

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-18438-02-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 27.03.2019

Date of issue: 27.03.2019

Holder of certificate:

**Jürgen Egly - Zerstörungsfreie Werkstoffprüfung
Siemensstraße 33, 67227 Frankenthal**

Tests in the fields:

manual non-destructive tests (radiographic test, ultrasonic test, penetrant test, magnetic particle test, visual test) as well as mobile hardness test at metallic materials in the metal production and metalworking industry as well as in the plant engineering, at plant, steel- and bridge building and at pipeline

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkKS, to use standards or equivalent testing methods listed here with different issue dates. The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

1 Radiographic test

DIN EN ISO 5579 2014-04	Non-destructive testing - Radiographic testing of metallic materials using film and X- or gamma rays - Basic rules (here: <i>Chapter 6</i>)
DIN EN ISO 17636-1 2013-05	Non-destructive testing of welds - Radiographic testing - Part 1: X- and gamma-ray techniques with film
DIN EN ISO 10893-6 2011-07	Non-destructive testing of steel tubes - Part 6: Radiographic testing of the weld seam of welded steel tubes for the detection of imperfections

This document is a translation. The definitive version is the original German annex to the accreditation certificate.

Abbreviations used: see last page

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

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DIN EN 12681-1 2018-02	Founding - Radiographic testing - Part 1: Film techniques
2	Ultrasonic test
DIN EN ISO 16810 2014-07	Non-destructive testing - Ultrasonic testing - General principles (here: <i>Chapter 9</i>)
DIN EN ISO 16811 2014-06	Non-destructive testing - Ultrasonic testing - Sensitivity and range setting
DIN EN ISO 16823 2014-07	Non-destructive testing - Ultrasonic testing - Transmission technique
DIN EN ISO 16826 2014-06	Non-destructive testing - Ultrasonic testing - Examination for discontinuities perpendicular to the surface
DIN EN ISO 16827 2014-06	Non-destructive testing - Ultrasonic testing - Characterization and sizing of discontinuities
DIN EN ISO 17640 2018-03	Non-destructive testing of welds - Ultrasonic testing - Techniques, testing levels, and assessment (here: <i>Chapters 10-13 and Annex A</i>)
DIN EN 10160 1999-09	Ultrasonic testing of steel flat product of thickness equal to or greater than 6 mm (reflection method)
DIN EN 10228-3 2016-10	Non-destructive testing of steel forgings - Part 3: Ultrasonic testing of ferritic or martensitic steel forgings
DIN EN 10228-4 2016-10	Non-destructive testing of steel forgings - Part 4: Ultrasonic testing of austenitic and austenitic-ferritic stainless steel forgings
DIN EN 10308 2002-03	Non-destructive testing - Ultrasonic testing of steel bars
DIN EN 12680-1 2003-06	Founding - Ultrasonic examination - Part 1: Steel castings for general purposes
DIN EN 12680-2 2003-06	Founding - Ultrasonic examination - Part 2: Steel castings for highly stressed components
DIN EN 12680-3 2012-02	Founding - Ultrasonic testing - Part 3: Spheroidal graphite cast iron castings

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DIN EN 14127
2011-04 Non-destructive testing - Ultrasonic thickness measurement

3 Penetrant test

DIN EN ISO 3452-1
2014-09 Non-destructive testing - Penetrant testing - Part 1: General principles
(here: *Chapter 8*)

DIN EN 1371-1
2012-02 Founding - Liquid penetrant testing - Part 1: Sand, gravity die and low
pressure die castings

DIN EN 1371-2
2015-04 Founding - Liquid penetrant testing - Part 2: Investment castings

DIN EN 10228-2
2016-10 Non-destructive testing of steel forgings - Part 2: Penetrant testing

DIN EN ISO 10893-4
2011-07 Non-destructive testing of steel tubes - Part 4: Liquid penetrant
inspection of seamless and welded steel tubes for the detection of
surface imperfections

4 Magnetic particle test

DIN EN ISO 9934-1
2017-03 Non-destructive testing - Magnetic particle testing - Part 1: General
principles
(here: *Chapter 7-14*)

DIN EN ISO 17638
2017-03 Non-destructive testing of welds - Magnetic particle testing

DIN EN 1369
2013-01 Founding - Magnetic particle testing

DIN EN 10228-1
2016-10 Non-destructive testing of steel forgings - Part 1: Magnetic particle
inspection

DIN EN ISO 10893-5
2011-07 Non-destructive testing of steel tubes - Part 5: Magnetic particle
inspection of seamless and welded ferromagnetic steel tubes for the
detection of surface imperfections

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5 Visual test

DIN EN 10163-1 2005-03	Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections - Part 1: General requirements (here: <i>Chapter 6.1</i>)
DIN EN 10163-2 2005-03	Delivery requirements for surface conditions of hot-rolled steel plates, wide flats and sections - Part 2: Plate and wide flats
DIN EN 10163-3 2005-03	Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections - Part 3: Sections
DIN EN ISO 17637 2017-04	Non-destructive testing of welds - Visual testing of fusion-welded joints (here: <i>Chapters 5 and 6</i>)
DIN EN 13018 2016-06	Non-destructive testing - Visual testing - General principles (here: <i>Chapters 5 and 6</i>)

6 Cross-procedural standards for NDT

DIN EN 13480-5 2017-12	Metallic industrial piping - Part 5: Inspection and testing
AD 2000-Merkblatt HP 5/3 Anlage 1 2015-04	Non-destructive testing of welded joints - Minimum requirements for non-destructive testing methods
ASME Code, Section V 2017	ASME Boiler and Pressure Vessel Code - Section V - Nondestructive Examination Subsection A: Article 1: General Requirements Article 2: Radiographic Examination Article 4: Ultrasonic Examination Methods for welds Article 5: Ultrasonic Examination Methods for materials Article 6: Liquid Penetrant Examination Article 7: Magnetic Particle Examination Article 9: Visual Examination Subsection B: Article 22: Radiographic Standards Article 23: Ultrasonic Standards Article 24: Liquid Penetrant Standards Article 25: Magnetic Particle Standards

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DIN EN ISO 17635 2017-04	Non-destructive testing of welds - General rules for metallic materials
DIN EN 1559-2 2014-12	Founding - Technical conditions of delivery - Part 2: Additional requirements for steel castings
DIN 1690-10 1991-01	Technical delivery conditions for castings of metallic materials - Supplementary requirements for steel castings used for heavy-duty valves <i>(withdrawn standard)</i>
DIN EN 1090-2 2018-09	Execution of steel structures and aluminium structures - Part 2: Technical requirements for steel structures
DIN EN 13445-5 2018-12	Unfired pressure vessels - Part 5: Inspection and testing

7 Measurement of hardness

DIN 50159-1 2015-01	Metallic materials - Hardness testing with the UCI method - Part 1: Test method
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abbreviations used:

AD HP	Working group Pressure vessel - Production and Testing
ASME	American Society of Mechanical Engineers
DIN	German Institute for Standardization
EN	European Standard
ISO	International Organization for Standardization

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