 84743 1

ICS 23.020.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 June 2016.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 764-8

June 2016

ICS 23.020.30

English Version

Pressure equipment and assemblies - Part 8: Proof test

Équipements sous pression et ensembles - Partie 8:
Épreuve

Druckgeräte und Zusammenbauten- Teil 8:
Druckprüfung

This Technical Specification (CEN/TS) was approved by CEN on 8 March 2016 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
European foreword.....	3
Introduction	4
1 Scope	5
2 Terms and definitions	5
3 Symbols and abbreviations	6
4 General.....	6
4.1 Purpose of proof testing by pressure test	6
4.2 Form of the pressure test	6
4.3 Pressure test procedure	7
5 Pressure equipment.....	7
5.1 Hydrostatic test.....	7
5.1.1 Basic rule.....	7
5.1.2 Specific adjustment	8
5.1.3 Creep consideration	8
5.2 Pneumatic test.....	8
6 Assemblies.....	9
Annex A (informative) Guidelines from the European Commission.....	10
Bibliography.....	12

European foreword

This document (CEN/TS 764-8:2016) has been prepared by Technical Committee CEN/TC 54 “Unfired pressure vessels”, the secretariat of which is held by BSI.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This European Standard consists of eight parts, which are currently:

- Part 1 Vocabulary;*
- Part 2 Quantities, symbols and units;*
- Part 4 Establishment of technical delivery conditions for metallic materials;*
- Part 5 Inspection documentation of metallic materials and compliance with the material specification;*
- Part 6 Structure and content of operating instructions [technical report];*
- Part 7 Safety systems for unfired pressure equipment;*
- Part 8 Proof test [technical specification].*

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is intended to establish a common approach for the proof testing by pressure test of items of pressure equipment and assemblies, in order to fulfil the essential requirement 3.2.2 of Annex 1 of the pressure equipment directive 97/23/CE.

It is intended to be used as a basis in the specific product standards, or directly by a manufacturer.

It takes into account the existing guidelines adopted by the European Commission, detailed in Annex A.

For the determination of the pressure test value, this document provides two methods in 5.1. Further investigation will take place, in order to better specify the method to be retained in the future. The determination of the nominal design stress will be part of this analysis.

CEN technical committees, which apply this document in their product standard, are encouraged to give feedback to CEN/TC 54, for the future revision of this document.

1 Scope

This document specifies the purpose, form and procedure of proof testing by pressure test of items of pressure equipment and assemblies.

It also specifies how to determine the value of the test pressure.

2 Terms and definitions

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

NOTE Other useful definitions can be found in EN 764-1 to -7.

2.1

pressure equipment

vessel, piping, safety accessory or pressure accessory with a maximum allowable pressure PS greater than 0,5 bar

Note 1 to entry: Where applicable, pressure equipment includes elements attached to pressurized parts, such as flanges, nozzles, couplings, supports, lifting lugs, etc.

[SOURCE: Directive 97/23/CE]

2.2

assembly

several pieces of pressure equipment assembled by a manufacturer to constitute an integrated and functional whole

[SOURCE: Directive 97/23/CE]

2.3

product standard

standard that specifies requirements to be fulfilled by a product or a group of products, to establish its fitness for purpose

Note 1 to entry: For this document, a product standard is a standard dealing with a pressure equipment or an assembly.

[SOURCE: EN 45020]

2.4

maximum allowable pressure

PS

p_s

maximum pressure for which the equipment is designed, as specified by the manufacturer

Note 1 to entry: The subscript “max” is added to the symbol for maximum values.

[SOURCE: EN 764-1]