

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-17234-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 11.02.2020

Date of issue: 04.05.2020

Holder of certificate:

**PLR Prüftechnik Linke & Rühle GmbH
Altenhäuser Straße 6, 39126 Magdeburg**

Tests in the fields:

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

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the free choice of standard or equivalent testing methods. The listed testing methods are exemplary.

The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

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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1 Non-destructive testing

1.1 Radiographic testing

Testing of metallic materials and material connections with respect to the existence of defects, their density distributions and their frequency as well as the identification of the nature of the defects by means of X-ray testings up to 300 keV and by the application of the radioactive isotopes Se75 and Ir192 in the range from 5 mm up to 100 mm irradiated thickness.

DIN EN ISO 5579 2014-04	Non-destructive testing - Radiographic testing of metallic materials using film and X- or gamma rays - Basic rules
DIN EN 12681-1 2018-02	Founding - Radiographic testing - Part 1: Film techniques
DIN EN 12681-2 2018-02	Founding - Radiographic testing - Part 2: Techniques with digital detectors
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 17636-2 2013-05	Non-destructive testing of welds - Radiographic testing - Part 2: X- and gamma-ray techniques with digital detectors

1.2 Ultrasonic testing

Manual and mechanized surface and volume testing with respect to defects in components of plant constructions, mechanical engineering, traffic engineering as well as in products and construction components of the metal producing and metal processing industry for the material thickness from 2 mm up to 700 mm and the temperature range from -20 °C up to 200 °C.

DIN EN ISO 16810 2014-07	Non-destructive testing - Ultrasonic testing - General principles
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

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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 2019-02	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 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 ISO 10893-8 2011-07	Non-destructive testing of steel tubes - Part 8: Automated ultrasonic testing of seamless and welded steel tubes for the detection of laminar imperfections
DIN EN 10306 2002-03	Iron and steel - Ultrasonic testing of H beams with parallel flanges and IPE beams
DIN EN 10307 2002-03	Non-destructive testing - Ultrasonic testing of austenitic and austenitic-ferritic stainless steels flat products of thickness equal to or greater than 6 mm (reflection method)
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
DIN EN 14127 2011-04	Non-destructive testing - Ultrasonic thickness measurement

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DIN EN 16729-1 2016-11	Railway applications - Infrastructure - Non-destructive testing on rails in track - Part 1: Requirements for ultrasonic inspection and evaluation principles
DIN EN ISO 22825 2018-02	Non-destructive testing of welds - Ultrasonic testing - Testing of welds in austenitic steels and nickel-based alloys
DIN ISO 4386-1 1992-11	Plain bearings; metallic multilayer plain bearings; non-destructive ultrasonic testing of bond
DIN 22261-3 2015-11	Excavators, spreaders and auxiliary equipment in opencast lignite mines - Part 3: Execution of steel structures
SEL 072 und Beiblatt 1977-12	Ultrasonically tested heavy plate; technical delivery specifications <i>(withdrawn document)</i>
SEP 1915 1994-09	Ultrasonic test of steel pipes for aberration <i>(withdrawn document)</i>
SEP 1918 1992-01	Ultrasonic test of steel pipes for transverse defects <i>(withdrawn document)</i>
SEP 1919 1977-06	Ultrasonic testing for laminations of pipes of creep-resistant steels <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	Ultrasonic testing of castings made of cast iron with spheroidal graphite <i>(withdrawn document)</i>
RIL 821.2007Z62 2007-11	Guideline for ultrasonic testing with rail testing trains <i>(withdrawn document)</i>

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1.3 Magnetic particle testing

Manual testing with respect to defects in the range close to the surface of components of plant constructions, mechanical engineering, traffic engineering as well as in products and construction components of the metal producing and metal processing industry made from ferromagnetic material in the temperature range from -20 °C up to 200 °C.

DIN EN ISO 9934-1 2017-03	Non-destructive testing - Magnetic particle testing - Part 1: General principles
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

1.4 Penetrant testing

Manual testing with respect to defects in the range close to the surface of components of plant constructions, mechanical engineering, traffic engineering as well as in products and construction components of the metal producing and metal processing industry made from metals, ceramics and plastics in the temperature range from 0 °C up to 80 °C.

DIN EN ISO 3452-1 2014-09	Non-destructive testing - Penetrant testing - Part 1: General principles
DIN EN 1371-1 2012-02	Founding - Liquid penetrant testing - Part 1: Sand, gravity die and low pressure die castings
DIN EN 1371-2 1998-07	Founding - Liquid penetrant testing - Part 2: Investment castings
DIN EN 10228-2 2016-10	Non-destructive testing of steel forgings - Part 2: Penetrant testing

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1.5 Eddy current testing

Manual and mechanized testing with respect to defects on the surface or in the range close to the surface of components of plant constructions, mechanical engineering, traffic engineering as well as in products and construction components of the metal producing and metal processing industry in the temperature range from -15°C up to 200°C. Characterization of material properties and determination of the layer thickness of metallic and metal fibre enhanced materials in the temperature range from -5 °C up to 100 °C.

DIN EN ISO 2178 2016-11	Non-magnetic coatings on magnetic substrates - Measurement of coating thickness - Magnetic method
DIN EN ISO 2360 2017-12	Non-conductive coatings on non-magnetic electrically conductive base metals - Measurement of coating thickness - Amplitude-sensitive eddy-current method
DIN EN ISO 17643 2015-12	Non-destructive testing of welds - Eddy current examination of welds by complex plane analysis
DIN EN 10893-1 2011-07	Non-destructive testing of steel tubes - Part 1: Automated electromagnetic testing of seamless and welded (except submerged arc-welded) steel tubes for the verification of hydraulic leaktightness
DIN EN 10893-2 2011-07	Non-destructive testing of steel tubes - Part 2: Automated eddy current testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of imperfections
DIN EN ISO 15549 2011-03	Non-destructive testing - Eddy current testing - General principles
DIN 54141-3 1987-02	Non-destructive testing; eddy current testing of pipes and tubes; procedure <i>(withdrawn standard)</i>
RIL 821.2007Z31 2016-07	Test guidance for eddy current testing of headcheck afflicted rails with the device WPG II
RIL 821.2007Z35A01 2016-07	Eddy current testing with the device WPG NT in inspection modus
RIL 821.2007Z35A02 2016-07	Eddy current testing with the device WPG NT in test modus SBM
RIL 821.2007Z63 2008-03	Test guidance for eddy current testing with rail test trains <i>(withdrawn document)</i>

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1.6 Visual testing

Testing of external and internal surfaces with respect to irregularities and to non-permissible findings on components of plant constructions, mechanical engineering and traffic engineering made of metals, ceramics, plastics, concrete, stone, wood, carbon fibre enhanced materials and composite materials in the temperature range from -20 °C up to 60 °C.

DIN EN ISO 17637 2017-04	Non-destructive testing of welds - Visual testing of fusion-welded joints
DIN EN 1370 2012-03	Founding - Examination of surface condition
DIN EN 13018 2016-06	Non-destructive testing - Visual testing - General principles

2 Cross-procedure standards
(here for RT, UT, MT, PT, ET and VT)

DIN EN 13445-5 2013-12	Unfired pressure vessels - Part 5: Inspection and testing
DIN 27201-7 2014-05	State of railway vehicles - Basic principles and production technology - Part 7: Non-destructive testing
AD HP 5/3 Annex 1 2015-04	Non destructive testing of welded joints - Procedural minimum requirements for non destructive testing
DVGW GW 350 2015-06	Welded joints on pipelines of steel within gas and water supply - Production, testing and evaluation (here: <i>only chapter 9</i>)

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Abbreviations used:

AD-HP	Working group of pressure vessels - Production and testing
DIN	German Institute for Standardization
DVGW	German association of gas- and water industry
EN	European Standard
ET	eddy current testing
ISO	International Organization for Standardization
MT	magnetic particle testing
PT	penetrant testing
RIL	Guideline of the Deutsche Bahn AG
RT	radiographic testing
SEL	Steel-iron-delivery conditions of the Association of German Steel
SEP	Steel and iron test sheet of the Association of German Steel Institute
UT	ultrasonic testing
VT	visual testing
WPG	Eddy current testing device for rails

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