

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV

Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

Accreditation



The Deutsche Akkreditierungsstelle GmbH attests that the testing laboratory

H. Butting GmbH & Co KG
Gifhorner Straße 59, 29379 Knesebeck

is competent under the terms of DIN EN ISO/IEC 17025:2018 to carry out tests in the following fields:

mechanical-technological, mechanical, metallographical and corrosion tests at metallic materials; material testing of metals using optical emission spectrometry of steel- and ferrous materials as well as nickel-based alloys; manual and mechanized non-destructive testing (radiographic testing and ultrasonic testing) at metallic materials, on welds and steel pipes

The accreditation certificate shall only apply in connection with the notice of accreditation of 30.06.2020 with the accreditation number D-PL-11126-01. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 8 pages.

Registration number of the certificate: **D-PL-11126-01-00**

Frankfurt am Main,
30.06.2020

Dipl.-Ing. (FH) Ralf Egnér
Head of Division

Translation issued:
03.09.2020


Head of Division

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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The publication of extracts of the accreditation certificate is subject to the prior written approval by Deutsche Akkreditierungsstelle GmbH (DAkKS). Exempted is the unchanged form of separate disseminations of the cover sheet by the conformity assessment body mentioned overleaf.

No impression shall be made that the accreditation also extends to fields beyond the scope of accreditation attested by DAkKS.

The accreditation was granted pursuant to the Act on the Accreditation Body (AkkStelleG) of 31 July 2009 (Federal Law Gazette I p. 2625) and the Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (Official Journal of the European Union L 218 of 9 July 2008, p. 30). DAkKS is a signatory to the Multilateral Agreements for Mutual Recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC). The signatories to these agreements recognise each other's accreditations.

The up-to-date state of membership can be retrieved from the following websites:

EA: www.european-accreditation.org

ILAC: www.ilac.org

IAF: www.iaf.nu

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-11126-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 30.06.2020

Date of issue: 03.09.2020

Holder of certificate:

H. Butting GmbH & Co KG
Prüflaboratorium
Gifhorner Straße 59, 29379 Knesebeck

Tests in the fields:

mechanical-technological, mechanical, metallographical and corrosion tests at metallic materials; material testing of metals using optical emission spectrometry of steel- and ferrous materials as well as nickel-based alloys; manual and mechanized non-destructive testing (radiographic testing and ultrasonic testing) at metallic materials, on welds and steel pipes

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods (without AA-WPL SPECTRO, API, DNVGL and DNV-OS) listed here with different issue dates.

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>

1 Mechanical-technological tests at metallic materials

1.1 Stability tests

DIN EN ISO 6892-1 2017-02	Metallic materials - Tensile testing - Part 1: Method of test at room temperature
DIN EN ISO 6892-2 2018-09	Metallic materials - Tensile testing - Part 2: Method of test at elevated temperature
ASTM E 8/E 8Ma 2016	Standard Test Methods for Tension Testing of Metallic Materials
ASTM E 21 2017	Standard Test Methods for Elevated Temperature Tension Tests of Metallic Materials
DIN EN ISO 4136 2013-02	Destructive tests on welds in metallic materials - Transverse tensile test
ASTM E 9 2019	Standard Test Methods of Compression Testing of Metallic Materials at Room Temperature
ASTM A 264 2012	Standard Specification for Stainless Chromium-Nickel Steel-Clad Plate (here: <i>only chapter 7.2 - Shear strength</i>)
ASTM A 265 2012 Reapproved: 2019	Standard Specification for Nickel and Nickel-Base Alloy-Clad Steel Plate (here: <i>only chapter 7.2 - Shear strength</i>)

1.2 Toughness tests

DIN EN ISO 148-1 2017-05	Metallic materials - Charpy pendulum impact test - Part 1: Test method
ASTM E 23 2018	Test Methods for Notched Bar Impact Testing of Metallic Materials

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1.3 Hardness tests

DIN EN ISO 6506-1 2015-02	Metallic materials - Brinell hardness test - Part 1: Test method (here: <i>only 2,5/187,5</i>)
ASTM E 10 2018	Standard Test Method for Brinell Hardness of Metallic Materials (here: <i>only 2,5/187,5</i>)
DIN EN ISO 6507-1 2018-07	Metallic materials - Vickers hardness test - Part 1: Test method (here: <i>only HV1, HV5, HV10</i>)
ASTM E 92 2017	Standard Test Methods for Vickers Hardness and Knoop Hardness of Metallic Materials (here: <i>only HV1, HV5, HV10</i>)
DIN EN ISO 6508-1 2016-12	Metallic materials - Rockwell hardness test - Part 1: Test method (here: <i>only HRB, HRC</i>)
ASTM E 18 2018	Test Methods for Rockwell Hardness of Metallic Materials (here: <i>only HRB, HRC</i>)
DIN EN ISO 9015-1 2011-05	Destructive tests on welds in metallic materials - Hardness testing - Part 1: Hardness test on arc welded joints
DIN EN ISO 9015-2 2016-10	Destructive tests on welds in metallic materials - Hardness testing - Part 2: Microhardness testing of welded joints (here: <i>only HV1</i>)

2 Ductility tests on metallic materials and pipes

DIN EN ISO 9017 2018-04	Destructive tests on welds in metallic materials - Fracture test
DIN EN ISO 7438 2016-07	Metallic materials - Bend test
DIN EN ISO 5173 2012-02	Destructive tests on welds in metallic materials - Bend tests

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5 Metallographical tests

ASTM E 562 2019	Standard Test Method for Determining Volume Fraction by Systematic Manual Point Count
ASTM E 1245 2003 reapproved: 2016	Standard Practice for Determining the Inclusion or Second-Phase Constituent Content of Metals by Automatic Image Analysis
DIN EN ISO 643 2013-05	Steels - Micrographic determination of the apparent grain size
ASTM E 112 2013	Standard Test Methods for Determining Average Grain Size
DIN EN ISO 17781 2017-11	Petroleum, petrochemical and natural gas industries - Test methods for quality control of microstructure of ferritic/austenitic (duplex) stainless steels (hier: <i>only chapter 5.2 - Microstructural examination</i>)
DIN EN ISO 17639 2013-12	Destructive tests on welds in metallic materials - Macroscopic and microscopic examination of welds

6 Optical emission spectrometry

AA-WPL SPECTRO-01 2019-12	Chemical analysis of metal alloys using optical emission spectrometry Iron-based alloys: Determination of the alloying elements C, Si, Mn, P, S, Cr, Ni, Mo, Cu, Ti, Nb, Al, N, Fe, B Nickel-based alloys: Determination of the alloying elements C, Si, Mn, P, S, Cr, Mo, Fe, V, W, Cu, Al, Nb, Ti, Ni
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7 Non-destructive tests

7.1 Radiographic tests

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>only chapter 6 - Recommended techniques for making radiographs</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 17636-2 2013-05	Non-destructive testing of welds - Radiographic testing - Part 2: X- and gamma-ray techniques with digital detectors
DIN EN ISO 10893-6 2019-06	Non-destructive testing of steel tubes - Part 6: Radiographic testing of the weld seam of welded steel tubes for the detection of imperfections
DIN EN ISO 10893-7 2019-06	Non-destructive testing of steel tubes - Part 7: Digital radiographic testing of the weld seam of welded steel tubes for the detection of imperfections
DNV-OS-F101 2013	Offshore Standard - Submarine Pipeline Systems: APPENDIX D - Non-Destructive Testing (NDT) : - Radiographic examination
DNVGL-ST-F101 2017	Offshore Standard - Submarine Pipeline Systems: APPENDIX D - Non-Destructive Testing (NDT) : - Radiographic examination
API 5L 2018-04	Specification for Line Pipe - Radiographic examination
ASME V 2017-07	ASME Boiler and Pressure Vessel Code, Section V (here: <i>only article 2 - Radiographic examination</i>)

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7.2 Ultrasonic tests

DIN EN ISO 16810 2014-07	Non-destructive testing - Ultrasonic testing - General principles (here: <i>only</i> chapter 9 - testing)
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 ISO 10893-9 2011-07	Non-destructive testing of steel tubes - Part 9: Automated ultrasonic testing for the detection of laminar imperfections in strip/plate used for the manufacture of welded steel tubes
DIN EN ISO 10893-10 2011-07	Non-destructive testing of steel tubes - Part 10: Automated full peripheral ultrasonic testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of longitudinal and/or transverse imperfections
DIN EN ISO 10893-11 2011-07	Non-destructive testing of steel tubes - Part 11: Automated ultrasonic testing of the weld seam of welded steel tubes for the detection of longitudinal and/or transverse imperfections
DNV-OS-F101 2013	Offshore Standard - Submarine Pipeline Systems: APPENDIX D - Non-Destructive Testing (NDT) : - Ultrasonic examination
DNVGL-ST-F101 2017	Offshore Standard - Submarine Pipeline Systems: APPENDIX D - Non-Destructive Testing (NDT) : - Ultrasonic examination
ASTM A 577/A 577M 2017	Standard Specification for Ultrasonic Angle-Beam Examination of Steel Plates
ASTM A 578/A 578M 2017	Standard Specification for Straight-Beam Ultrasonic Examination of Rolled Steel Plates for Special Applications
ASTM E 213 2014	Standard Practice for Ultrasonic Testing of Metal Pipe and Tubing
API 5L 2018-04	Specification for Line Pipe - Ultrasonic examination

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Abbreviations used:

AA-WPL SPECTRO	In house method of the H. BUTTING GmbH & Co. KG
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
API	American Petroleum Institute
CEN	European Committee for Standardization
DIN	German Institute for Standardization
DNVGL	Det Norske Veritas - Germanischer Lloyd
DNV-OS	Det Norske Veritas - Offshore Standard
EN	European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
SEP	Steel-iron Test Sheets from the Association of German Ironworkers
SPEC	Standard Performance Evaluation Corporation
TR	Technical Report

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