The Appendix is an integral part of
Certificate of Accreditation No. 181/2022 of 13/04/2022

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Evident Service Center Europe s.r.o.
NDT Calibration Laboratory
Evropská 176/16, 160 00 Praha 6

CMC for the field of measured quantity: Length

Ord. number [1]	Calibrated quantity / Subject of calibration	Nominal range min. unit		Nominal range max. unit	Parameter(s) of the meas. quantity		Lowest expanded measurement uncertainty specified [2]	Calibration principle	Calibration procedure identification [3]	Work-place
1.	Ultrasonic thickness gauges	0.150 mm 1.000 mm	to to	5.100 mm 100.000 mm			0.005 mm 0.005 mm	Comparison with the value of a standard	OCG-CAL-SOP-001	
2.	Magnamike thickness gauges	0.250 mm	to	25.340 mm			0.005 mm	Comparison with the value of a standard	OCG-CAL-SOP-001	

[1] Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

[2] The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02, part of CMC, and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the value measured. If the calibration is carried out outside the laboratory premises, the measurement uncertainty may be affected.

[3] If the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Evident Service Center Europe s.r.o.
NDT Calibration Laboratory
Evropská 176/16, 160 00 Praha 6

CMC for the field of measured quantity: Testing of properties and defects of materials

Ord. number[1]	Calibrated quantity / Subject of calibration	Nominal range min.	unit		Nominal range max.	unit	Parameter(s) of the meas. quantity		Lowest expanded measurement uncertainty specified[2]	Calibration principle	Calibration procedure identification[3]	Work place
1.	Olympus ultrasonic thickness gauges by automatic method										OCG-CAL-SOP-001	
	Pulse repetition frequency	3 Hz		to	34 Hz				2 %	Measurement by an oscilloscope		
	Transmit pulse voltage	2 V		to	500 V				0.01 V	Measurement by an oscilloscope		
	Pulse tail	2 V		to	500 V				0.01 V			
	Pulse rise time	2 ns		to	500 ns				0.86 ns			
	Pulse duration	2 ns		to	500 ns				0.86 ns			
	Current operating range	0.1 A		to	0.3 A				0.01 A	Power supply reading		
	Precision and resolution	0.25 mm		to	100 mm				0.01 mm	Comparison with the value of a standard		
2.	Olympus ultrasonic flaw detectors by automatic method										OCG-CAL-SOP-002 (ČSN EN 12668-1:2010)	
	Stability after heating									Instrument display reading		
	-signal amplitude	5 % SH		to	100 % SH				0.14 % SH			
	-signal position	5 % SW		to	100 % SW				0.12 % SW			
	Display instability									Instrument display reading		
	-signal amplitude (mm)	5 % SH		to	100 % SH				0.14 % SH			
	-signal position (mm)	5 % SW		to	100 % SW				0.12 % SW			
	Stability at voltage fluctuation									Instrument display reading		
	-signal amplitude (mm)	5 % SH		to	100 % SH				0.14 % SH			
	-signal position (mm)	5 % SW		to	100 % SW				0.12 % SW			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Evident Service Center Europe s.r.o.
NDT Calibration Laboratory
Evropská 176/16, 160 00 Praha 6

Ord. number[1]	Calibrated quantity / Subject of calibration	Nominal range min.	unit		Nominal range max.	unit	Parameter(s) of the meas. quantity		Lowest expanded measurement uncertainty specified[2]	Calibration principle	Calibration procedure identification[3]	Work place
	Transmit pulse voltage	2	V	to	500	V			0.01 V	Measurement by an oscilloscope		
	Pulse tail	2	V	to	500	V			0.01 V			
	Pulse rise time	2	ns	to	500	ns			0.86 ns			
	Pulse duration	2	ns	to	500	ns			0.86 ns			
	Amplifier frequency response	0.2	MHz	to	26.5	MHz			$5.8 \cdot 10^{-5}$ MHz	Electrical signal simulation		
	Equivalent input noise level	1	nV/√Hz	to	80	nV/√Hz			0.7 % nV/√Hz	Calculation from measured values		
	Calibrated attenuator accuracy	0	dB	to	110	dB			0.34 dB	Comparison with the standard		
	Display unit vertical linearity	5	% SH	to	100	% SH			0.62 % SH	Electrical signal simulation		
	Time base linearity	0.1	µs	to	5,125	µs			$8.6 \cdot 10^{-4}$ µs	Electrical signal simulation		
	Time resolution	$50 \cdot 10^{-9}$	s	to	$150 \cdot 10^{-9}$	s			$2 \cdot 10^{-9}$ s	Electrical signal simulation		
3.	Ultrasonic flaw detectors by manual method										OCG-CAL-SOP-003 (ČSN EN 12668-1:2010)	
	Stability after heating									Instrument display reading		
	-signal amplitude	5	% SH	to	100	% SH			0.43 % SH			
	-signal position	5	% SW	to	100	% SW			0.29 % SW			
	Display instability									Instrument display reading		
	-signal amplitude (mm)	5	% SH	to	100	% SH			0.43 % SH			
	-signal position (mm)	5	% SW	to	100	% SW			0.29 % SW			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Evident Service Center Europe s.r.o.
NDT Calibration Laboratory
Evropská 176/16, 160 00 Praha 6

Ord. number[1]	Calibrated quantity / Subject of calibration	Nominal range min.	unit		Nominal range max.	unit	Parameter(s) of the meas. quantity		Lowest expanded measurement uncertainty specified[2]	Calibration principle	Calibration procedure identification[3]	Work place
	Instability at fluctuation									Instrument display reading		
	-signal amplitude (mm)	5 %	SH	to	100 %	SH			0.43 %	SH		
	-signal position (mm)	5 %	SW	to	100 %	SW			0.29 %	SW		
	Transmit pulse voltage	2	V	to	500	V			1.20	V	Measurement by an oscilloscope	
	Pulse tail	2	V	to	500	V			0.43 %	V		
	Pulse rise time	2	ns	to	500	ns			0.9	ns		
	Pulse duration	2	ns	to	500	ns			0.9	ns		
	Amplifier frequency response	0.2	MHz	to	26.5	MHz			0.46	%	Electrical signal simulation	
	Calibrated attenuator accuracy	0	dB	to	110	dB			0.39	dB	Comparison with the standard	
	Display unit vertical linearity	5 %	SH	to	100 %	SH			0.72 %	SH	Instrument display reading	
	Equivalent input noise level	0	nV/√Hz	to	80	nV/√Hz			5.4	%	Calculation from measured values	
	Time base linearity	0.1	µs	to	5,125	µs			$17.8 \cdot 10^{-4}$	µs	Electrical signal simulation	
4.	Olympus Nortec 500 series eddy current flaw detectors										OCG-CAL-SOP-004	
	Instrument current demand	550	mA	to	850	mA			0.006	mA	Power supply reading	
	Instrument switching-off	7.0	V	to	8.0	V			0.06	V	Power supply reading	
	Instrument charging current	1.0	A	to	1.7	A			0.5	mA	Power supply reading	
	Output signal amplitude	0.4	V	to	4.2	V			0.05	mV	Measurement by a multimeter	
	Instrument driving pulse	8.20	V_{p-p}	to	10.27	V_{p-p}			0.06	V_{p-p}	Measurement by an oscilloscope	

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Evident Service Center Europe s.r.o.
NDT Calibration Laboratory
Evropská 176/16, 160 00 Praha 6

Ord. number[1]	Calibrated quantity / Subject of calibration	Nominal range min.	unit		Nominal range max.	unit	Parameter(s) of the meas. quantity		Lowest expanded measurement uncertainty specified[2]	Calibration principle	Calibration procedure identification[3]	Work place
	Instrument output frequency				100 Hz 12 MHz				0.1 Hz 12 Hz	Measurement by an oscilloscope		
	Filter test	2 Hz		to	8 Hz				0.057 Hz	Instrument display reading		
	Scanner output frequency (for 1,200 RPM) (for 3,000 RPM)				 20 Hz 50 Hz				 0.02 Hz 0.05 Hz	Measurement by an oscilloscope		
	Instrument conductivity	30 % IACS		to	60 % IACS				0.17 % IACS	Comparison with the standard		
	Additional outputs, Frequency No. 1 and 2				5 V				0.06 V	Measurement by an oscilloscope		
	Olympus Nortec 600 series eddy current flaw detectors											
	Excitation frequency	$10 \cdot 10^{-6}$ MHz		to	10 MHz				2 %	Measurement by an oscilloscope		
	Harmonic distortion	$10 \cdot 10^{-6}$ MHz		to	10 MHz				0.3 %	Measurement by an oscilloscope		
	Maximum output voltage	1.8 V_{p-p}		to	2,2 V_{p-p}				0.3 %	Measurement by an oscilloscope		
	Maximum permissible output voltage	0.1 V_{p-p}		to	14.4 V_{p-p}				0.5 %	Measurement by an oscilloscope		
	Signal processing frequency response	0.1 kHz		to	2 kHz				0.1 %	Measurement by an oscilloscope		
	Phase linearity				360 °				0.002 °	Instrument display reading		
	Gain setting accuracy				100 dB				0.07 dB	Comparison with the standard		

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Evident Service Center Europe s.r.o.
NDT Calibration Laboratory
Evropská 176/16, 160 00 Praha 6

Ord. number[1]	Calibrated quantity / Subject of calibration	Nominal range min.	unit		Nominal range max.	unit	Parameter(s) of the meas. quantity		Lowest expanded measurement uncertainty specified[2]	Calibration principle	Calibration procedure identification[3]	Work place
	Instrument maximum noise	1.8 µV	to		15 µV				0.5 %	Calculation from measured values		
	Olympus BondMaster 600 series eddy current flaw detectors											
	Excitation frequency	1 kHz	to		500 kHz				2 %	Measurement by an oscilloscope		
	Harmonic distortion	$10 \cdot 10^{-6}$ MHz	to		10 MHz				0.3 %	Measurement by an oscilloscope		
	Maximum output voltage of TX generator (MIA, RESONANCE) and HV generator (MIA)	0.9 V_{p-p}	to		140 V_{p-p}				0.3 %	Measurement by an oscilloscope		
	Output voltage linearity	0.01 %	to		0.75 %				0.5 %	Measurement by an oscilloscope		
	Signal processing frequency response	70 Hz	to		80 Hz				0.1 %	Measurement by an oscilloscope		
	Phase linearity				360 °				0.002 °	Instrument display reading		
	Gain setting accuracy				100 dB				0.07 dB	Comparison with the standard		
	Instrument maximum noise	1.8 µV	to		15 µV				0.5 %	Calculation from measured values		
5.	Olympus Omniscan series ultrasonic flaw detectors										OCG-CAL-SOP-005	
	Control unit current demand	0.034 A	to		2.250 A				0.004 A	Measurement by a multimeter		
	Transmit pulse voltage	2 V	to		500 V				0.01 V	Measurement by an oscilloscope		
	Pulse tail	2 V	to		500 V				0.01 V			
	Pulse rise time	2 ns	to		500 ns				0.86 ns			
	Pulse duration	2 ns	to		500 ns				0.86 ns			

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Evident Service Center Europe s.r.o.
NDT Calibration Laboratory
Evropská 176/16, 160 00 Praha 6

Ord. number[1]	Calibrated quantity / Subject of calibration	Nominal range min.	unit		Nominal range max.	unit	Parameter(s) of the meas. quantity		Lowest expanded measurement uncertainty specified[2]	Calibration principle	Calibration procedure identification[3]	Work place
	Emission delay			to	5 ns				0.08 ns	Measurement by an oscilloscope		
	Bandwidth	0.2	MHz	to	26.5	MHz			0.06 MHz	Electrical signal simulation		
	Display linearity	5	% SH	to	100	% SH			0.23 % SH	Instrument display reading		
	Display linearity delay	0.01	µs	to	10.01	µs			0.001 µs	Electrical signal simulation		
	Instrument absolute gain	70	%	to	90	%			0.23 %	Electrical signal simulation		
	Time base linearity	0.1	µs	to	5,125	µs			$8.6 \cdot 10^{-4}$ µs	Electrical signal simulation		
	Stability after heating									Instrument display signal reading		
	-signal amplitude	5	% SH	to	100	% SH			0.14 % SH			
	-signal position	5	% SW	to	100	% SW			0.12 % SW			
	Display instability									Instrument display signal reading		
	-signal amplitude (mm)	5	% SH	to	100	% SH			0.14 % SH			
	-signal position (mm)	5	% SW	to	100	% SW			0.12 % SW			
	Instability at voltage fluctuation									Instrument display signal reading		
	-signal amplitude (mm)	5	% SH	to	100	% SH			0.14 % SH			
	-signal position (mm)	5	% SW	to	100	% SW			0.12 % SW			
	Amplifier frequency response	0.2	MHz	to	26.5	MHz			$5.7 \cdot 10^{-3}$ MHz	Electrical signal simulation		
	Equivalent input noise level	0	nV/√Hz	to	80	nV/√Hz			0.7 %	Calculation from measured values		
	Calibrated attenuator accuracy	0	dB	to	110	dB			0.12 dB	Comparison with the standard		

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Evident Service Center Europe s.r.o.
NDT Calibration Laboratory
Evropská 176/16, 160 00 Praha 6

Ord. number[1]	Calibrated quantity / Subject of calibration	Nominal range min.	unit		Nominal range max.	unit	Parameter(s) of the meas. quantity		Lowest expanded measurement uncertainty specified[2]	Calibration principle	Calibration procedure identification[3]	Work place
	Display unit vertical linearity (mm)	5 % SH		to	100 % SH				0.62 % SH	Instrument display reading		
	Channel gain deviation	5 % SH		to	100 % SH				0.2 % SH	Instrument display reading		
	Linearity of individual received pulses			to	55 ns				0.05 ns	Electrical signal simulation		
	Transmit channel position deviation				5 ns				0.08 ns	Electrical signal simulation		
	Vertical display linearity (mm)	5 % SH		to	100 % SH				0.2 % SH	Instrument display reading		
	Linearity of individual transmit pulses				55 ns				0.05 ns	Electrical signal simulation		
	Instrument absolute gain				1.5 V				0.01 V	Measurement by an oscilloscope		
	Gain linearity	0.1			3.0 %				0.7 %	Comparison with the standard		
	Generator excitation frequency	0.1 MHz		to	6.1 MHz				2.0 %	Measurement by an oscilloscope		
	Output voltage verification - voltage - frequency	 1 V 1 Hz		 to to	 10 V 20 Hz				 0.7 % 2.0 %	Measurement by an oscilloscope		
	General test - voltage on a connector - voltage on a BNC connector				 12 V 12 V				 0.08 V 0.08 V	Measurement by an oscilloscope		

[1] Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Evident Service Center Europe s.r.o.
NDT Calibration Laboratory
Evropská 176/16, 160 00 Praha 6

[2] The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02, part of CMC, and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the value measured. If the calibration is carried out outside the laboratory premises, the measurement uncertainty may be affected.

[3] If the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).

Explanations and abbreviations:

IACS – International Annealed Copper Standard

RPM – Revolutions per minute

SW – Screen Width

SH – Screen Height