

LEEKTORUKATLAD. OSA 6: NÕUDED KATLA  
SEADMESTIKULE

Shell Boilers - Part 6: Requirements for equipment for  
the boiler

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 12953-6:2024 sisaldab Euroopa standardi EN 12953-6:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.12.2024.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 12953-6:2024 consists of the English text of the European standard EN 12953-6:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 18.12.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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EUROPEAN STANDARD

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## Shell Boilers - Part 6: Requirements for equipment for the boiler

Chaudières à tubes de fumée - Partie 6: Exigences pour l'équipement de la chaudière

Großwasserraumkessel - Teil 6: Anforderungen an die Ausrüstung für den Kessel

This European Standard was approved by CEN on 20 October 2024.

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## Contents

European foreword.....	5
<b>1</b> <b>Scope</b> .....	<b>7</b>
<b>2</b> <b>Normative references</b> .....	<b>7</b>
<b>3</b> <b>Terms and definitions</b> .....	<b>8</b>
<b>4</b> <b>General requirements for steam boilers and hot water boilers</b> .....	<b>12</b>
4.1 <b>Safeguards (safety valves) against excessive pressure</b> .....	<b>12</b>
4.2 <b>Materials for valves, fittings, flanges and bolting</b> .....	<b>12</b>
4.3 <b>Protective systems</b> .....	<b>12</b>
4.4 <b>Energy supply</b> .....	<b>13</b>
4.4.1 <b>General</b> .....	<b>13</b>
4.4.2 <b>Start up</b> .....	<b>13</b>
4.4.3 <b>Normal shutdown</b> .....	<b>14</b>
4.5 <b>Flue-gas heated economizers</b> .....	<b>14</b>
4.6 <b>Drain and blowdown devices</b> .....	<b>14</b>
4.7 <b>Water quality</b> .....	<b>15</b>
4.8 <b>Water quality protection</b> .....	<b>15</b>
4.8.1 <b>Conductivity in steam boiler water</b> .....	<b>15</b>
4.8.2 <b>Condensate in steam boiler plants</b> .....	<b>15</b>
4.8.3 <b>Water circulating system in hot water boiler plants</b> .....	<b>16</b>
4.8.4 <b>Make-up water or feed water</b> .....	<b>16</b>
4.9 <b>Furnace temperature monitoring system</b> .....	<b>16</b>
<b>5</b> <b>Special requirements for steam boilers</b> .....	<b>18</b>
5.1 <b>Water level indication</b> .....	<b>18</b>
5.2 <b>Steam pressure and temperature indication</b> .....	<b>21</b>
5.3 <b>Valves for connections</b> .....	<b>21</b>
5.3.1 <b>Steam outlets</b> .....	<b>21</b>
5.3.2 <b>Feed pipe connections</b> .....	<b>21</b>
5.4 <b>Feed water supply</b> .....	<b>22</b>
5.5 <b>Feed water control</b> .....	<b>22</b>
5.6 <b>Limiting and monitoring devices</b> .....	<b>22</b>
5.6.1 <b>Low and high water level protection</b> .....	<b>22</b>
5.6.2 <b>Pressure limitation</b> .....	<b>23</b>
5.6.3 <b>Temperature limitation</b> .....	<b>23</b>
5.6.4 <b>Flow monitoring device</b> .....	<b>23</b>
5.7 <b>Electrically heated steam boilers</b> .....	<b>23</b>
<b>6</b> <b>Special requirements for hot water boilers</b> .....	<b>24</b>
6.1 <b>Hot water generating systems</b> .....	<b>24</b>
6.2 <b>Expansion and feed lines for open vented systems</b> .....	<b>25</b>
6.3 <b>Water supply</b> .....	<b>27</b>
6.4 <b>Water level indication</b> .....	<b>27</b>
6.5 <b>Limiting and monitoring devices</b> .....	<b>27</b>
6.5.1 <b>Low water protection</b> .....	<b>27</b>
6.5.2 <b>Pressure and temperature limitation</b> .....	<b>27</b>
6.5.3 <b>Flow monitoring device</b> .....	<b>28</b>
6.5.4 <b>High water level protection</b> .....	<b>28</b>
6.6 <b>Vent valves</b> .....	<b>28</b>
6.7 <b>Pressure and temperature indication</b> .....	<b>28</b>

6.8	Electrically heated hot water boilers .....	29
6.9	Parallel mode of operation of hot water boilers .....	29
7	Operating instructions and operational aspects including maintenance and testing .....	29
8	Alarms and monitoring from the boiler plant.....	30
Annex A (informative) Typical examples of steam and hot water boiler systems.....		31
A.1	General .....	31
A.2	Key to figures.....	31
A.3	Plant with open vented system.....	33
A.4	Plant with closed system.....	34
A.4.1	Hot water system with external pressure generating and expansion system .....	34
A.4.2	Hot water system with internal pressure generating and expansion system - Steam cushion in the boiler .....	35
A.4.3	Steam boiler.....	36
A.5	Superheater and economizer .....	37
A.5.1	Superheater .....	37
A.5.2	Economizer .....	38
Annex B (informative) Dimensioning of expansion space.....		39
B.1	General .....	39
B.2	Required data.....	39
B.3	Formulas for dimensioning.....	40
Annex C (informative) Aspects of boiler operation.....		42
C.1	General .....	42
C.2	Maintenance .....	42
C.3	Boiler operation and testing.....	42
Annex D (informative) Drain and blowdown devices.....		47
D.1	General .....	47
D.2	Design of the drain and blowdown devices.....	47
Annex E (informative) Alarms and monitoring from the boiler plant.....		49
E.1	General .....	49
E.2	Conditions for alarms and monitoring .....	49
Annex F (normative) Requirements for monitoring devices.....		52
F.1	General requirements for monitoring devices .....	52
F.1.1	General .....	52
F.1.2	Components.....	52
F.1.3	Materials and design .....	52
F.1.4	Electrical equipment .....	53
F.1.5	Test procedure .....	54

<b>F.1.6</b>	<b>Marking.....</b>	<b>55</b>
<b>F.1.7</b>	<b>Operating instructions.....</b>	<b>55</b>
<b>F.2</b>	<b>Additional requirements for water monitoring devices.....</b>	<b>55</b>
<b>F.2.1</b>	<b>Functional requirements.....</b>	<b>55</b>
<b>F.2.2</b>	<b>Special requirements for water hardness monitoring devices.....</b>	<b>55</b>
<b>F.2.3</b>	<b>Special requirements for devices for detecting and monitoring water for ingress of harmful foreign matter.....</b>	<b>56</b>
<b>F.2.4</b>	<b>Special requirements for water conductivity monitoring devices.....</b>	<b>56</b>
<b>F.3</b>	<b>Additional requirements for flow monitoring devices.....</b>	<b>57</b>
<b>F.3.1</b>	<b>Design.....</b>	<b>57</b>
<b>F.3.2</b>	<b>Examination of functional capability.....</b>	<b>58</b>
<b>G.1</b>	<b>General.....</b>	<b>60</b>
<b>G.2</b>	<b>Key to figures.....</b>	<b>60</b>
<b>G.3</b>	<b>Recommendations for expansion system.....</b>	<b>61</b>
<b>G.4</b>	<b>Expansion and pressure holding for hot water boiler system.....</b>	<b>62</b>
<b>G.4.1</b>	<b>Pressure pump-controlled system with pressureless membrane type expansion vessel.....</b>	<b>63</b>
<b>G.4.2</b>	<b>Pressure pump-controlled system with open expansion vessel.....</b>	<b>64</b>
<b>G.4.3</b>	<b>Membrane type expansion vessel with pre-pressurized gas cushion.....</b>	<b>65</b>
<b>G.4.4</b>	<b>Membrane type expansion vessel with controlled gas cushion.....</b>	<b>66</b>
<b>G.4.5</b>	<b>Closed expansion vessel with pre-pressurized gas cushion.....</b>	<b>67</b>
<b>G.4.6</b>	<b>Closed expansion vessel with gas or steam cushion.....</b>	<b>68</b>
<b>Annex H (informative)</b>	<b>Significant technical changes between this document and the previous edition.....</b>	<b>69</b>
<b>Annex ZA (informative)</b>	<b>Relationship between this European Standard and the Essential Requirements of EU Directive 2014/68/EU aimed to be covered.....</b>	<b>70</b>
<b>Bibliography.....</b>		<b>72</b>

## European foreword

This document (EN 12953-6:2024) 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 2025, and conflicting national standards shall be withdrawn at the latest by June 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12953-6:2011.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Annex H provides details of significant technical changes between this document and the previous edition.

The series concerning shell boilers consists of the following parts:

- *Part 1: General*
- *Part 2: Materials for pressure parts of boilers and accessories*
- *Part 3: Design and calculation for pressure parts*
- *Part 4: Workmanship and construction of pressure parts of the boiler*
- *Part 5: Inspection during construction, documentation and marking of pressure parts of the boiler*
- *Part 6: Requirements for equipment for the boiler*
- *Part 7: Requirements for firing systems for liquid and gaseous fuels for the boiler*
- *Part 8: Requirements for safeguards against excessive pressure*
- *Part 9: Requirements for limiting devices of the boiler and accessories*
- *Part 10: Requirements for boiler feed water and boiler water quality*
- *Part 11: Acceptance tests*
- *Part 12: Requirements for firing systems for solid fuels for the boiler*
- *Part 13: Operating instructions*

Although these parts can be obtained separately, it should be recognized that the parts are inter-dependent. As such, the design and manufacture of shell boilers requires the application of more than one part in order for the requirements of the standard to be satisfactorily fulfilled.

NOTE A “Boiler Helpdesk” has been established in CEN/TC 269 which can be contacted for any questions regarding the application of the European Standards series EN 12952 and EN 12953 see the following website: <http://www.boiler-helpdesk.din.de>.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

## 1 Scope

This document specifies the minimum requirements for safety related equipment for shell boilers (generator and/or assemblies) as specified in EN 12953-1:2012, to ensure the boiler operates within the allowable limits (pressure, temperature, etc.) and if the limits are exceeded the energy supply is automatically interrupted and locked out, irrespective of the degree of intervention.

NOTE 1 For this document, the term “boiler” is applicable for generator and/or assemblies.

NOTE 2 The maximum time of operation without manual (human) intervention can be specified for each boiler system.

NOTE 3 Annex C gives recommendations of operation and testing of the boiler system with a maximum time of operation without manual (human) intervention of 24 h and 72 h.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 ISO 5167-1:2022, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full - Part 1: General principles and requirements (ISO 5167-1:2022)*

EN 12953-1:2012, *Shell boilers - Part 1: General*

EN 12953-2:2012, *Shell boilers - Part 2: Materials for pressure parts of boilers and accessories*

EN 12953-3:2016, *Shell boilers - Part 3: Design and calculation for pressure parts*

EN 12953-7:2002, *Shell boilers - Part 7: Requirements for firing systems for liquid and gaseous fuels for the boilers*

EN 12953-8:2001, *Shell boilers - Part 8: Requirements for safeguards against excessive pressure*

EN 12953-9:2024, *Shell boilers - Part 9: Requirements for limiting devices of the boiler and accessories*

EN 12953-10:2003, *Shell boilers - Part 10: Requirements for feedwater and boiler water quality*

EN 12953-12:2003, *Shell boilers - Part 12: Requirements for grate firing systems for solid fuels for the boiler*

EN 12953-13:2012, *Shell boilers - Part 13: Operating instructions*

EN 14597:2012, *Temperature control devices and temperature limiters for heat generating systems*

EN 50156-1:2015, *Electrical equipment for furnaces and ancillary equipment - Part 1: Requirements for application design and installation*

EN 60529:1991,<sup>1</sup> *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN 60730-1:2016, *Automatic electrical controls - Part 1: General requirements (IEC 60730-1:2013)*

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<sup>1</sup> Document impacted by A1:2000, A2:2013 and AC:2016.

EN 61140:2016, *Protection against electric shock - Common aspects for installation and equipment (IEC 61140:2016)*

EN 61558-2-6:2009, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers (IEC 61558-2-6:2009)*

EN 61558-2-16:2009, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units (IEC 61558-2-16:2009)*

ISO 2186:2007, *Fluid flow in closed conduits — Connections for pressure signal transmissions between primary and secondary elements*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12953-1:2012 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>

#### 3.1

##### **control**

device used for maintaining the variable to be controlled (pressure, temperature, etc.) at a specific value (set point)

#### 3.2

##### **monitoring system**

##### **monitoring device**

system which checks given parameters and draws attention to those which are outside normal operating limits but which are below the limiting values determined by the hazard and risk analysis and specified e.g. in the operation manual

Note 1 to entry: Normal operating conditions of the process can be restored either directly by the system or by a boiler attendant depending on the individual requirements.

#### 3.3

##### **safety accessory**

device designed to protect pressure equipment against the allowable limits being exceeded, including devices for direct pressure limitation, such as safety valves, bursting disc safety devices, buckling rods, controlled safety pressure relief systems (CSPRS), and limiting devices, which either activate the means for correction or provide for shutdown or shutdown and lockout, such as pressure switches or temperature switches or fluid level switches and safety related measurement control and regulation (SRMCR) devices

[SOURCE: PED 2014/68/EU]