DAkkS
Deutsche
Akkreditierungsstelle

Accreditation

The Deutsche Akkreditierungsstelle attests with this **Accreditation Certificate** that the testing laboratory

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Einsteinstraße 20, 85521 Ottobrunn

meets the requirements of DIN EN ISO/IEC 17025:2018 for the conformity assessment activities specified in the following partial accreditation certificates. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided that these are explicitly confirmed in the annexes to the partial accreditation certificates listed below.

D-PL-12001-02-01
D-PL-12001-02-02
D-PL-12001-02-03
D-PL-12001-02-04

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 accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This accreditation certificate consists of this cover sheet, the reverse side of the cover sheet and the following annex. It only applies in connection with the partial accreditation certificates listed above and the notices referred to there.

Registration number of the certificate: **D- PL-12001-02-00**

Berlin, 14.05.2025

Im Auftrag Tim Fuchs
Head of Service Unit

Translation issued:
10.07.2025

Tim Fuchs
Head of Service Unit

The certificate together with the annex 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 (www.dakks.de).

This document is a translation. The definitive version is the original German accreditation certificate.

See notes overleaf

Deutsche Akkreditierungsstelle GmbH

Office Berlin
Spittelmarkt 10
10117 Berlin

Office Frankfurt am Main
Europa-Allee 52
60327 Frankfurt am Main

Office Braunschweig
Bundesallee 100
38116 Braunschweig

The Deutsche Akkreditierungsstelle GmbH (DAkkS) is the entrusted national accreditation body of the Federal Republic of Germany according to § 8 section 1 AkkStelleG in conjunction with § 1 section 1 AkkStelleGBV. DAkkS is designated as the national accreditation authority by Germany according to Art. 4 Para. 4 of Regulation (EC) 765/2008 and clause 4.7 of DIN EN ISO/IEC 17000.

Pursuant to Art. 11 section 2 of Regulation (EC) 765/2008, the accreditation certificate shall be recognised as equivalent by the national authorities within the scope of this Regulation as well as by the WTO member states that have committed themselves in bilateral or multilateral mutual agreements to recognise the certificates of accreditation bodies that are members of ILAC or IAF as equivalent.

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 Co-operation (ILAC).

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

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Annex to the Accreditation Certificate D-PL-12001-02-00 according to DIN EN ISO/IEC 17025:2018

Valid from: **14.05.2025**

Date of issue: 14.05.2025

Holder of accreditation certificate:

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Einsteinstraße 20, 85521 Ottobrunn

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 in the annexes to the partial accreditation certificates listed below.

D-PL-12001-02-01

D-PL-12001-02-02

D-PL-12001-02-03

D-PL-12001-02-04

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.

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Accreditation

The Deutsche Akkreditierungsstelle attests with this **Partial Accreditation Certificate** that the testing laboratory

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Einsteinstraße 20, 85521 Ottobrunn

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

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 accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This partial accreditation certificate only applies in connection with the notice of 14.05.2025 with accreditation number D-PL-12001-02.
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 3 pages.

Registration number of the partial accreditation certificate: **D- PL-12001-02-01**
It is a part of the accreditation certificate: D-PL-12001-02-00.

Berlin, 14.05.2025 Dr.-Ing. Ernst Ulrich
Head of Technical Unit

Translation issued:
10.07.2025 Dr.-Ing. Ernst Ulrich
Head of Technical Unit

The certificate together with the annex 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 (www.dakks.de).

This document is a translation. The definitive version is the original German accreditation certificate.

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Annex to the Partial Accreditation Certificate D-PL-12001-02-01 according to DIN EN ISO/IEC 17025:2018

Valid from: **14.05.2025**

Date of issue: 14.05.2025

This annex is a part of the accreditation certificate D-PL-12001-02-00.

Holder of partial accreditation certificate:

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Einsteinstraße 20, 85521 Ottobrunn

with the locations

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Zum Windkanal 17, 01109 Dresden

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Betriebsfestigkeitslabor (IBL)
Einsteinstraße 20, 85521 Ottobrunn

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.

Testing in the fields:

Mechanical strength and functional tests as well as vibration resistance on mechanical components of railway vehicles

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.

Within the test areas indicated [Flex B] the testing laboratory is permitted without being required to prior inform and obtain approval from DAkkS to have the free choice from standardised or equivalent test methods.
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.

1 determination of the vibration resistance of railway vehicle components [Flex B] (Location Ottobrunn)

DIN EN 61373 2011-04	Railway applications - Rolling stock equipment - Shock and vibration tests

2 mechanical strength and functional tests on mechanical components of railway vehicles [Flex B] (Location Dresden)

DIN EN 16019 2014-06	Railway applications - Automatic coupler - Performance requirements, specific interface geometry and test method
DIN EN 12663-1 2015-03	Railway applications - Structural requirements of railway vehicle bodies - Part 1: Locomotives and passenger rolling stock (and alternative method for freight wagons)
DIN EN 13749 2021-05	Railway applications - Wheelsets and bogies - Method of specifying the structural requirements of bogie frames
UIC 510-3 1994-07	Wagons - Strength testing of 2 and 3-axle bogies on test rig
UIC 515-4 1993-01	Bogie frame strength tests
UIC 566 1990-01	Loadings of coach bodies and their components
UIC 615-4 2003-02	Bogie frame structure strength tests
APTA-PR-CS-S-034-99 2006-06	Standard for the Design and Construction of Passenger Railroad Rolling Stock
DIN EN 12082 2021-09	Railway applications - Axleboxes - Performance testing

3 mechanical strength and functional tests on railway vehicle components (qualification tests)
(Location Dresden)

TAS5-PV-01 22.06.2021	Performing qualification tests on components in the railway and construction machinery sector

Abbreviations used:

APTA	American Public Transportation Association
DIN	Deutsches Institut für Normung e.V. – German institute for standardization
EN	Europäische Norm – European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardisation
TAS5-PV-xx	In house method of IABG
UIC	Union internationale des chemins de fer

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Accreditation

The Deutsche Akkreditierungsstelle attests with this **Partial Accreditation Certificate** that the testing laboratory

Industrieanlagen-Betriebsgesellschaft mit beschränkter Haftung
Einsteinstraße 20, 85521 Ottobrunn

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

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 accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This partial accreditation certificate only applies in connection with the notice of 14.05.2025 with accreditation number D-PL-12001-02.
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 3 pages.

Registration number of the partial accreditation certificate: **D-PL-12001-02-02**
It is a part of the accreditation certificate: D-PL-12001-02-00.

Berlin, 14.05.2025 Im Auftrag Dr. Dirk Tscharntke
Fachbereichsleitung

Translation issued: 29.07.2025
i.V.
Dr. Dirk Tscharntke
Head of Technical Unit

The certificate together with the annex 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 (www.dakks.de).

This document is a translation. The definitive version is the original German accreditation certificate.

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Pursuant to Art. 11 section 2 of Regulation (EC) 765/2008, the accreditation certificate shall be recognised as equivalent by the national authorities within the scope of this Regulation as well as by the WTO member states that have committed themselves in bilateral or multilateral mutual agreements to recognise the certificates of accreditation bodies that are members of ILAC or IAF as equivalent.

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ILAC: www.ilac.org
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Annex to the Partial Accreditation Certificate D-PL-12001-02-02 according to DIN EN ISO/IEC 17025:2018

Valid from: **14.05.2025**

Date of issue: 29.07.2025

This annex is a part of the accreditation certificate D-PL-12001-02-00.

Holder of partial accreditation certificate:

Industrieanlagen-Betriebsgesellschaft mit beschränkter Haftung
Einsteinstraße 20, 85521 Ottobrunn

with the location

Industrieanlagen-Betriebsgesellschaft mit beschränkter Haftung
Zum Windkanal 17, 01109 Dresden

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.

manual and mechanical non-destructive testing (penetrant, magnetic and visual testing) at metallic components, fiber-reinforced materials, plastics and composites

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.

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

1 Non-destructive testing

1.1 Penetrant testing

DIN EN ISO 3452-1 2014-09	Non-destructive testing - Penetrant testing - Part 1: General principles
DIN EN ISO 3452-5 2009-04	Non-destructive testing - Penetrant testing - Part 5: Penetrant testing at temperatures higher than 50 °C
DIN EN ISO 3452-6 2009-04	Non-destructive testing - Penetrant testing - Part 6: Penetrant testing at temperatures lower than 10 °C
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

1.2 Magnetic testing

DIN EN ISO 9934-1 2017-03	Non-destructive testing - Magnetic particle testing - Part 1: General principles
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
DIN EN ISO 17638 2017-03	Non-destructive testing of welds - Magnetic particle testing

DAkkS Deutsche Akkreditierungsstelle

1.3 Visual testing

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

Abbreviations used:

DIN	German institute for standardization
EN	European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization

DAkkS
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Akkreditierungsstelle

Accreditation

The Deutsche Akkreditierungsstelle attests with this **Partial Accreditation Certificate** that the testing laboratory

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Einsteinstraße 20, 85521 Ottobrunn

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

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 accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This partial accreditation certificate only applies in connection with the notice of 12.05.2025 with accreditation number D-PL-12001-02.
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 06 pages.

Registration number of the partial accreditation certificate: **D-PL-12001-02-03**
It is a part of the accreditation certificate: D-PL-12001-02-00.

Berlin, 14.05.2025 Florian Burkart
Head of Technical Unit

Translation issued:
10.07.2025 Florian Burkart
Head of Technical Unit

The certificate together with the annex 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 (www.dakks.de).

This document is a translation. The definitive version is the original German accreditation certificate.

See notes overleaf

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Pursuant to Art. 11 section 2 of Regulation (EC) 765/2008, the accreditation certificate shall be recognised as equivalent by the national authorities within the scope of this Regulation as well as by the WTO member states that have committed themselves in bilateral or multilateral mutual agreements to recognise the certificates of accreditation bodies that are members of ILAC or IAF as equivalent.

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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

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Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-12001-02-03 according to DIN EN ISO/IEC 17025:2018

Valid from: **14.05.2025**

Date of issue: 10.07.2025

This annex is a part of the accreditation certificate D-PL-12001-02-00.

Holder of partial accreditation certificate:

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Einsteinstraße 20, 85221 Ottobrunn

with the location

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Betriebsfestigkeitslabor (IBL)
Einsteinstraße 20, 85521 Ottobrunn

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 following areas:

Environmental simulation: **Climatic tests on components**

Annex to the Partial Accreditation Certificate D-PL-12001-02-03 according to DIN EN ISO/IEC 17025:2018

Flexible accreditation scope:

The testing laboratory is permitted to freely select standardized or equivalent test methods within the designated test areas without requiring prior information and approval from DAkkS (flexibility according to Category B).

The test methods listed are examples. The testing laboratory maintains a current list of all test methods within the flexible accreditation scope. This list is publicly available on the testing laboratory's website.

Annex to the Partial Accreditation Certificate D-PL-12001-02-03 according to DIN EN ISO/IEC 17025:2018

Test type	Test parameters/ Measured variable	Test area	Characteristic Norm
Temperature cold, dry heat	temperature	-70 °C - +200 °C	DIN EN 60068-2-1 DIN EN 60068-2-2 RTCA DO-160 G cl. 4
Temperature changes	temperature	-70 °C - +200 °C	DIN EN 60068-2-14 Prüfung Nb RTCA DO-160 G cl. 5
	at a fixed speed	≤ 15 K/min	
Temperature shock	temperature	-70 °C - +200 °C	DIN EN 60068-2-14 Test Na
Damp heat, constant, cyclical	temperature	20 °C – 70 °C	DIN EN 60068-2-30 DIN EN 60068-2-38 DIN EN 60068-2-78 RTCA DO-160 G cl. 6
	Relative humidity	20 % r.F. - 96 % r.F.	
Decompression Overpressure test	Air pressure	50 mbar to 2500 mbar	RTCA DO-160 G cl. 4.6

Annex to the Partial Accreditation Certificate D-PL-12001-02-03 according to DIN EN ISO/IEC 17025:2018

Department	Standard / In-house procedure / Version	Title of the standard or in-house procedure (state any deviations / modifications from standard procedures)	Test area / Restriction
Climatic tests			
Environmental simulation	DIN EN 60068-2-1 2008-01	Environmental testing - Part 2-1: Test methods - Test A: Cold	
Environmental simulation	IEC 60068-2-1:2007	Environmental testing - Part 2-1: Tests - Test A: Cold	
Environmental simulation	DIN EN 60068-2-2 2008-05	Environmental testing - Part 2-2: Test methods - Test B: Dry heat	
Environmental simulation	IEC 60068-2-2:2007	Environmental testing - Part 2-2: Tests - Test B: Dry heat	
Environmental simulation	DIN EN 60068-2-14 2010-04	Environmental testing - Part 2-14: Test methods - Test N: Temperature cycling	Only: Test Na and Nb
Environmental simulation	IEC 60068-2-14:2023	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	Only tests Na and Nb
Environmental simulation	DIN EN 60068-2-30 2006-06	Environmental testing - Part 2-30: Test methods - Test Db: Damp heat, cyclic (12 + 12 hours)	
Environmental simulation	IEC 60068-2-30:2005	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)	
Environmental simulation	DIN EN 60068-2-38 2022-09	Environmental testing - Part 2-38: Test methods - Test Z/AD: Combined test, Temperature/humidity, cyclic	
Environmental simulation	IEC 60068-2-38:2021	Environmental testing - Part 2-38: Tests - Test Z/AD: Composite temperature/ humidity cyclic test	
Environmental simulation	DIN EN 60068-2-78 2014-02	Environmental testing - Part 2-78: Tests - Test Cab: Constant damp heat	
Environmental simulation	IEC 60068-2-78:2012	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	
Environmental simulation	ISO 16750-4 2010-04	Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 4: Climatic loads	Only tests 5.1, 5.2, 5.3, 5.6, 5.7

Annex to the Partial Accreditation Certificate D-PL-12001-02-03 according to DIN EN ISO/IEC 17025:2018

Department	Standard / In-house procedure / Version	Title of the standard or in-house procedure (state any deviations / modifications from standard procedures)	Test area / Restriction
Environmental simulation	RTCA DO-160 G 2010	Radio Technical Commission for Aeronautics Environmental Conditions and Test Procedure for Airborne Equipment	Only tests Section 4.5.1 to 4.5.5 - Temperature and Attitude Section 4.6 – Altitude, Decompression and Overpressure Tests Section 5 - Temperature Variation Section 6 - Humidity
Environmental simulation	MIL-STD-810 H 2019	USA - DEPARTMENT OF DEFENSE TEST METHOD STANDARD ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS	Only tests 500.6 - Low Pressure (Altitude) 501.7 - High Temperature 502.7 - Low Temperature 503.7 - Temperature Shock 507.6 – Humidity

Annex to the Partial Accreditation Certificate D-PL-12001-02-03 according to DIN EN ISO/IEC 17025:2018

Abbreviations used:

DIN	Deutsches Institut für Normung e.V. – German institute for standardization
EN	Europäische Norm – European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardisation
MIL-STD	US Military Standard
RTCA	Radio Technical Commission for Aeronautics

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Accreditation

The Deutsche Akkreditierungsstelle attests with this **Partial Accreditation Certificate** that the testing laboratory

Industrieanlagen-Betriebsgesellschaft mit beschränkter Haftung
Einsteinstraße 20, 85521 Ottobrunn

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

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 accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This partial accreditation certificate only applies in connection with the notice of 14.05.2025 with accreditation number D-PL-12001-02.
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 9 pages.

Registration number of the partial accreditation certificate: **D-PL-12001-02-04**
It is a part of the accreditation certificate: D- PL-12001-02 -00.

Berlin, 14.05.2025

Im Auftrag Dr. Tobias Poeste
Head of Technical Unit

Translation issued:
29.07.2025

Dr.-Ing. Tobias Poeste
Head of Technical Unit

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38116 Braunschweig

The Deutsche Akkreditierungsstelle GmbH (DAkkS) is the entrusted national accreditation body of the Federal Republic of Germany according to § 8 section 1 AkkStelleG in conjunction with § 1 section 1 AkkStelleGBV. DAkkS is designated as the national accreditation authority by Germany according to Art. 4 Para. 4 of Regulation (EC) 765/2008 and clause 4.7 of DIN EN ISO/IEC 17000.

Pursuant to Art. 11 section 2 of Regulation (EC) 765/2008, the accreditation certificate shall be recognised as equivalent by the national authorities within the scope of this Regulation as well as by the WTO member states that have committed themselves in bilateral or multilateral mutual agreements to recognise the certificates of accreditation bodies that are members of ILAC or IAF as equivalent.

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 Co-operation (ILAC).

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EA: www.european-accreditation.org
ILAC: www.ilac.org
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Annex to the Partial Accreditation Certificate D-PL-12001-02-04 according to DIN EN ISO/IEC 17025:2018

Valid from: **14.05.2025**

Date of issue: 14.05.2025

This annex is a part of the accreditation certificate D-12001-02-00.

Holder of partial accreditation certificate:

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Einsteinstraße 20, 85521 Ottobrunn

with the location

Industrieanlagen- Betriebsgesellschaft mit beschränkter Haftung
Betriebsfestigkeitslabor (IBL)
Einsteinstraße 20, 85521 Ottobrunn

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:

Hardness tests on metallic materials and plastics;
metallographic examinations of metallic materials;
evaluation of the adhesion behavior of coatings;
surface testing of components;
mechanical-technological tests on metallic materials and plastics, fatigue tests on metallic material samples and components;
vibration testing and earthquake simulation

Flexible accreditation scope:

Within the test areas marked with [Flex A], the testing laboratory is permitted to use the standardized or equivalent test methods listed here, with different versions, without requiring prior information and approval from DAkkS.

Within the test areas marked with [Flex B], the testing laboratory is permitted to freely select standardized or equivalent test methods without requiring prior information and approval from DAkkS. The test methods listed are examples.

The testing laboratory maintains a current list of all test methods within the flexible accreditation scope. The list is publicly available on the testing laboratory's website.

1 Determination of the hardness of metallic materials and plastics using indenters [Flex B]

DIN EN ISO 6506-1 2015-02	Metallic materials - Brinell hardness test - Part 1: Test method
ASTM E 10 2018	Standard Test Method for Brinell Hardness of Metallic Materials
DIN EN ISO 6507-1 2018-07	Metallic materials - Vickers hardness test - Part 1: Test method
ASTM E 384 2017	Standard Test Method for Microindentation Hardness of Materials
DIN EN ISO 6508-1 2016-12	Metallic materials - Rockwell hardness test - Part 1: Test method
ASTM E 18 2019	Standard Test Methods for Rockwell Hardness of Metallic Materials
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 the depth of decarburization.
DIN EN 10328 2005-04	Iron and steel - Determination of the conventional depth of hardening after surface heating
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
DIN 50190-3 1979-03	Hardness depth of heat-treated parts - Determination of the effective depth of hardening after nitriding
DIN 50190-4 1999-09	Hardness depth of heat-treated parts - Part 4: Determination of the fusion hardening depth and the fusion depth

2 Metallographic testing methods

2.1 Determination of non-metallic inclusions (steel purity) in steels using light microscopy [Flex B]

DIN EN 10247 2017-09	Micrographic examination of the non-metallic inclusion content of steels using standard pictures
ASTM E 45 2013	Standard Test Methods for Determining the Inclusion Content of Steel

2.2 Determination of the detectable ferrite or austenite grain size of steels (determination of the mean grain size) by microphotographic methods [Flex B]

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

2.3 Other metallographic testing methods [Flex A]

DIN EN ISO 3887 2018-05	Steels - Determination of the depth of decarburization.
DIN EN ISO 945-1 2010-09	Microstructure of cast irons - Part 1: Graphite classification by visual analysis
DIN EN ISO 1463 2004-08	Metallic and oxide coatings - Measurement of coating thickness - Microscopical method
SEP 1520 1998-09	Microscopic examination of carbide structure in steels by means of diangram series
SEP 1615 1975-01	Microscopic and Macroscopic Test for the image orderedCarbide Distribution of High Speed Steels

3 Adhesion behavior of coatings

3.1 Evaluation of the degree of blistering on coatings by comparison with images [Flex B]

DIN EN ISO 4628-2 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 2: Assessment of degree of blistering

3.2 Assessment of the degree of rust of coatings on steel by comparison with images [Flex B]

DIN EN ISO 4628-3 2016-07	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 3: Assessment of degree of rusting
ASTM D 610 2008	Standard Practice for Evaluating Degree of Rusting on Painted Steel Surfaces

3.3 Determination of the adhesion of coatings using cross-cut testing [Flex B]

DIN EN ISO 2409 2013-06	Paints and varnishes – Cross-cut test

3.4 Measurement of the adhesion of coatings using the adhesive tape method [Flex B]

ASTM D 3359 2017	Standard Test Methods for Rating Adhesion by Tape Test

4 Surface testing of components using the replica technique [Flex B]

DIN 54150 1977-08	Non destructive testing; impression methods for surface examination (Replica-technique)
ISO 3057 1998-03	Non-destructive testing. Metallographic replica techniques of surface examination.

5 Mechanical-technological tests

5.1 Determination of the quasi-static properties of metallic materials, plastics and plastic composites at different temperatures using tensile, compression and shear tests [Flex B]

DIN EN ISO 6892-1 2017-02	Metallic materials - tensile testing - Part 1: method of test at room temperature
DIN EN ISO 6892-2 2011-05	Metallic materials - tensile testing - Part 2: method of test at elevated temperature
DIN EN ISO 6892-3 2015-07	Metallic materials - tensile testing - Part 3: method of test at low temperature
ASTM D 3518 2013	Standard Test Method for In-Plane Shear Response of Polymer Matrix Composite Materials by Tensile Test of ±45° Laminate
ASTM D 3039 2014	Standard test method for tensile properties of polymer matrix composite materials

5.2 Determination of material properties under oscillating loading of metallic materials and components by means of fatigue tests [Flex B]

DIN 50100 2016-12	Load controlled fatigue testing - Execution and evaluation of cyclic tests at constant load amplitudes on metallic specimens and components
ASTM E 466 2021	Standard Practice for Conducting Force Controlled Constant Amplitude Axial Fatigue Tests of Metallic Materials

6 Determination of the vibration and earthquake resistance of plants and systems in the energy, automotive, aerospace, rail and medical technology sectors using vibration tests [Flex B]

IEEE 693 2018	Recommended Practice for Seismic Design of Substations
ANSI/IEEE 344 2004	Recommended Practice for Seismic Qualification for Class 1E Equipment for Nuclear Power Generating Stations
ANSI/IEEE 382 2006	Standard for Qualification of Safety-Related Actuators for Nuclear Power Generating Stations

KTA 2201.4 2012-11	Design of Nuclear Power Plants against Seismic Events; Part 4: Components
KTA 3504 2015-11	Electrical Drive Mechanisms of the Safety System in Nuclear Power Plants
DIN EN 60068-2-6 2008-10	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)
DIN EN 60068-2-57 2015-10	Environmental testing - Part 2-57: Tests –Test Ff: Vibration - Time-history and sine-beat method
DIN EN 60068-2-64 2009-04	Environmental testing - Part 2-64: Tests -Test Fh: Vibration, broadband random and guidance
DIN EN 300019-2-3 2016-07	Environmental Engineering (EE) - Environmental conditions and environmental tests for telecommunications equipment - Part 2-3: Specification of environmental tests; Stationary use at weatherprotected locations
DIN EN 300019-2-4 2016-07	Environmental engineering (ee) - environmental conditions and environmental tests for telecommunications equipment - Part 2-4_ specification of environmental tests; stationary use at non-weather protected locations
DIN EN 60255-21-3 1995-11	Electrical relays - Part 21: vibration, shock, bump and seismic tests on measuring relays and protection equipment; section 3: seismic tests
IEC 60980 1989-06	Recommended practices for seismic qualification of electrical equipment of the safety system for nuclear generating stations
DIN EN 61373 2011-04	Railway applications - Rolling stock equipment - Shock and vibration tests.
DIN EN 61587-2 2012-06	Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 - Part 2: Seismic tests for cabinets and racks.
DIN EN 62271-207 2013-02	High-voltage switchgear and controlgear - Part 207: Seismic qualification for gas-insulated switchgear assemblies for rated voltages above 52 kV
DIN EN 1998-1 2010-12	Eurocode 8: Design of structures for earthquake resistance - Part 1: General rules, seismic actions and rules for buildings.
GR-63-CORE NEBS 2012-04	Network Equipment-Building System Requirements: Physical Protection

IEC TS 62271-210 2013	High-voltage switchgear and controlgear – Part 210: Seismic qualification for metal enclosed and solid-insulation enclosed switchgear and controlgear assemblies for rated voltages above 1 kV and up to and including 52 kV
ICC-ES AC156 2015-05	Acceptance criteria for seismic certification by shake-table testing of nonstructural components
RCC-E 2016	Design and construction rules for electrical equipment of PWR nuclear islands
IEC/TR 62271-300 2006	High-voltage switchgear and controlgear – Part 300: Seismic qualification of alternating current circuit-breakers
IEC/IEEE 60780-323 2016-04	IEC/IEEE International Standard – Nuclear facilities – Electrical equipment important to safety – Qualification
STANAG 4370 2014-09	ENVIRONMENTAL TESTING AECTP-400: Mechanical environmental tests – Method 401: Vibration

Abbreviations used:

AECTP	Allied Environmental Conditions and Test Publication
ANSI	American National Standards Institution
ASTM	American Society for Testing and Materials
DIN	German institute for standardization
EN	European Standard
GR	Generic Requirements
NEBS	Network Equipment Building Systems
ICC-ES AC	International Code Council Evaluation Service Acceptance Criteria
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Organization for Standardization
KTA	Nuclear Technical Committee
RCC-E	Règles de conception et de construction des matériels des chaudières électronucléaires
SEP	Steel-iron test sheets from the German Ironworks Association
STANAG	Standardization Agreement