

საქართველოს სტანდარტი

საკვამურები-კომპონენტები. ბეტონის საკვამურის ამოღება

საქართველოს სტანდარტებისა და მეტროლოგიის
ეროვნული სააგენტო
თბილისი

საინფორმაციო მონაცემები

1 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს 2015 წლის 30 ოქტომბრის № 71 და 2015 წლის 09 ივლისის № 46 განკარგულებებით

2 მიღებულია გარეკანის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 1857:2010 „საკვამურები-კომპონენტები. ბეტონის საკვამურის ამოღება“

3 პირველად

4 რეგისტრირებულია საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2015 წლის 30 ოქტომბერი №268-1.3-8069

აკრძალულია ამ სტანდარტის გადაცემა მესამე პირებისათვის ან/და მისი სხვა ფორმით გავრცელება

English Version

Chimneys - Components - Concrete flue liners

Conduits de fumée - Composants - Conduits intérieurs en
béton

Abgasanlagen - Bauteile - Betoninnenrohre

This European Standard was approved by CEN on 20 February 2010.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

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



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Materials	8
4.1 General.....	8
4.2 Reaction to fire.....	8
5 Reinforcement for handling.....	8
6 Surface treatment	8
7 Tolerances	8
7.1 Size	8
7.2 Straightness	9
7.3 Squareness of ends.....	9
8 Performance requirements	9
8.1 Heat stress resistance.....	9
8.2 Heat shock resistance.....	10
8.3 Gas tightness	10
8.4 Abrasion resistance	11
8.5 Compressive strength.....	11
8.6 Corrosion resistance	11
8.7 Condensate resistance	12
8.8 Bulk density.....	12
8.9 Thermal resistance	12
8.10 Freeze/thaw resistance	12
8.11 Flow resistance	12
8.11.1 Flow resistance of flue liners	12
8.11.2 Flow resistance of fittings	12
8.12 Dangerous substances	12
9 Designation	12
9.1 Designations and classes	12
9.1.1 General.....	12
9.1.2 Temperature class	13
9.1.3 Pressure class.....	13
9.1.4 Resistance to fire class	13
9.1.5 Condensate resistance class	14
9.1.6 Corrosion resistance class.....	14
9.2 Designation system	14
10 Marking	15
11 Product information.....	15
12 Evaluation of conformity.....	16
12.1 General.....	16
12.2 Initial type testing	16
12.3 Further type tests.....	16
12.4 Factory production control.....	16
Annex A (normative) Test methods.....	18

A.1	Measurement of dimensions	18
A.1.1	Transverse dimensions	18
A.1.2	Declared height.....	18
A.1.3	Wall thickness.....	18
A.2	Straightness test	18
A.2.1	Apparatus	18
A.2.2	Procedure	18
A.2.3	Result.....	19
A.3	Squareness of ends test	19
A.3.1	Apparatus	19
A.3.2	First procedure	19
A.3.3	Result of first procedure.....	19
A.3.4	Result of second procedure	19
A.3.5	Result.....	20
A.4	Heat stress resistance and heat shock test.....	20
A.4.1	Apparatus	21
A.4.2	Test assembly.....	21
A.4.3	Test environment and conditioning	21
A.4.4	Procedure	22
A.5	Thermal resistance	25
A.5.1	Test assembly.....	25
A.5.2	Test procedure.....	25
A.5.3	Results	26
A.6	Gas tightness test	26
A.6.1	Apparatus	26
A.6.2	Test environment and conditioning	27
A.6.3	Procedure	27
A.6.4	Test result.....	28
A.7	Abrasion resistance test.....	28
A.7.1	Test assembly.....	28
A.7.2	Preparation	29
A.7.3	Test brush	29
A.7.4	Test procedure.....	29
A.7.5	Test result.....	29
A.8	Compressive strength test	29
A.8.1	Apparatus	29
A.8.2	Preparation of test sample	29
A.8.3	Test procedure.....	30
A.9	Corrosion and condensate resistance test.....	30
A.9.1	Test apparatus	30
A.9.2	Test solution	32
A.9.3	Test assembly.....	32
A.9.4	Conditioning	32
A.9.5	Test procedure.....	32
A.9.6	Test results	33
A.10	Bulk density	33
A.10.1	Apparatus	33
A.10.2	Procedure	33
A.10.3	Test result.....	33
A.11	Ultimate compressive strength.....	34
A.11.1	Test procedure.....	34
A.11.2	Result.....	34
Annex B	(informative) Illustration of joint types	35
Annex C	(normative) Thermal resistance calculation	36
C.1	Thermal resistance of the individual element	36
C.2	Thermal resistance of the flue liner	36
Annex D	(normative) Requirements of sampling plan in accordance with ISO 2859-1 at an Acceptable Quality Level (AQL) and inspection level S2 Inspection procedure.....	38

D.1	Acceptability determination.....	38
D.1.1	General.....	38
D.1.2	Single sampling	38
D.1.3	Double sampling	38
D.2	Normal inspection.....	38
D.3	Normal.....	40
D.4	Reduced to normal inspection	41
D.5	Tightened inspection.....	41
D.6	Tightened to normal inspection	41
D.7	Discontinuation of inspection	41
Annex E (informative)	Recommended test sequence	42
Annex F (informative)	Abbreviated designations for common types of concrete flue liners	43
Annex ZA (informative)	Clauses of this European Standard addressing the provisions of the EU Construction Products Directive.....	44
ZA.1	Scope and relevant characteristics	44
ZA.2	Procedure of attestation of conformity of concrete flue liners.....	45
ZA.2.1	System of attestation of conformity	45
ZA.2.2	EC Certificate and Declaration of conformity.....	46
ZA.3	CE Marking and labelling	47
Bibliography		49

Foreword

This document (EN 1857:2010) has been prepared by Technical Committee CEN/TC 166 “Chimneys”, the secretariat of which is held by UNI.

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 October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

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 document supersedes EN 1857:2003+A1:2008.

This document 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).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This standard is one of a series of standards dealing with the specification, design, testing and execution of chimneys with concrete liners, both single and multi wall.

The co-ordinated package of standards is further divided by material of construction and this European Standard is one of a series of specifications and installation documents dealing with design and installation of concrete chimney products and systems.

The standards in this series for concrete chimney products are:

- EN 1857, *Chimneys — Components — Concrete flue liners*
- EN 1858, *Chimneys — Components — Concrete flue blocks*
- EN 12446, *Chimneys — Components — Concrete outer wall elements*

In this European Standard, Annexes A, C and D are normative and Annexes B, E, F and ZA are informative.

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