

საქართველოს ეროვნული სტანდარტი

დაწესილი აირის ან აზოტის შემცველი უნიფიცირებული წნევის
გალონები. ნაწილი 1. ზოგადი დანიშნულების წნევის გალონები

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

საქართველოს სტანდარტების, ტექნიკური რეგლამენტების
და მეტროლოგიის ეროვნული სააგენტო
თბილისი

საინფორმაციო მონაცემები

1 შემუშავებულია საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს სტანდარტებისა და ტექნიკური რეგლამენტების დეპარტამენტის მიერ

2 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს 2010 წლის 15 მარტის №64 “ს” განკარგულებით

3 მიღებულია გარეკანის მეთოდით სტანდარტიზაციის საერთაშორისო ორგანიზაციის სტანდარტი ისო ენ 286-1 : 1998 „დაწნეხილი აირის ან აზოტის შემცველი უნიფიცირებული წნევის ბალონები. ნაწილი 1. ზოგადი დანიშნულების წნევის ბალონები“

4 პირველად

5 რეგისტრირებულია საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2010 წლის 19 მარტი №268-1.3-4001

წინამდებარე სტანდარტის სრული ან ნაწილობრივი აღწარმოება, ტირაჟირება და გავრცელება საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს ნებართვის გარეშე არ დაიშვება

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

EUROPEAN STANDARD

EN 286-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 1998

ICS 23.020.30

Supersedes EN 286-1:1998

Descriptors: pressure vessels, gas pressure vessels, tanks : containers, air, nitrogen, classifications, materials, steels, aluminium, aluminium alloys, design, manufacturing, welding, qualification, procedures, tests, technical notices, marking, certification

English version

Simple unfired pressure vessels designed to contain air or nitrogen - Part 1: Pressure vessels for general purposes

Réipients à pression simples, non soumis à la flamme,
destinés à contenir de l'air ou de l'azote - Partie 1:
Réipients pour usage général

Einfache unbefeuerte Druckbehälter für Luft oder Stickstoff
- Teil 1: Druckbehälter für allgemeine Zwecke

This European Standard was approved by CEN on 30 November 1997.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

	Page
Foreword	4
1 Scope	5
2 Normative references	6
3 Definitions, symbols and units	8
3.1 Definitions	8
3.2 General symbols and units	10
4 Classifications and certification procedures	12
5 Materials	12
5.1 Main pressurized parts (see also 5.2)	12
5.2 Accessories contributing towards the strength of vessels	14
5.3 Non-pressurized parts	14
5.4 Welding consumables	14
6 Design	14
6.1 General	14
6.2 Weld joint design	15
6.3 Determination of wall thicknesses	19
6.4 Calculation method	21
6.5 Experimental method	57
6.6 Access and inspection openings	59
6.7 Drainage openings	62
6.8 Supports	62
7 Fabrication	66
7.1 Manufacturing and testing equipment	66
7.2 Forming of ends and shell	66
7.3 Typical connections of main body	67
7.4 Welding	70
8 Qualification of welders and welding operators	71
9 Qualification of welding procedures	71
9.1 General	71
9.2 Additional requirements for steel vessels	71
9.3 Existing welding procedures	71
10 Testing	71
10.1 Calibration	71
10.2 Vessels designed by calculation method	72
10.3 Vessels designed by experimental method	78
10.4 Testing records	79
10.5 Pressure test	80
11 Instructions to accompany the vessel	80
12 Marking	81

Annex A (normative)	Verification	82
Annex B (normative)	Declaration of conformity - Surveillance	83
Annex C (normative)	Design and manufacturing schedules	86
Annex D (normative)	Type examination	87
Annex E (normative)	Content of the manufacturing record	87
Annex F (normative)	Test of the protection against corrosion	89
Annex G (informative)	Essential safety requirements	91

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 54 "Unfired pressure vessels", the secretariat of which is held by BSI.

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 August 1998, and conflicting national standards shall be withdrawn at the latest by August 1998.

It is the revision of the standard adopted by CEN in 1991. Main changes concern:

- scope;
- materials;
- weld joint design;
- calculations coefficient;
- flange calculations;
- reinforcement of openings;
- supports;
- testing and inspection;
- instruction and marking;
- corrosion allowance.

Although the requirements of this standard support the essential safety requirements of the Simple pressure vessel Directive 87/404/EEC, that directive does not make compliance with this standard mandatory. This standard includes an interpretation of the conformity assessment requirements of the directive and thus the national implementing legislation. These interpretations cannot be taken as having any formal status and carry the risk of misinterpretation. Users of this standard should, therefore, refer to the applicable national legislation for the definitive conformity assessment requirements. A further revision of this standard is being prepared to remove any misleading provisions.

This standard 'Simple unfired pressure vessels designed to contain air or nitrogen' is one of a series of four. The other standards cover :

- Part 2 : pressure vessels for air braking equipment and auxiliary systems for motor vehicles and their trailers ;
- Part 3 : steel pressure vessels designed for air braking equipment and auxiliary pneumatic equipment for railway rolling stock ;
- Part 4 : aluminium alloy pressure vessels designed for air braking equipment and auxiliary pneumatic equipment for railway rolling stock.

This Part of this European Standard has been prepared for use in conjunction with the informative annex G of this European Standard.

No rules of construction can be written in sufficient detail to ensure good workmanship and construction. Each manufacturer is responsible for taking every necessary step to make sure that the quality of workmanship and construction is such as to ensure compliance with good engineering practice. Aspects of quality assurance are dealt with in various clauses and annexes of this standard, for example in clause 10, Testing, and annexes A, Verification, B, Declaration of conformity - surveillance ; C, Design and manufacturing schedule, D, Type examination ; E, Content of manufacturing record, all of which form part of this standard. These are minimum requirements, having taken into account EN ISO 9002 *Quality systems - Model for quality assurance in production, installation and servicing* and EN ISO 9003 *Quality systems - Model for quality assurance in final inspection and test*, but it is not implied that a quality system in accordance with EN ISO 9002 and EN ISO 9003 is necessary.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

The general layout of the standard was not changed and accordingly is not in full conformity with the recent CEN rules for harmonised standards.

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.