Fristående industriskorstenar –
Del 6: Stålskorstenar – Utformning och utförande

Free-standing chimneys –
Part 6: Steel liners – Design and execution

Free-standing chimneys - Part 6: Steel liners - Design and execution

This European Standard was approved by CEN on 10 October 2004.

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Foreword

This document (EN 13084-6:2004) has been prepared by Technical Committee CEN/TC 297 “Free-standing industrial chimneys”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

This European Standard is part one of the package of standards listed below:

- EN 13084-1, Free-standing industrial chimneys – Part 1: General requirements.
- EN 13084-2, Free-standing chimneys – Part 2: Concrete chimneys.
- EN 13084-8, Free-standing chimneys – Part 8: Design and execution of mast construction with satellite components.

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

1 To be published
1 Scope

This document deals with special requirements and performance criteria for the design of lining systems made of steel for free standing chimneys. It specifies the requirements for cylindrical steel liners as stated in EN 13084-1.

This document covers the design of the following three basic types of liners located in a load bearing structure:

a) base supported liner;

b) sectional liner;

c) top hung liner.

Additionally this document also applies to single wall chimneys whose surface is in contact with flue gases.

Liners built from prefabricated metal chimneys in accordance with EN 1856-1 and EN 1856-2 are installed as base supported liners with additional supports and guides as defined in this document.

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.

EN 1443, Chimneys - General requirements.


EN 1856-2, Chimneys - Requirements for metal chimneys – Part 2: Metal liners and connecting flue pipes.


EN 10028 (all parts), Flat products made of steels for pressure purposes.

EN 10088 (all parts), Stainless steels.

EN 10095, Heat resisting steels and nickel alloys.


IEC 62305-1, Protection against lightning – Part 1: General principles.
EN 13084-6:2004 (E)

3 Terms and definitions

For the purpose of this document, the terms and definitions given in EN 13084-1:2000 and the following apply.

3.1 base supported liner
liner which is supported vertically only at the liner base

3.2 independent liner
base supported liner which has no other horizontal support or restraint

3.3 guided liner
liner which has horizontal supports and/or guides allowing free expansion

3.4 top hung liner
liner which is supported vertically at the top

3.5 sectional steel liner
liner with at least two independent vertically supported sections

3.6 liner support
load bearing component which supports the liner

3.7 duct entry
part of the liner which introduces the flue gases into the liner

3.8 gas flow
mass or volume of gas through the liner per unit of time

3.9 single wall chimney
liner which also is bearing wind actions

3.10 turning vanes
plates to lead the flue gas in another direction

3.11 prefabricated metal chimneys
prefabricated metal chimneys or liners in accordance with EN 1856-1 and EN 1856-2

4 Material

4.1 General

Materials used, shall be based upon chemical, thermal and mechanical effects and shall fulfil the requirements of EN 13084-1 and EN 1993-3-2.

Materials used shall not have a negative influence upon each other.

If prefabricated metal chimneys are used the additional requirements of this document shall be fulfilled.