Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-PL-19221-01-02 according to DIN EN ISO/IEC 17025:2018

Valid from: **12.08.2024**

Date of issue: 09.02.2026

This annex is part of the Accreditation Certificate D-PL-19221-01-00.

Holder of the Accreditation Certificate:

DEKRA Incos GmbH
Nicolaus-Otto-Ring 10, 85098 Großmehring

with the locations

DEKRA Incos GmbH
Nicolaus-Otto-Ring 10, 85098 Großmehring

DEKRA Incos GmbH
Mausegatt 18, 47228 Duisburg

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

Tests in the fields:

Mechanical tests, metallographic tests, corrosion tests and X-ray fluorescence analyses of metallic materials; optical emission spectrometry of low alloy steels, chromium, chromium-nickel, tool and duplex steels

Flexible Scope of Accreditation:

Within the indicated test areas marked with [Flex A] the testing laboratory is permitted to use standardised or equivalent test methods listed here with different issue dates without being required to prior inform and obtain approval from DAkkS.

The testing laboratory has an up-to-date list of all test methods within the flexible scope of accreditation. The list is publicly available on the website of the testing laboratory.

The test methods are marked with the following abbreviations of the locations listed below where they are performed:

GRO=Großmehring

DU II = Duisburg – Mausegatt 18 (MP-zP)

1 Mechanical tests [Flex A]

1.1 Tensile test

DIN EN ISO 4136 2022-09	Destructive tests on welds in metallic materials – Transverse tensile test	DU II
DIN EN ISO 6892-1 2020-06	Metallic materials – Tensile testing – Part 1: Method of test at room temperature	DU II
DIN EN ISO 6892-2 2018-09	Metallic materials – Tensile testing – Part 2: Method of test at elevated temperature	DU II
ASTM A370 2022	Standard Test Methods and Definitions for Mechanical Testing of Steel Products	DU II
ASTM E21 2020	Standard Test Methods for Elevated Temperature Tension Tests of Metallic Materials	DU II
ASTM E8/E8Ma 2022	Standard Test Methods for Tension Testing of Metallic Materials	DU II

1.2 Bend test

DIN EN ISO 5173 2023-05	Destructive tests on welds in metallic materials – Bend tests	DU II
DIN EN ISO 7438 2021-03	Metallic materials – Bend test	DU II
DIN EN ISO 8492 2014-03	Metallic materials – Tube – Flattening test	DU II
DIN EN ISO 8493 2004-10	Metallic materials – Tube – Drift-expanding test	DU II
DIN EN ISO 8495 2014-03	Metallic materials – Tube – Ring-expanding test	DU II
DIN EN ISO 8496 2014-03	Metallic materials – Tube – Ring tensile test	DU II
DIN EN 1320 1996-12	Destructive tests on welds in metallic materials – Fracture test	DU II

DIN EN ISO 9017 2018-04	Destructive tests on welds in metallic materials – Fracture test	DU II
ASTM E190 2021	Standard Test Method for Guided Bend Test for Ductility of Welds	DU II
ASTM E290 2022	Standard Test Methods for Bend Testing of Material for Ductility	DU II
ASTM A370 2022	Standard Test Methods and Definitions for Mechanical Testing of Steel Products	DU II

1.3 Impact tests

DIN EN ISO 9016 2022-07	Destructive tests on welds in metallic materials – Impact tests – Test specimen location, notch orientation and examination	DU II
DIN EN ISO 148-1 2017-05	Metallic materials – Charpy pendulum impact test – Part 1: Test method	DU II
ASTM E23 2018	Standard Test Methods for Notched Bar Impact Testing of Metallic Materials	DU II
ASTM A370 2023	Standard Test Methods and Definitions for Mechanical Testing of Steel Products	DU II

1.4 Hardness tests

1.4.1 Basic test methods

DIN EN ISO 6508-1 2016-12	Metallic materials – Rockwell hardness test – Part 1: Test method	DU II, GRO
DIN EN ISO 6506-1 2015-02	Metallic materials – Brinell hardness test – Part 1: Test method	DU II, GRO
DIN EN ISO 6507-1 2018-07	Metallic materials – Vickers hardness test – Part 1: Test method	DU II, GRO
DIN EN ISO 9015-1 2011-05	Destructive tests on welds in metallic materials – Hardness testing – Part 1: Hardness test on arc welded joints	DU II

ASTM E10 2023	Standard Test Method for Brinell Hardness of Metallic Materials	DU II
ASTM E18 2022	Standard Test Methods for Rockwell Hardness of Metallic Materials	DU II
ASTM E384 2022	Standard Test Methods for Microindentation Hardness of Materials	DU II
ASTM E92 2023	Standard Test Methods for Vickers Hardness and Knoop Hardness of Metallic Materials	DU II
ASTM A370 2022	Standard Test Methods and Definitions for Mechanical Testing of Steel Products	DU II

1.4.2 Mobile hardness tests

DIN EN ISO 16859-1 2016-02	Metallic materials – Leeb hardness test – Part 1: Test method	GRO
DIN 50157-1 2020-11	Metallic materials – Hardness testing with portable measuring devices operating with mechanical penetration depth – Part 1: Test method	GRO
DIN 50159-1 2022-06	Metallic materials – Hardness testing with the UCI method – Part 1: Test method	GRO
ASTM A956/A956M 2022	Standard Test Method for Leeb Hardness Testing of Steel Products	GRO
ASTM A1038-19 2019	Standard Test Method for Portable Hardness Testing by the Ultrasonic Contact Impedance Method	GRO
DIN EN ISO 6507-1 2018-07	Metallic materials – Vickers hardness test – Part 1: Test method	GRO

2 Metallographic test

2.1 Comparative methods [Flex A]

ISO 4967 2013-07	Steel – Determination of content of non-metallic inclusions – Micrographic method using standard diagrams	DU II
DIN EN ISO 945-1 2019-10	Microstructure of cast irons – Part 1: Graphite classification by visual analysis	DU II
DIN EN ISO 17639 2022-05	Destructive tests on welds in metallic materials – Macroscopic and microscopic examination of welds	DU II
DIN EN 1321 1996-12	Destructive tests of welds in metallic materials – Macroscopic and microscopic examination of welds	DU II
DIN 50602 1985-09	Metallographic examination; microscopic examination of special steels using standard diagrams to assess the content of non-metallic inclusions	DU II
DIN 54150 1977-08	Non-destructive testing – impression methods for surface examination (Replica-technique)	DU II,-GRO
ASTM E45 2018	Standard Test Methods for Determining the Inclusion Content of Steel	DU II

The following test methods are outside of the flexible accreditation scope:

VGB-S-517 2014	Guidelines for rating the microstructural composition and creep rupture damage of creep-resistant steel for high pressure pipelines and boiler components and their weld connections	DU II, GRO
VGB-TW-507 1992	Guidelines for the assessment of microstructure and damage development of creep exposed materials for pipes and boiler components	DU II,-GRO

2.2 Measuring methods [Flex A]

DIN EN ISO 643 2020-06	Steels – Micrographic determination of the apparent grain size	DU II
ASTM E112 2013	Standard Test Methods for Determining Average Grain Size	DU II
ASTM E562 2019	Standard Test Method for Determining Volume Fraction by Systematic Manual Point Count	DU II

3 Corrosion tests [Flex A]

DIN EN ISO 3651-1 1998-08	Determination of resistance to intergranular corrosion of stainless steels – Part 1: Austenitic and ferritic-austenitic (duplex) stainless steels – Corrosion test in nitric acid medium by measurement of loss in mass (Huey test)	DU II
DIN EN ISO 3651-2 1998-08	Determination of resistance to intergranular corrosion of stainless steels – Part 2: Ferritic, austenitic and ferritic-austenitic (duplex) stainless steels – Corrosion test in media containing sulfuric acid	DU II
ASTM A262 2015	Standard Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels	DU II
ASTM A923 2023	Standard Test Methods for Detecting Detrimental Intermetallic Phase in Duplex Austenitic/Ferritic Stainless Steels	DU II
ASTM G28 2022	Standard Test Methods for Detecting Susceptibility to Intergranular Corrosion in Wrought, Nickel-Rich, Chromium-Bearing Alloys	DU II
ASTM G48-11 2011	Standard Test Methods for Pitting and Crevice Corrosion Resistance of Stainless Steels and Related Alloys by Use of Ferric Chloride Solution	DU II
SEP 1877 1994-07	Test of the resistance of high-alloy, corrosion-proof materials against intercrystalline corrosion	DU II

4 Spectroscopic tests

0311-09-PA 2022-05	Positive material identification (PMI) using mobile X-Ray emission analysis (Positive Material Identification PMI)	GRO
0551-10-AA 2024-01	Optical Emission Spectrometry (OES): In house procedure for stationary spectrometers	DU II
0650-10-AA 2024-01	Performing optical emission spectrometry (OES) with Hitachi PMI Master Pro	GRO
0316-10-AA 2024-01	Chemical element analysis using energy dispersive x-ray spectroscopy (EDX)	GRO

Abbreviations used:

AA	Work instruction
ASTM	American Society for Testing and Materials
DIN	German institute for standardisation
EN	European Standard
IEC	International Electrotechnical Commission
ISO	International Organisation for Standardisation
PA	Test instructions
SEP	Steel and iron test sheet of the German Association of Iron Works
VGB	VGB PowerTech e.V. VGB PowerTech Association