

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-18989-01-00 according to DIN EN ISO/IEC 17025:2005

Period of validity: 25.07.2018 to 24.07.2023

Date of issue: 25.07.2018

Holder of certificate:

HWD Haase Werkstoffprüfung Duisburg GmbH
Wanheimer Straße 431, 47055 Duisburg

Tests in the fields:

manual non-destructive testing (radiographic-, ultrasonic-, magnetic particle-, penetration- and visual testing) at metallic materials of the metal production and processing industry as well as in the plant engineering and in plant construction

Abbreviations used: see last page

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.

1 Radiographic testing

DIN EN 444
1994-04 Non-destructive testing - general principles for the radiographic examination of metallic materials using X-rays and gamma-rays
(withdrawn standard)

DIN EN ISO 5579
2014-04 Non-destructive testing - Radiographic testing of metallic materials using film and X- or gamma rays - Basic rules
(here: chapter 6)

DIN EN 1435
2002-09 Non-destructive testing of welds - Radiographic testing of welded joints
(withdrawn standard)

DIN EN 12681-1 2018-02	Founding - Radiographic testing - Part 1: Film techniques
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 16407-1 2014-04	Non-destructive testing - Radiographic inspection of corrosion and deposits in pipes by X- and gamma rays - Part 1: Tangential radiographic inspection
DIN EN 16407-2 2014-04	Non-destructive testing - Radiographic inspection of corrosion and deposits in pipes by X- and gamma rays - Part 2 : Double Wall radiographic inspection

2 Ultrasonic testing

DIN EN 14127 2011-04	Non-destructive testing - Ultrasonic thickness measurement
DIN EN 583-4 2002-12	Non-destructive testing - Ultrasonic examination - Part 4: Examination for discontinuities perpendicular to the surface <i>(withdrawn standard)</i>
DIN EN 583-5 2001-02	Non-destructive testing - Ultrasonic examination - Part 5: Characterization and sizing of discontinuities <i>(withdrawn standard)</i>
DIN EN 583-6 2009-03	Non-destructive testing - Ultrasonic examination - Part 6: Time-of-flight diffraction technique as a method for detection and sizing of discontinuities <i>(withdrawn standard)</i>
DIN EN ISO 16810 2014-07	Non-destructive testing - Ultrasonic testing - General principles <i>(here: chapter 9)</i>
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

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DIN EN ISO 16827 2014-06	Non-destructive testing - Ultrasonic testing - Characterization and sizing of discontinuities
DIN EN ISO 16828 2014-06	Non-destructive testing - Ultrasonic testing - Time-of-flight diffraction technique as a method for detection and sizing of discontinuities
DIN EN ISO 17405 2014-10	Non-destructive testing - Ultrasonic testing - Technique of testing claddings produced by welding, rolling and explosion
SEP 1915 1994-09	Ultrasonic testing of steel pipes for aberration <i>(withdrawn document)</i>
SEP 1920 1984-12	Ultrasonic testing of rolled semi-finished products on internal material discontinuities
SEP 1922 1985-07	Ultrasonic testing of forgings of ferritic steel <i>(withdrawn document)</i>
SEP 1923 2009-02	Ultrasonic testing of steel forgings to stringent standards, in particular for components in turbine and generator systems
SEP 1924 1989-10	Founding - Ultrasonic examination - spheroidal graphite cast iron castings <i>(withdrawn standard)</i>
DIN EN ISO 23279 2017-12	Non-destructive testing of welds - Ultrasonic testing - Characterization of discontinuities in welds
DIN EN ISO 17640 2018-03	Non-destructive testing of welds - Ultrasonic testing - Techniques, testing levels, and assessment
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 54123 1980-10	Non-destructive Test; Ultrasonic Method of Testing Claddings, Produced by Welding, Rolling and Explosion <i>(withdrawn standard)</i>

3 Magnetic particle testing

DGZfP-EM 0 2005-01	Directive for the introduction of magnetic particle tests
DIN EN ISO 9934-1 2017-03	Non-destructive testing - Magnetic particle testing - Part 1: General principles (here: <i>chapters 7-14</i>)
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

4 Penetration testing

DIN EN 571-1 1997-03	Non-destructive testing - Penetrant testing - Part 1: General principles (<i>withdrawn standard</i>)
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 3452-1 2014-09	Non-destructive testing - Penetrant testing - Part 1: General principles (here: <i>chapter 8</i>)

5 Visual testing

DIN EN ISO 17637 2017-04	Non-destructive testing of welds - Visual testing of fusion-welded joints
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DIN EN 13018 Non-destructive testing - Visual testing - General principles
2016-06

6 Cross standards for NDT (here for: RT, UT, MT, PT, and VT)

DIN EN 17635 Non-destructive testing of welds - General rules for metallic
2017-04 materials

AD 2000-Merkblatt HP 5/3 Manufacture and testing of joints - Non-destructive testing of
2015-04 welded joints

AD 2000-Merkblatt HP 5/3 Non-destructive testing of welded joints - Minimum requirements
Anlage 1 for non-destructive testing methods
2015-04

DVGW GW 350 Welding Joints of Steel Pipelines for Gas and Water Supply -
2015-06 Manufacturing, Testing and Evaluation
(here only: *chapter 9*)

SEP 1916 Non-destructive testing of fusion-welded ferritic steel pipes
1989-12

SEP 1917 Nondestructive testing of resistance welded pipes of ferritic steels
1994-09

Abbreviations used:

AD-HP	Arbeitsgemeinschaft Druckbehälter
DIN	German Institute for Standardization
DGZfP	German Society for Non-destructive Testing
DVGW	German association of gas- and water industry
EN	European Standard
ISO	International Organization for Standardization
MT	Magnetic particle testing
PT	Penetration testing
RT	Radiographic testing
SEP	Steel and iron test sheet of the Association of German Steel Institute
UT	Ultrasonic testing
VT	Visual testing