

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-K-20066-01-00 according to ISO/IEC 17025:2017

Period of validity: 19.08.2020 to 09.05.2022

Date of issue: 19.08.2020

Holder of certificate:

**October Metrology centre of the Oktyabrskaya Railway
branch of the Open joint stock company “Russian Railways”
Predportovaya 1-A, RU-196240 St. Petersburg**

Calibration in the fields:

Mechanical quantities

Mass
Weighing instruments^{a)}
Pressure

Electrical quantities

DC and low frequency quantities
- DC voltage
- DC current

Dimensional quantities

Length
- Length measuring Instruments

Thermodynamic quantities

Temperature quantities
- Radiation thermometers

^{a)} Only on-site calibration

Abbreviations used: see last page

Permanent Laboratory
Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement ¹⁾	Remarks
Conventional Mass	20 kg	OIML R 111-1:2004	0,3 g	For weight pieces according to OIML R 111-1, class M1
	2000 kg		30 g	
Gauge pressure p_e	0 MPa to 1,0 MPa	M OKT/DTsM 3.10.002 in according MI 2124-90 "Indication and Recording Pressure Instruments" DKD-R 6-1:2014 EURAMET cg-17 Version 3.0	0,001 MPa	Pressure medium: fluid The accreditation applies only to spring manometer
	> 1,0 MPa to 6,0 MPa		0,01 MPa	
DC voltage measuring instruments	0 V to 320 mV		25 μ V	
	> 320 mV to 3,2 V		0,25 mV	
	> 3,2 V to 200 V		18 mV	
	> 200 V to 600 V		60 mV	
DC current Measuring Instruments	1 mA to 20 mA		3,8 μ A	
	> 20 mA to 200 mA		45 μ A	
	> 200 mA to 2 A		1,4 mA	
	> 2 A to 10 A		6,5 mA	
Temperature Radiation thermometers	35 °C to 200 °C	MP RT 2049-2014	0,94 °C at T = 35 °C 1,10 °C at T = 200 °C	Infrared Pyrometers. Calibration procedure of solar radiation thermometers in the temperature range of 35 °C to 200 °C with spectral response of 8 μ m to 14 μ m

¹⁾ The expanded uncertainties according to EA-4/02 M:2013 are part of CMC and are the best measurement uncertainties within accreditation. They have a coverage probability of approximately 95 % and have a coverage factor of $k = 2$ unless stated otherwise. Uncertainties without unit are relative uncertainties referring to the measurement value unless stated otherwise.

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Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement ¹⁾	Remarks
Length Length measuring instruments	1510 mm to 1550 mm	Calibration procedure of track-measuring gauges mod. 08809:3.10.001	0,8 mm	Width of track
	1460 mm to 1500 mm		0,8 mm	Distance between the active faces of core and track guard rail
	1420 mm to 1460 mm		0,8 mm	Distance between the active faces of counter-rail and track guard rail
	100 mm to 1480 mm		0,8 mm	Ordinates of turnout curves
	40 mm to 400 mm		0,8 mm	Width of slots
	0 mm to 160 mm		0,4 mm	Elevation of one rail relative to another one

On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement ¹⁾	Remarks
Weighing instruments	to 100000 kg	EURAMET Calibration Guide No. 18, Version 4.0	7 · 10 ⁻⁵	For weight pieces according to OIML R111-1:2004, class M1. Above 80000 kg with substitution loads and increased expanded uncertainty

Abbreviations used:

CMC	Calibration and measurement capabilities
DIN	Deutsches Institut für Normung e.V.
DKD-R	Richtlinie des Deutschen Kalibrierdienstes (DKD), herausgegeben von der Physikalisch-Technischen Bundesanstalt
EURAMET	European Association of National Metrology Institutes
OIML	International Organisation of Legal Metrology
EURAMET	European Association of National Metrology Institutes
Calibration procedure..	In house method of the CAB
MP-RT	In house method of the CAB

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