Vattenrörsannor och hjälpinstallationer –
Del 1: Allmänt

Water-tube boilers and auxiliary installations –
Part 1: General


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Chaudières à tubes d'eau et installations auxiliaires - Partie 1: Généralités

Wasserrohrkessel und Anlagenkomponenten - Teil 1: Allgemeines

This European Standard was approved by CEN on 10 March 2000.

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 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 Management Centre 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.
Contents

<table>
<thead>
<tr>
<th>Page</th>
<th>5 Responsibilities</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scope</td>
<td>4</td>
</tr>
<tr>
<td>1.1</td>
<td>General</td>
<td>4</td>
</tr>
<tr>
<td>1.2</td>
<td>Boiler assembly</td>
<td>4</td>
</tr>
<tr>
<td>1.3</td>
<td>Other plant equipment</td>
<td>4</td>
</tr>
<tr>
<td>1.4</td>
<td>Exclusions</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Normative references</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Definitions</td>
<td>5</td>
</tr>
<tr>
<td>3.1</td>
<td>Purchaser</td>
<td>5</td>
</tr>
<tr>
<td>3.2</td>
<td>Manufacturer</td>
<td>6</td>
</tr>
<tr>
<td>3.3</td>
<td>Designer</td>
<td>6</td>
</tr>
<tr>
<td>3.4</td>
<td>Material supplier</td>
<td>6</td>
</tr>
<tr>
<td>3.5</td>
<td>Material producer</td>
<td>6</td>
</tr>
<tr>
<td>3.6</td>
<td>Responsible authority</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Symbols and abbreviations</td>
<td>7</td>
</tr>
</tbody>
</table>

5.1 Responsibility of the purchaser 11
5.2 Responsibility of the manufacturer 11
5.3 Responsible authority 11

6 Interpretations 11

7 Design/type appraisal of pressure parts 11

Annex A (informative) Guidance in the use of the conformity assessment procedures 13
A.1 General 13
A.2 Principles for the application of the PED 14

Annex ZA (informative) Clauses of this European Standard addressing essential safety requirements or other provisions of the Pressure Equipment Directive 17
Foreword

This document EN 12952-1:2001 has been prepared by Technical Committee CEN/TC 269 "Shell and water-tube boilers", 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 June 2002, and conflicting national standards shall be withdrawn at the latest by June 2002.

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 the Pressure Equipment Directive (PED)\(^1\).\)

For the relationship with Pressure Equipment Directive see informative annex ZA, which is an integral Part of this document.

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.

The European Standard series EN 12952 concerning water-tube boilers and auxiliary installations consists of the following parts:

<table>
<thead>
<tr>
<th>Part</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General</td>
</tr>
<tr>
<td>2</td>
<td>Materials for pressure parts of boilers and accessories</td>
</tr>
<tr>
<td>3</td>
<td>Design and calculation for pressure parts</td>
</tr>
<tr>
<td>4</td>
<td>In-service boiler life expectancy calculations</td>
</tr>
<tr>
<td>5</td>
<td>Workmanship and construction of pressure parts of the boiler</td>
</tr>
<tr>
<td>6</td>
<td>Inspecting during construction, documentation and marking of pressure parts of the boiler</td>
</tr>
<tr>
<td>7</td>
<td>Requirements for equipment for the boiler</td>
</tr>
<tr>
<td>8</td>
<td>Requirements for firing systems for liquid and gaseous fuels for the boiler</td>
</tr>
<tr>
<td>9</td>
<td>Requirements for firing systems for pulverized solid fuels for the boiler</td>
</tr>
<tr>
<td>10</td>
<td>Requirements for safeguards against excessive pressure</td>
</tr>
<tr>
<td>11</td>
<td>Requirements for limiting devices, and safety circuits of the boiler and accessories</td>
</tr>
<tr>
<td>12</td>
<td>Requirements for boiler feedwater and boiler water quality</td>
</tr>
<tr>
<td>13</td>
<td>Requirements for flue gas cleaning systems</td>
</tr>
<tr>
<td>14</td>
<td>Requirements for flue gas DENOX-systems</td>
</tr>
<tr>
<td>15</td>
<td>Acceptance tests</td>
</tr>
<tr>
<td>16</td>
<td>Requirements for grate and fluidized bed firing systems for solid fuels for the boiler</td>
</tr>
</tbody>
</table>

Although these Parts may be obtained separately, it should be recognised that the Parts are inter-dependent. As such, the design and manufacture of boilers requires the application of more than one Part in order for the requirements of the European Standard to be satisfactorily fulfilled.

NOTE Part 4 is not applicable during the design, construction and installation stages.

The annexes A and ZA of this European Standard are informative.

1 Scope

1.1 General

This European Standard applies to water-tube boilers with volumes in excess of 2 litres for the generation of steam and/or hot water at an allowable pressure greater than 0.5 bar and with a temperature in excess of 110 °C as well as auxiliary installations (other plant equipment).

The purpose of this European Standard is to ensure that the hazards associated with the operation of water-tube boilers are reduced to a minimum and that adequate protection is provided to contain the hazards that still prevail when the water-tube boiler is put into service. This protection will be achieved by the proper application of the design, manufacturing, testing and inspection methods and techniques incorporated in the various parts of this European Standard. Where appropriate, adequate warning of residual hazards and the potential for misuse are given in the training and operating instructions and local to the equipment concerned (see prEN 12952-8, prEN 12952-9 and prEN 12952-16).

1.2 Boiler assembly

For the purpose of this standard, the boiler assembly includes:

a) the water-tube boiler including all the pressure parts from the feedwater inlet (including the inlet valve) up to and including the steam and/or hot water outlet (including the outlet valve or, if there is no valve, the first circumferential weld or flange downstream of the outlet header).

All superheaters, reheaters, economizers, the associated safety accessories and interconnecting tubing that are heated by means of the gases of combustion and are not capable of isolation from the main system by interposing shut-off valves.

Additionally, the tubing that is connected to the boiler involved in services such as draining, venting, desuperheating, etc., up to and including the first isolating valve in the tubing line downstream of the boiler.

Reheaters which are heated by the flue gas or independently fired, and are separately provided with their safety accessories including all control and safety systems.

b) isolatable superheaters, reheaters, economizers and related interconnecting tubing;

c) the heat supply or firing system;

d) the means of preparing and feeding the fuel to the boiler including the control systems;

e) the means of providing the boiler with feedwater including the control system;

f) the pressure expansion vessels and tanks of hot water generating plant.

1.3 Other plant equipment

a) the boiler supporting structural steelwork, the thermal insulation and/or brickwork and the casing;

b) the means of providing the boiler with air including the forced draught fans and air pre-heaters which are heated by the gases of combustion;

b) the facilities for moving flue gases through the boiler up to the stack inlet, including the induced draught fans and the air pollution reducing equipment located in the flue gas removal path;

d) all other equipment necessary for the operation of the boiler plant.

For a description of the types of operating systems used for water-tube boiler plant, see prEN 12952-7.
1.4 Exclusions

This European Standard does not apply to the following types of boiler plant:

a) boilers other than stationary boilers;

b) shell type boilers including electrical boilers;

c) nuclear primary circuits, the failure of which can cause an emission of radioactivity.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

prEN 764 (All parts), Pressure equipment


3 Terms and definitions

For the purposes of this European Standard, the terms and definitions in prEN 764 and the following apply:

3.1 purchaser
individual or organization that buys the completed boiler plant or part thereof from the manufacturer

3.2 manufacturer
individual or organization responsible for the design, fabrication, testing, installation where relevant, and compliance with the requirements of this standard whether executed by him or a subcontrator, see prEN 764-3:1999
3.3 **designer**
individual or organization that, on behalf of the manufacturer, carries out the design of the boiler plant. The designer determines the shape, dimensions and thicknesses of the boiler plant components, selects the materials and details the methods of construction and testing.

3.4 **material supplier**
individual or organization, not being a material manufacturer, that supplies material or prefabricated parts to be used in the construction of the boiler plant or any component thereof.

3.5 **material manufacturer**
individual or organization that produces basic materials for the fabrication of boiler plant components or prefabricated standardized parts.

3.6 **responsible authority**
this standard identifies the involvement of competent organizations which are independent of the manufacturer. Such organizations may be notified bodies, recognized third-party organizations or user inspectorates. For the purpose of this standard these organizations have been collectively termed responsible authorities (RA)

**NOTE 1** The definition of a notified body and the criteria controlling its operation are given in Article 12 of the Pressure Equipment Directive.

**NOTE 2** The definition of a recognized third-party organization and the criteria controlling its operation are given in Article 13 of the Pressure Equipment Directive.

**NOTE 3** The definition of a user inspectorate and the criteria controlling its operation are given in Article 14 of the Pressure Equipment Directive.

**NOTE 4** The responsibility of the manufacturer is described in 3.2.