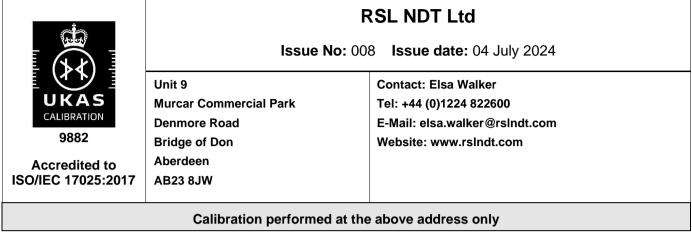
Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK



CALIBRATION AND MEASUREMENT CAPABILITY (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks
ELECTRICAL VERIFICATION of ULTRASONIC FLAW DETECTION EQUIPMENT			
As BS EN ISO 22232-1:2020 Group 2 tests and including the following calibrations and quantities:			
quantites.	Pulser Voltage	5.0 %	
	Pulser Risetime Pulse duration	3.8 ns 1.5 ns	For instruments designed to comply with BS EN 12668- 1:2010, the pulse width is determined at 10 % of the pulse height, otherwise the 50 %
			points are used.
	Frequency response 0.01 MHz to 50 MHz	5.9 % at -3 dB point	For instruments designed to comply with BS EN 12668- 1:2010, the centre frequency f_0 is calculated using $f_0 = \sqrt{(f_u \times f_0)}$, otherwise the expression
			$f_0 = (f_u + f_l)/2$ is used.
	Equivalent input noise	1.1 x 10 ^{.9} V/√Hz	Using Method B as described in Section 9.4.3.3 of BS EN ISO 22232-1:2020.
	Calibrated attenuator Gain linearity Vertical Linearity	0.70 dB 0.70 dB 1.8 % of screen height	

UKAS CALIBRATION 9882	Schedule of Accreditation issued by United Kingdom Accreditation Service 2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK				
	RSL NDT Ltd Issue No: 008 Issue date: 04 July 2024				
Accredited to ISO/IEC 17025:2017					
Calibration performed at main address only					
Measured Quantity	Expanded Measurement				

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty $(k = 2)$	Remarks	
CALIBRATION OF EDDY CURRENT TEST SETS				
Frequency Generator	100 Hz to 10 MHz	20 µHz/Hz	In accordance with BS EN ISO 15548-1:2013, 6.2.1	
Oscillator Drive	1 V to 14 V 100 Hz to 2 MHz	1.9 % to 2.9 %	In accordance with BS EN ISO 15548-1:2013, 6.2.4	
Harmonic Distortion	0 % to 1000 %	5.4 % of value or 5.0 % distortion, whichever is greater.	In accordance with BS EN ISO 15548-1:2013, 6.2.2	
System Gain	10 dB to 50 dB <i>10 kHz</i>	0.29 dB	Using step attenuator.	
Horizontal and Vertical Linearity	15 % to 80 % of FSH 10 kHz	2.0 % of FSH	Using step attenuator and oscilloscope.	
END				



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Calibration performed at main address only

Appendix - Calibration and Measurement Capabilities

Introduction

The definitive statement of the accreditation status of a calibration laboratory is the Accreditation Certificate and the associated Schedule of Accreditation. This Schedule of Accreditation is a critical document, as it defines the measurement capabilities, ranges and boundaries of the calibration activities for which the organisation holds accreditation.

Calibration and Measurement Capabilities (CMCs)

The capabilities provided by accredited calibration laboratories are described by the Calibration and Measurement Capability (CMC). which expresses the lowest measurement uncertainty that can be achieved during a calibration. If a particular device under calibration itself contributes significantly to the uncertainty (for example, if it has limited resolution or exhibits significant nonrepeatability) then the uncertainty quoted on a calibration certificate will be increased to account for such factors.

The CMC is normally used to describe the uncertainty that appears in an accredited calibration laboratory's schedule of accreditation and is the uncertainty for which the laboratory has been accredited using the procedure that was the subject of assessment. The measurement uncertainty is calculated according to the procedures given in the GUM and is normally stated as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of k = 2. An accredited laboratory is not permitted to quote an uncertainty that is smaller than the published measurement uncertainty in certificates issued under its accreditation.

Expression of CMCs - symbols and units

It should be noted that the percentage symbol (%) represents the number 0.01. In cases where the measurement uncertainty is stated as a percentage, this is to be interpreted as meaning percentage of the measurand. Thus, for example, a measurement uncertainty of 1.5 % means $1.5 \times 0.01 \times q$, where q is the quantity value.

The notation Q[a, b] stands for the root-sum-square of the terms between brackets: Q[a, b] = $[a^2 + b^2]^{1/2}$