

Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-K-19500-01-02 according to DIN EN ISO/IEC 17025:2018

Valid from: 25.03.2024

Date of issue: 25.03.2024

This annex is a part of the accreditation certificate D-K-19500-01-00.

Holder of partial accreditation certificate:

Isabellenhütte Heusler GmbH & Co. KG
Eibacher Weg 3-5, 35683 Dillenburg

with the location

Isabellenhütte Heusler GmbH & Co. KG
Eibacher Weg 3-5, 35683 Dillenburg

The calibration laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The calibration 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 calibration laboratories and they conform to the principles of DIN EN ISO 9001.

Calibration in the fields:

Thermodynamic quantities

Temperature quantities

- **Direct reading thermometers**
- **Thermocouples**
- **Resistance thermometers**

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

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

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The calibration laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use calibration standards or equivalent calibration procedures listed here with different issue dates.

The calibration laboratory maintains a current list of all calibration standards / equivalent calibration procedures within the flexible scope of accreditation.

Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Temperature Resistance thermometers and Direct reading thermometers with resistance sensor	-40 °C to < 0 °C	in liquid bath DKD-R 5-1:2018	0.10 K	Comparison with standard platin resistance thermometer
	0 °C to 250 °C		0.05 K	
	> 250 °C to 630 °C	in fluidizing solid bath DKD-R 5-1:2018	0.25 K	
Direct reading thermometers with thermocouple sensor	-40 °C to < 0 °C	in liquid bath DKD-R 5-3:2018	0.5 K	
	0 °C to 250 °C		0.3 K	
	> 250 °C to 630 °C	in fluidizing solid bath DKD-R 5-3:2018	0.5 K	
	> 630 °C to 1100 °C	in tube furnaces DKD-R 5-3:2018	1.0 K	
	> 1100 °C to 1200 °C		1.5 K	
Noble metal thermocouples	0 °C to 1100 °C	in liquid bath or tube furnaces DKD-R 5-3:2018	1.0 K	Comparison with standard thermocouples type S
	> 1100 °C to 1200 °C		1.5 K	
Base metal thermocouples Type K, Type	-40 °C to 0 °C	in liquid bath DKD-R 5-3:2018	1.8 K	Comparison with standard platin resistance thermometer
	> 0 °C to 300 °C	in liquid bath or tube furnaces DKD-R 5-3:2018	1,8 K	Comparison with standard thermocouples type S
	> 300 °C to 1000 °C		3,0 K	
	> 1000 °C to 1200 °C		4,0 K	
Type J	0 °C to 300 °C	in liquid bath or tube furnaces DKD-R 5-3:2018	1.1 K	
	> 300 °C to 500 °C		2.0 K	
	> 500 °C to 760 °C		3.0 K	
Type T	-40 °C to 0 °C	in liquid bath DKD-R 5-3:2018	1.5 K	Comparison with standard platin resistance thermometer
	> 0 °C to 400 °C	in liquid bath or tube furnaces DKD-R 5-3:2018	1,5 K	Comparison with standard thermocouples type S

Abbreviations used:

Annex to the Partial Accreditation Certificate D-K-19500-01-02

- CMC Calibration and measurement capabilities (Kalibrier- und Messmöglichkeiten)
- DIN Deutsches Institut für Normung e.V. – German institute for standardization
- DKD-R Calibration Guide of Deutscher Kalibrierdienst (DKD), published by the Physikalisch-Technischen Bundesanstalt
- EN Europäische Norm – European Standard
- IEC International Electrotechnical Commission
- ISO International Organization for Standardisation