Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-18750-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 12.08.2019

Date of issue: 12.08.2019

Holder of certificate:

SIGMA KARLSRUHE GmbH
Ingenieurleistungen für das Bauen - Prüfinstitut für Baukonstruktionen
Daimlerstraße 21, 76316 Malsch

Tests in the fields:

Mechanical testing of load bearing capacity and of deformation behaviour of scaffold systems and scaffold structural elements of service and working scaffolds and falsework as well as formwork and racking systems; selected tests on metallic materials

Within the given testing field marked with *, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the free choice of standard or equivalent testing methods The listed testing methods are exemplary.

Within the scope marked with **, 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 laboratory maintains a current list of all test methods in 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 testing of load bearing capacity and of deformation behaviour of scaffold systems and scaffold structural elements of service and working scaffolds and falsework as well as formwork and racking systems*

Type of testing	Test parameter	Measurement range	Measurement uncertainty	Characteristic test methods
Tensile Compressive Deformation	Tensile force, Compressive force	1.0 kN - 10.0 kN 5.0 kN - 50.0 kN 20.0 kN - 200.0 kN 100.0 kN - 1000.0 kN	1.0 % 1.0 % 1.0 % 1.0 %	See below
	deformation	0.2 mm - 10 mm 0.2 mm - 50 mm 0.2 mm - 100 mm 5.0 mm - 600 mm	0.5 % 1.0 % 1.0 % 1.0 %	
	Inclination difference	0.001 rad - 0.25 rad	0.5 %	

Characteristic test methods

EN 74-1 2005	Couplers, spigot pins and baseplates for use in falsework and scaffolds - Part 1: Couplers for tubes - Requirements and test procedures
EN 74-2 2008	Couplers, spigot pins and baseplates for use in falsework and scaffolds - Part 2: Special couplers - Requirements and test procedures
EN 74-3 2007	Couplers, spigot pins and baseplates for use in falsework and scaffolds - Part 3: Plain base plates and spigot pins - Requirements and test procedures
EN 1065 1998	Adjustable telescopic steel props - Product specifications, design and assessment by calculation and tests
EN 12810-2 2003	Façade scaffolds made of prefabricated components - Part 2: Particular methods of structural design
EN 12811-3 2002	Temporary works equipment - Part 3: Load testing
EN 12813 2004	Temporary works equipment - Load bearing towers of prefabricated components - Particular methods of structural design
EN 15512 2009	Steel static storage systems - Adjustable pallet racking systems - Principles for structural design

-Translation-

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Valid from: 12.08.2019
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EN 16031 2012	Adjustable telescopic aluminum props - Product specifications, design and assessment by calculation and tests
DIN 4425 2017-04	Light adjustable base plates for scaffolds; structural requirements, assessment of load-bearing capacity and inspection
DIN 18216 2017-11	Formwork ties; requirements, testing, use
DIBt 67193.03 2003-06	Test programme for fastenings of bracket type scaffolds *Prüfprogramm für Verankerungen von Konsolengerüsten*
Schriften des DIBt Reihe B, Heft 5 2008-04	Approval for service and working scaffolds - requirements, structural analysis, load testing and proof of conformity *Zulassungsgrundsätze für Arbeits- und Schutzgerüste - Anforderungen, Berechnungsannahmen, Versuche und Übereinstimmungsnachweis*
FEM 10.2.06 2012	The design of Hand loaded low rise steel static shelving - Design by experimental methods
FEM 10.2.07 2011	The design of Drive-in and drive-through racking
FEM 10.2.09 2008	The design of Cantilever racking

2. Ausgewählte Prüfungen an metallischen Werkstoffen: Härteprüfungen und Zugversuch**

DIN EN ISO 6506-1 2015-02	Metallic materials - Brinell hardness test - Part 1: Test method
DIN EN ISO 6507-1 2018-07	Metallic materials - Vickers hardness test - Part 1: Test method
DIN EN ISO 6892-1 2017-02	Metallic materials - Tensile testing - Part 1: Method of test at room temperature

-Translation-

Abbreviations used: see last page

Valid from: 12.08.2019
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Abbreviations used:

DIN	Deutsches Institut für Normung e. V.
EN	Europäische Norm
ISO	International Organisation for Standardisation
FEM	Fédération Européenne de la Manutention
DIBt	Deutsches Institut für Bautechnik

-Translation-

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