Chimneys - Metal chimneys - Test methods

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This European Standard was approved by CEN on 1 May 2009 and includes Amendment 1 approved by CEN on 24 February 2013.

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Foreword

This document (EN 1859:2009+A1:2013) has been prepared by Technical Committee CEN/TC 166 “Chimneys”, the secretariat of which is held by ▌A1⟩ ASI ⟨A1▌.

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of an identical text or by endorsement, at the latest by October 2013, and conflicting national standards shall be withdrawn at the latest by October 2013.

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This document ▌A1⟩ supersedes EN 1859:2009 ⟨A1▌.

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1 Scope

This European Standard describes test methods for metal chimney products.

2 Normative references

[A1] The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. [A1]

EN 1443:2003, *Chimneys — General requirements*

EN 1856-1:2009, *Chimneys — Requirements for metal chimneys — Part 1: System chimney products*

EN 60068-2-59, *Environmental testing — Part 2: Test methods — Test Fe: Vibration, Sine beat method (IEC 60068-2-59:1990)*

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

ISO 3966, *Measurement of fluid flow in closed conduits. Velocity area method using Pitot static tubes*

3 Definitions

For the purposes of this standard, the definitions given in EN 1443:2003 and EN 1856-1:2009 apply.

4 Test methods for metal chimney products

4.1 Compressive strength

4.1.1 Sections and Fittings

4.1.1.1 Test assembly

Assemble the fitting according to the manufacturer's installation instructions between two adaptors including one chimney section (see Figure 1a). The adaptors shall be supplied by the chimney manufacturer and shall transfer the test load in the usual way to the load bearing wall of the test components as it is done in the installation. The test load shall be transferred to the test components by means of a pivoted plate.

4.1.1.2 Procedure and results

Increase the test load on the components without shock up to 4 times the design load where the flue liner is load bearing or 3 times the design load where the flue liner is non load bearing. The load shall be measured to an accuracy of 2 % of the design load. Record the result.

Where the design load is unknown, increase the test load uniformly and record the results to allow the point of failure to be detected. Failure is deemed to have occurred when the fitting cannot sustain a further increase in load.

Use the minimum value from three failure loads to determine the design load.

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