The Deutsche Akkreditierungsstelle attests with this Partial Accreditation Certificate that

Karlsruher Institut für Technologie

with its testing laboratory

Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 1, 76131 Karlsruhe

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 confirm generally with 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 notices of 27.09.2023 with accreditation number D-PL-11068-01.
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-11068-01-01
It is a part of the accreditation certificate D-PL-11068-01-00.
Deutsche Akkreditierungsstelle GmbH

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Spittelmarkt 10
10117 Berlin

Office Frankfurt am Main
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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

This accreditation certificate is the property of the German Accreditation Body.
Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate
D-PL-11068-01-01
according to DIN EN ISO/IEC 17025:2018

Valid from: 27.09.2023
Date of issue: 27.09.2023

This annex is a part of the accreditation certificate D-PL-11068-01-00.

Holder of partial accreditation certificate:
Karlsruher Institut für Technologie

with its testing laboratory

Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 1, 76131 Karlsruhe

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 confirm generally with the principles of DIN EN ISO 9001.

Physical and mechanical testing and fire behaviour testing of steel and lightweight constructions and testing of building products, building kits and building types;

Testing of construction products (system of assessment and verification of constancy of performance 3) within the scope of the Regulation (EU) No. 305/2011 laying down harmonised conditions for the marketing of construction products (Construction Products Regulation)

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

This document is a translation. The definitive version is the original German annex to the accreditation certificate.
Annex to the Partial Accreditation Certificate D-PL-11068-01-01

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed in this document with different issue dates. The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

1 Physical and mechanical testing and fire behaviour testing of steel and lightweight constructions

1.1 Timber products and fasteners

**DIN EN 408**

*2012-10*

Timber structures - Structural timber and glued laminated timber - Determination of some physical and mechanical properties

*here Sections:*

5 Determination of dimensions of test pieces
6 Determination of moisture content of test pieces
7 Determination of density of test pieces
9 Determination of local modulus of elasticity in bending
10 Determination of global modulus of elasticity in bending
11 Determination of the shear modulus according to section 11.2

Shear field test method
12 Determination of modulus of elasticity in tension parallel to the grain
13 Determination of tension strength parallel to the grain
14 Determination of modulus of elasticity in compression parallel to the grain
15 Determination of compression strength parallel to grain
16 Determination of tension an compression strength perpendicular to the grain
17 Determination of modulus of elasticity perpendicular to the grain
18 Determination of shear strength parallel to the grain
19 Bending strength parallel to grain

**DIN EN 409**

*2009-08*

Timber structures - Test methods - Determination of the yield moment of dowel type fasteners

**DIN EN 1382**

*2016-07*

Timber structures - Test methods - Withdrawal capacity of timber fasteners

**DIN EN 1383**

*2016-07*

Timber structures - Test methods - Pull through resistance of timber fasteners

**EAD 130118-01-0603**

Screws and threaded rods for use in timber constructions

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Annex to the Partial Accreditation Certificate D-PL-11068-01-01

EAD 130336-00-0603  Point connector - Dovetail made of plywood for cross laminated timber


_Here Sections:_
7.1 Joint slip
8.3 Nailed connections
8.4 Stapled connections
8.5 Bolted connections
8.9 Split ring and shear plate connectors
8.10 Toothed-plate connectors

DIN EN 13183-1  Moisture content of a piece of sawn timber - Part 1: Determination by oven dry method
2002-07
+ Corrigenda 1
2003-12

DIN EN 14358  Timber structures - Calculation and verification of characteristic values
2016-11

DIN EN 15737  Timber structures - Test methods - Torsional resistance of driving in screws
2009-12

ASTM F 1575/F 1575M  Standard Test Method for Determining Bending Yield Moment of Nails
2021

1.2 Reaction to fire tests

DIN EN ISO 11925-2  Reaction to fire tests – Ignitability of products subjected to direct impingement of flame – Part 2: Single-flame source test
2020-07

_In conjunction with:_

_DIN EN 13501-1  Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests_ 2019-05

_DIN 4102-1  Fire behaviour of building materials and building components - Part 1: Building materials; concepts, requirements and tests_ 1998-05

Valid from: 27.09.2023
Date of issue: 27.09.2023

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2 Testing of Building Products, Building Types, Building Parts and Building Structures

2.1 Testing of building products and building types

DIN EN 14509 2013-12

Self-supporting double skin metal faced insulating panels – Factory made products – Specifications

*here Annexes:*

A.1: Cross panel tensile test
A.2: Compressive strength and modulus of the core material
A.3: Shear test on the core material
A.3.5: Calculations and results - short-term loading
A.3.6: Test procedures, calculations and results - long term loading
A.4: Test to determine the shear properties of a complete panel
A.5: Test to determine the bending moment capacity of a simply supported panel
A.6: Determination of the creep coefficient (\(\gamma_t\))
A.7: Interaction between bending moment and support force
A.8: Determination of apparent core density and mass of panel
A.9: Test for resistance to point loads and repeated loads
A.15: Support reaction capacity at the end of a panel
B.2: Test DUR1 - Annex B.3: Test DUR2
B.5: Adhesive bond between faces and prefabricated core material (wedge test)
B.6: Repeated loading test
C.1.2: Fire test EN ISO 11925-2 (ignitability test)
C.4: Determination of the amount and thickness of the adhesive layer
D.2: Dimensional tolerances

EAD 030351-00-0402

Systems of mechanically fastened flexible roof waterproofing sheets – here tests according table 7 except for the unwinding test

ETAG 006 2000-03

+ draft of change of 05.01.2007

Guideline for European technical approval of systems of mechanically fastened flexible roof waterproofing membranes

*here:*

Annex D of the change version draft

*in conjunction with:*

DIN EN 12691:2006-06 and ISO 179-1:2010-11, except for the unwinding test

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Date of issue: 27.09.2023

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2.2 Testing of building parts and building structures

DIN EN 74-1 2022-09
Couplers, spigot pins and baseplates for use in falsework and scaffolds – Part 1: Couplers for tubes – Requirements and test procedures

DIN EN 12810-2 2004-03
Façade scaffolds made of prefabricated components – Part 2: Particular methods of structural design

DIN EN 12811-3 2003-02
Temporary works equipment - Part 3: Load testing

DIN EN 14782 2006-03
Self-supporting metal sheet for roofing, external cladding and internal lining – Product specification and requirements

here: Section 4.3.2: Resistance of roofing products to concentrated forces

DIBt publications, Series B, Volume 5, 2008-04
Approval assessment procedures for service and working scaffolds - requirements, structural analysis, load testing and proof of conformity

here: section 4 - tests

CUAP 03.02/14
Cable net systems

here Chapter:
2.4.1: Tension resistance of stainless steel wire ropes for static load
2.4.2: Modulus of elasticity of stainless steel wire ropes for static loads
2.4.3: Slipping resistance of clamp for static loads
2.4.4: Tension resistance of shackles for static loads
2.4.5: Safety of horizontal cable net systems against impact loads
2.4.6: Safety of vertical cable net systems against impact loads

CUAP 06.02/02
Tension Rod System

here:
Section 4.1: Determination of characteristic values of tension resistance by tension test

CUAP 06.02/03
Point Fastener – Testing of load bearing capacity

here:
Section 2.4.1.1 Methods of verification
Annex to the Partial Accreditation Certificate D-PL-11068-01-01

CUAP 06.02/07  Fastening screws for metal members and sheeting

*here Chapter:*
2.4.1: Shear resistance of the connections
2.4.2: Tension resistance of the connections

3.2: Tasks of the manufacturer and notified bodies
- Measurement of the geometry in accordance with Table 3 in conjunction with the DIbt Guideline of 01.08.1999, Section 3.1
- Shear fracture testing in accordance with Table 3 in conjunction with ECCS publication no. 42, Section B.3.4.2
- Shear fracture testing in accordance with Table 3 in conjunction with the DIbt Guideline of 01.08.1999, Section 3.7
- Bolt penetration behaviour and torsion fracture in accordance with Table 3 in conjunction with the DIbt Guideline of 01.08.1999, Sections 3.3.1, 3.3.2, 3.4.1 and 3.4.2
- Hydrogen embrittlement in accordance with Table 3 in conjunction with the DIbt Guideline of 01.08.1999, Section 3.6
- Ductility (bolt head impact testing) in accordance with Table 3 in conjunction with the DIbt Guideline of 01.08.1999, Section 3.5 and DIN EN ISO 898-1

CUAP 06.02/09  Prefabricated steel and stainless steel wire ropes with end connectors

*here Chapter:*
2.4.1: Tension resistance
2.4.2: Modulus of elasticity
CUAP 06.02/12

Fastening Screws for Sandwich Panels

here Chapter:

2.4.1: Shear resistance of the connections
2.4.2: Tension resistance of the connections
2.4.3: Design resistance in case of combined tension and shear forces
2.4.4: Check of bending capacity in case of thermal expansion (bending test)

3.2: Tasks of the manufacturer and notified bodies
   - Measurement of the geometry in accordance with Table 3 in conjunction with the DIBt Guideline of 01.08.1999, Section 3.1
   - Shear fracture testing in accordance with Table 3 in conjunction with ECCS publication no. 42, Section B.3.4.2
   - Shear fracture testing in accordance with Table 3 in conjunction with the DIBt Guideline of 01.08.1999, Section 3.7
   - Bolt penetration behaviour and torsion fracture in accordance with Table 3 in conjunction with the DIBt Guideline of 01.08.1999, Sections 3.3.1, 3.3.2, 3.4.1 and 3.4.2
   - Hydrogen embrittlement in accordance with Table 3 in conjunction with the DIBt Guideline of 01.08.1999, Section 3.6
   - Ductility (bolt head impact testing) in accordance with Table 3 in conjunction with the DIBt Guideline of 01.08.1999, Section 3.5 and DIN EN ISO 898-1

CUAP 06.02/13

Blind rivets for metal members and sheeting

here Chapter:

2.4.1: Shear resistance of the connections
2.4.2: Tension resistance of the connections
2.4.3: Shear resistance of blind rivet
2.4.4: Tension resistance of blind rivet
2.4.5: Design resistance in case of combined tension and shear forces

3.2: Tasks of the manufacturer and notified bodies
   - Measurement of the geometry in accordance with Table 4 in conjunction with the DIBt Guideline of 01.08.1999, Section 2.1

CUAP 03.02/16

Roof and Wall Systems with Hidden Fastenings

here Chapter:

2.4.1: Mechanical resistance and stability, safety in use
2.4.3: Corrosion protection of elements made of metal

EAD 331072-00-0601

Anchor Devices for Fastening Personal Fall Protection Systems to Concrete Structures

here Chapter:

2.2.4: Static load
2.2.5: Dynamic loading
2.2.6: Check of deformation capacity in case of constraining forces
2.2.7: Durability

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ECCS publication no. 124  The Testing of Connections with Mechanical Fasteners in Steel Sheet and Sections
here; Chapter 3: Test Procedures

CIB Report publication 320/ ECCS publication no. 127 Preliminary European Recommendations for testing and design of fastenings for sandwich panels
here Chapter:
2: Testing of fastenings used to fix the panels to the frames of buildings
3: Testing of fastenings installed to a face layer
4: Additional tests

3 Testing of construction products (system of assessment and verification of constancy of performance 3) within the scope of the Regulation (EU) No. 305/2011 laying down harmonised conditions for the marketing of construction products (Construction Products Regulation)

<table>
<thead>
<tr>
<th>Decision / Resolution of the Commission</th>
<th>System(^1)</th>
<th>Technical Specification</th>
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<tr>
<td></td>
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<td>Timber structures - Connectors - Requirements</td>
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<td></td>
<td></td>
<td>Timber structures - Dowel-type fasteners - Requirements</td>
</tr>
</tbody>
</table>

\(^1\) System for assessment and verification of constancy of performance

The requirements for a testing laboratory in accordance with Article 43 of the Construction Products Regulation are fulfilled.

Without prior approval by the DAkkS German Accreditation Body, the testing laboratory body is permitted to use new revisions of harmonised technical specifications.
Annex to the Partial Accreditation Certificate D-PL-11068-01-01

Abbreviations used:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Name</th>
</tr>
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<tbody>
<tr>
<td>CIB</td>
<td>International Council for Research and Innovation in Building and Construction</td>
</tr>
<tr>
<td>CUAP</td>
<td>Common Understanding Assessment Procedure</td>
</tr>
<tr>
<td>DIBt</td>
<td>Deutsches Institut für Bautechnik</td>
</tr>
<tr>
<td>DIN</td>
<td>Deutsches Institut für Normung e. V.</td>
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<tr>
<td>EAD</td>
<td>European Assessment Document</td>
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<td>EN</td>
<td>European Standard</td>
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<td>ECCS</td>
<td>European Convention for Constructional Steelwork</td>
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<td>ETAG</td>
<td>European Technical Approval Guideline</td>
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<td>ISO</td>
<td>International Organization for Standardization</td>
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