

# SVENSK STANDARD

## SS-EN 12952-2:2011

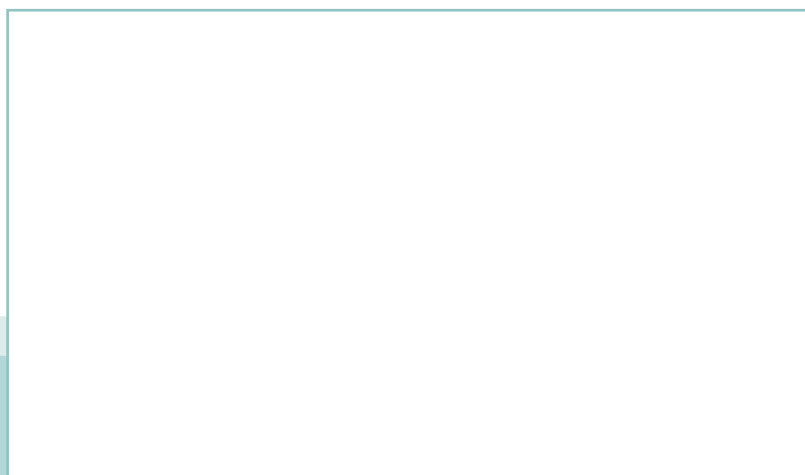


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### **Vattenrörspannor och hjälpinstallationer – Del 2: Material för pannors tryckbärande delar och tillbehör**

### **Water-tube boilers and auxiliary installations – Part 2: Materials for pressure parts of boilers and accessories**



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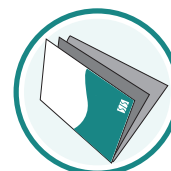
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Europastandarden EN 12952-2:2011 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 12952-2:2011.

Denna standard ersätter SS-EN 12952-2, utgåva 1.

The European Standard EN 12952-2:2011 has the status of a Swedish Standard. This document contains the official version of EN 12952-2:2011.

This standard supersedes the Swedish Standard SS-EN 12952-2, edition 1.

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English Version

## Water-tube boilers and auxiliary installations - Part 2: Materials for pressure parts of boilers and accessories

Chaudières à tubes d'eau et installations auxiliaires - Partie  
2: Matériaux des parties sous pression des chaudières et  
accessoires

Wasserrohrkessel und Anlagenkomponenten - Teil 2:  
Werkstoffe für drucktragende Kesselteile und Zubehör

This European Standard was approved by CEN on 25 June 2011.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 12952-2:2011) 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 February 2012, and conflicting national standards shall be withdrawn at the latest by February 2012.

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 12952-2:2001.

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 97/23/EC, see informative Annex ZA, which is an integral part of this document.

Annex D provides details of significant technical changes between this European Standard and the previous edition.

The European Standard series EN 12952 concerning water-tube boilers and auxiliary installations 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: In-service boiler life expectancy calculations*
- *Part 5: Workmanship and construction of pressure parts of the boiler;*
- *Part 6: Inspection during construction, documentation and marking of pressure parts of the boiler;*
- *Part 7: Requirements for equipment for the boiler;*
- *Part 8: Requirements for firing systems for liquid and gaseous fuels for the boiler;*
- *Part 9: Requirements for firing systems for pulverized solid fuels for the boiler;*
- *Part 10: Requirements for safeguards against excessive pressure;*
- *Part 11: Requirements for limiting devices of the boiler and accessories;*
- *Part 12: Requirements for boiler feedwater and boiler water quality;*
- *Part 13: Requirements for flue gas cleaning systems;*
- *Part 14: Requirements for flue gas DENOX-systems using liquefied pressurized ammonia and ammonia water solution;*

- *Part 15: Acceptance tests;*
- *Part 16: Requirements for grate and fluidized-bed firing systems for solid fuels for the boiler;*
- *CR 12952 Part 17: Guideline for the involvement of an inspection body independent of the manufacturer.*

NOTE 1 A Part 18 on operating instructions is currently in preparation.

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

NOTE 2 Part 4 and Part 15 are not applicable during the design, construction and installation stages.

NOTE 3 A "Boiler Helpdesk" has been established in CEN/TC 269 which may be contacted for any questions regarding the application of European Standards series EN 12952 and EN 12953, see the following website: <http://www.boiler-helpdesk.din.de>

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.



## 1 Scope

This European Standard specifies the requirements for the product forms for use in pressure parts of water-tube boilers and for parts welded on to pressure parts:

- plates;
- wrought seamless tubes;
- electrically welded tubes;
- submerged, plasma and TIG arc-welded tubes;
- forgings;
- castings;
- rolled bars;
- welding consumables;
- fasteners;
- seamless composite tubes.

## 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 757:1997, *Welding consumables — Covered electrodes for manual metal arc welding of high strength steels — Classification*

EN 760:1996, *Welding consumables — Fluxes for submerged arc welding — Classification*

EN 764-4:2002, *Pressure equipment — Part 4: Establishment of technical delivery conditions for metallic materials*

EN 764-5:2002, *Pressure equipment — Part 5: Compliance and inspection documentation of materials*

EN 1092-1:2007, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 1: Steel flanges*

EN 1503-1:2000, *Valves — Materials for bodies, bonnets and covers — Part 1: Steels specified in European Standards*

EN 1503-2:2000, *Valves — Materials for bodies, bonnets and covers — Part 2: Steels other than those specified in European Standards*

EN 1600:1997, *Welding consumables — Covered electrodes for manual metal arc welding of stainless and heat resisting steels — Classification*

EN 1759-1:2004, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, class designated — Part 1: Steel flanges, NPS ½ to 24*

EN 10021, *General technical delivery conditions for steel products*

EN 10028-2:2009, *Flat products made of steels for pressure purposes — Part 2: Non-alloy and alloy steels with specified elevated temperature properties*

EN 10028-3:2009, *Flat products made of steels for pressure purposes — Part 3: Weldable fine grain steels, normalized*

EN 10028-7:2007, *Flat products made of steels for pressure purposes — Part 7: Stainless steels*

EN 10160:1999, *Ultrasonic testing of steel flat product of thickness equal or greater than 6 mm (reflection method)*

EN 10164:2004, *Steel products with improved deformation properties perpendicular to the surface of the product — Technical delivery conditions*

EN 10204:2004, *Metallic products — Types of inspection documents*

EN 10213:2007, *Steel castings for pressure purposes*

EN 10216-2, *Seamless steel tubes for pressure purposes — Technical delivery conditions — Part 2: Non-alloy and alloy steel tubes with specified elevated temperature properties*

EN 10216-3:2002, *Seamless steel tubes for pressure purposes — Technical delivery conditions — Part 3: Alloy fine grain steel tubes*

EN 10216-5:2004, *Seamless steel tubes for pressure purposes — Technical delivery conditions — Part 5: Stainless steel tubes*

EN 10217-2:2002, *Welded steel tubes for pressure purposes — Technical delivery conditions — Part 2: Electric welded non-alloy and alloy steel tubes with specified elevated temperature properties*

EN 10217-3:2002, *Welded steel tubes for pressure purposes — Technical delivery conditions — Part 3: Alloy fine grain steel tubes*

EN 10217-5, *Welded steel tubes for pressure purposes — Technical delivery conditions — Part 5: Submerged arc welded non-alloy and alloy steel tubes with specified elevated temperature properties*

EN 10217-7:2005, *Welded steel tubes for pressure purposes — Technical delivery conditions — Part 7: Stainless steel tubes*

EN 10222-2:1999, *Steel forgings for pressure purposes — Part 2: Ferritic and martensitic steels with specified elevated temperature properties*

EN 10222-3:1998, *Steel forgings for pressure purposes — Part 3: Nickel steels with specified low temperature properties*

EN 10222-4:1998, *Steel forgings for pressure purposes — Part 4: Weldable fine grain steels with high proof strength*

EN 10222-5:1999, *Steel forgings for pressure purposes — Part 5: Martensitic, austenitic and austenitic-ferritic stainless steels*

EN 10228-1:1999, *Non-destructive testing of steel forgings — Part 1: Magnetic particle inspection*

EN 10228-2:1998, *Non-destructive testing of steel forgings — Part 2: Penetrant testing*

EN 10228-3:1998, *Non-destructive testing of steel forgings — Part 3: Ultrasonic testing of ferritic or martensitic steel forgings*

- EN 10253-2:2007, *Butt-welding pipe fittings — Part 2: Non alloy and ferritic alloy steels with specific inspection requirements*
- EN 10253-4, *Butt-welding pipe fittings — Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements*
- EN 10254:1999, *Steel closed die forgings — General technical delivery conditions*
- EN 10269:1999, *Steels and nickel alloys for fasteners with specified elevated and/or low temperature properties*
- EN 10273:2007, *Hot rolled weldable steel bars for pressure purposes with specified elevated temperature properties*
- EN 10308:2001, *Non destructive testing — Ultrasonic testing of steel bars*
- EN 10314, *Method for the derivation of minimum values of proof strength of steel at elevated temperatures*
- EN 12074:2000, *Welding consumables — Quality requirements for manufacture, supply and distribution of consumables for welding and allied processes*
- EN 12536:2000, *Welding consumables — Rods for gas welding of non alloy and creep-resisting steels — Classification*
- EN 12952-3:2011, *Water-tube boilers and auxiliary installations — Part 3: Design and calculation for pressure parts*
- EN 12952-5:2011, *Water-tube boilers and auxiliary installations — Part 5: Workmanship and construction of pressure parts of the boiler*
- EN 12952-6:2011, *Water-tube boilers and auxiliary installations — Part 6: Inspection during construction, documentation and marking of pressure parts of the boiler*
- EN 12952-7:2002, *Water-tube boilers and auxiliary installations — Part 7: Requirements for equipment for the boiler*
- EN 12952-12:2003, *Water-tube boilers and auxiliary installations — Part 12: Requirements for boiler feedwater and boiler water quality*
- EN 13479:2004, *Welding consumables — General product standard for filler metals and fluxes for fusion welding of metallic materials*
- EN ISO 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method (ISO 148-1:2009)*
- EN ISO 544:2011, *Welding consumables — Technical delivery conditions for filler materials and fluxes — Type of product, dimensions, tolerances and markings (ISO 544:2011)*
- EN ISO 636:2008, *Welding consumables — Rods, wires and deposits for tungsten inert gas welding of non-alloy and fine-grain steels — Classification (ISO 636:2004)*
- EN ISO 2560:2009, *Welding consumables — Covered electrodes for manual metal arc welding of non-alloy and fine grain steels — Classification (ISO 2560:2009)*
- EN ISO 2566-1, *Steel — Conversion of elongation values — Part 1: Carbon and low alloy steels (ISO 2566-1:1984)*
- EN ISO 2566-2, *Steel — Conversion of elongation values — Part 2: Austenitic steels (ISO 2566-2:1984)*
- EN ISO 3580:2011, *Welding consumables — Covered electrodes for manual metal arc welding of creep-resisting steels — Classification (ISO 3580:2010)*