Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-PL-17479-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: **14.02.2024**

Date of issue: 16.04.2024

Holder of accreditation certificate:

SPC Werkstofflabor GmbH
In der Waage 10, 73463 Westhausen

with the location

SPC Werkstofflabor GmbH
In der Waage 10, 73463 Westhausen

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.

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at https://www.dakks.de.

Tests in the Fields:

Mechanical-technological testing (compression test, tensile test, bend test, pendulum impact test, hardness test and hardness profile test); metallographic testing of metallic materials and their alloys, cast and forged parts, sheets, tubes, semi-finished products, formed products, welded joints and finished parts in the metal-producing and metal-processing industry; coating thickness measurement; measurement of internal oxidation and determination of grain size; optical spark emission spectrometry (OES) of metallic materials (aluminium, cast iron, non-alloy steels, low-alloy steels and high-alloy steels) as well as corrosion tests

Within the scope of accreditation marked with *, the testing laboratory is permitted to use the standardised test methods listed here with different revision levels of the standard without prior disclosure to or agreement by DAkkS.
The testing laboratory has an up-to-date list of all test methods within the flexible scope of accreditation.

Content

1 Physical and mechanical-technological testing *

1.1 Tensile testing

DIN EN 876 1995-10	Destructive tests on welds in metallic materials – Longitudinal tensile test on weld metal in fusion welded joints
DIN EN 895 1999-05	Destructive tests on welds in metallic materials – Transverse tensile test
DIN EN ISO 4136 2022-09	Destructive tests on welds in metallic materials – Transverse tensile test
DIN EN ISO 5178 2019-05	Destructive tests on welds in metallic materials – Longitudinal tensile test on weld metal in fusion welded joints
DIN EN ISO 6892-1 2020-06	Metallic materials – Tensile testing – Part 1: Method of test at room temperature (here: Method B)
DIN EN ISO 6892-2 2018-09	Metallic materials – Tensile testing – Part 2: Method of test at elevated temperature
DIN EN 10002-1 2001-12	Metallic materials – Tensile testing – Part 1: Method of test at room temperature

1.2 Pendulum impact testing

DIN EN ISO 148-1 2017-05	Metallic materials – Charpy pendulum impact test – Part 1: Test method
DIN EN 875 1995-10	Destructive tests on welds in metallic materials – Impact tests – Test specimen location, notch orientation and examination
DIN EN ISO 9016 2022-07	Destructive tests on welds in metallic materials – Impact tests – Test specimen location, notch orientation and examination

DIN EN 10045-1 1991-04	Metallic materials – Charpy pendulum impact test – Part 1: Test method
DIN 50115 1991-04	Notched bar impact testing of metallic materials using test pieces othe than ISO test pieces

1.3 Bend testing

DIN EN ISO 5173 2012-02	Destructive tests on welds in metallic materials – Bend tests
DIN EN ISO 7438 2021-03	Metallic materials – Bend test

1.4 Compression testing

DIN EN 50106 2023-02	Testing of metallic materials – Compression test at room temperature

1.5 Hardness testing

DIN EN 1043-1 1996-02	Destructive tests on welds in metallic materials – Hardness testing – Part 1: Hardness test on arc welded joints
DIN EN ISO 6506-1 2015-02	Metallic materials – Brinell hardness test – Part 1: Test method (here: Method HBW 2.5 / 62.5; 2.5 / 187.5; 5 / 750; 10 / 3000)
DIN EN ISO 6507-1 2018-07	Metallic materials – Vickers hardness test – Part 1: Test method (here: Method HV 0.1 to HV 30)
DIN EN ISO 6508-1 2016-12	Metallic materials – Rockwell hardness test – Part 1: Test method (here: Methods B and C)
DIN EN ISO 9015-1 2011-05	Destructive tests on welds in metallic materials – Part 1: Hardness test on arc welded joints

2 Metallographic testing *

DIN EN ISO 643 2020-06	Steels – Micrographic determination of the apparent grain size
DIN EN ISO 945 1994-09	Cast iron – Designation of microstructure of graphite
DIN EN ISO 945-1 2019-10	Microstructure of cast irons – Part 1: Graphite classification by visual analysis
DIN EN 1321 1996-12	Destructive tests on welds in metallic materials – Macroscopic and microscopic examination of welds
DIN EN ISO 2639 2003-04	Steels – Determination and verification of the depth of carburized and hardened cases
DIN EN ISO 3887 2018-05	Steels – Determination of depth of decarburization
ISO 4967 2013-07	Steel – Determination of content of non-metallic inclusions – Micrographic method using standard diagrams
DIN EN 10328 2005-04	Iron and steel – Determination of the conventional depth of hardening after surface heating
DIN EN 10247 2017-09	Micrographic examination of the non-metallic inclusion content of steels using standard pictures
DIN EN ISO 15614-1 2020-05	Specification and qualification of welding procedures for metallic materials – Welding procedure test – Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys (here: Section 7)
DIN EN ISO 17639 2022-05	Destructive tests on welds in metallic materials – Macroscopic and microscopic examination of welds
DIN 50190-2 1979-03	Hardness depth of heat-treated parts – Determination of the effective depth of hardening after flame or induction hardening

DIN 50190-3 1979-03	Hardness depth of heat-treated parts – Determination of the effective depth of hardening after nitriding
DIN 50190-4 1999-04	Hardness depth of heat-treated parts – Part 4: Determination of the fusion hardening depth and the fusion depth
DIN 50601 1985-08	Metallographic examination – Determination of the ferritic or austenitic grain size of steel and ferrous materials
DIN 50602 1985-09	Metallographic examination – Microscopic examination of special steels using standard diagrams to assess the content of non-metallic inclusions
DIN 30901 2016-12	Heat treatment of ferrous materials – Determination of the depth and form of appearance of the internal oxidation
ASTM E 112-13 2013	Standard Test Methods for Determining Average Grain Size
ASTM E 45-18a 2018	Standard Test Methods for Determining the Inclusion Content of Steel
SEP 1520 1998-09	Microscopic examination of carbide structure in steels by means of diagram series
SEP 1572 2019-03	Microscopic testing of free-cutting steels for sulphide non-metallic inclusions using standard images
SEP 1614 1996-09	Microscopic inspection of hot-work tool steels
VDG P441 1962-08	Cast iron – Guidelines for marking the formation of graphite
DIN EN ISO 18203 2022-07	Steel - Determination of the thickness of surface-hardened layers

3 Corrosion testing *

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 sulphuric acid (method A and B)
DIN EN ISO 9400 1995-12	Nickel-based alloys – Determination of resistance to intergranular corrosion (method B)
ASTM A262-15 2015	Standard Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels (Practice E)

4 Optical spark emission spectrometry

SPCAV00022 Rev. 4 2023-03	Spectral analysis by SPECTROLAB spectrometer (steel and cast iron) – Detection of alloying elements and determination of their proportions in metallic materials (matrix: cast iron, non-alloy steels, low-alloy steels and high-alloy steels) – Determination of the elements C, Si, Mn, P, S, Cr, Mo, Ni, Al, Cu, V, Nb, Ti, Co, W, As, Sn, Mg, Pb, B, Zr
SPCAV00028 Rev. 2 2023-03	Spectral analysis by SPECTROLAB spectrometer (aluminium) – Detection of alloying elements and determination of their proportions in metallic materials (matrix: aluminium and aluminium alloys) – Determination of the elements Si, Fe, Mn, Cr, Ni, Co, Cu, Ti, V, Pb, Sn, Zr, Bi, Ca, Mg, Cd, Sb, Zn

Abbreviations used:

ASTM	American Society for Testing and Materials
DIN	German institute for standardization
EN	European Standard
IEC	International Electrotechnical Commission
ISO	International Organisation for Standardisation
SEP	Steel-iron test sheets published by Verein Deutscher Eisenhüttenleute
SPCAV	Analysis specification of SPC Werkstofflabor GmbH
VDG	Verein Deutscher Gießereifachleute e. V.