Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

4387

Accredited to ISO/IEC 17025:2017

KeyMed (Medical & Industrial Equipment) Ltd

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KeyMed House
Stock Road
Southend-on-Sea
Essex
SS2 5QH

Contact: Mr Lee Bird
Tel: +44 (0)1702 616333
Fax: +44 (0)1702 465677
E-Mail: Lee.Bird@olympus.co.uk
Website: www.Olympus-ims.com

Calibration performed by the Organisation at the locations specified

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details		Activity	Location code
Address KeyMed House Stock Road Southend-on-Sea Essex SS2 5QH	**Local contact** Mr Lee Bird	Calibration of NDT test sets	Main Laboratory

Site activities performed away from the locations listed above:

Location details		Activity	Location code
The customer's site or premises must be suitable for the nature of the particular calibrations undertaken and will be the subject of contract review arrangements between the laboratory and the customer	**Local contact** Mr Lee Bird	Calibration of NDT test set	Site

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
ELECTRICAL VERIFICATION of ULTRASONIC FLAW DETECTION EQUIPMENT				.
Measurement and sourcing capabilities listed below follow the method of direct comparison against laboratory references or established ratio technique unless otherwise stated in the remarks column.				
As BS EN 12668-1:2010 and including the following calibrations and quantities:			These same parameters and claims also apply to ISO 18563-1	Main Laboratory and site
	Stability after warm up (height)	0.77 % of screen height		
	Stability after warm up (width)	0.16 % of screen width		
	Jitter - screen height	0.77 % of screen height		
	Jitter - screen width	0.16 % of screen width		
	Stability against voltage variation (height)	0.77 % of screen height		
	Stability against voltage variation (width)	0.16 % of screen width		
	Pulser Voltage	0.50 %		
	Pulser Width	0.87 ns		
	Pulser Risetime	0.91 ns		
	Pulser Reverberation	1.4 % of pulser voltage		
	Frequency response 0.1 MHz to 25 MHz	0.73 % at - 3 dB point		
	Equivalent input noise	7.0 %		
	Calibrated attenuator	0.42 dB		
	Vertical Linearity	0.69 % of screen height		
	Linearity of time base	0.15 % of full-scale		
	Temporal resolution 50 ns to 150 ns	5.0 ns		
As BS EN 15317-2013	Thickness measurement			
	Nominal values 1 mm, 2 mm, 5 mm, 10 mm, 20 mm, 50 mm and 100 mm	0.037 %	Using specially manufactured 4330 steel (Nickel plated) test blocks.	
Additional points for factory standard	0.025 mm to 1.5 mm	0.58 %	Using cartridge brass shims	
	1.5 mm to 25.5 mm	0.44 %		

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
As BS EN 15317-2013 continued				Main Laboratory and site.
PRF	4 Hz to 30 Hz	77 mHz		
Pulse Voltage Pulse Width	60 V to 200 V 500 kHz to 20 MHz	0.27 % on Voltage 0.89 ns on pulse width		
Rise time	20 ps to 20 ns	0.87 ns		
Current	100 mA to 2 A	1.6 mA		
As BS EN 15548-1: 2013				
Excitation frequency	10 Hz to 10 MHz	0.060 %		
Harmonic distortion	10 Hz to 10 MHz Nominal 14.4 V Pk-Pk (Harmonic content to 60 MHz)	0.070 % distortion		
Voltage DC	0 V to 10 V	50 mV		
Frequency response	1 kHz to 10 MHz 3dB point	76 mHz		
Phase linearity	0 ° to 360 ° 10 Hz to 10 MHz	0.10 %		
Gain setting	10 Hz to 10 MHz 0 dB to 45 dB	0.080 dB		
Noise	10 Hz to 10 MHz fundamental 2.5 kHz low pass filter	0.25 %		
END				

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 non-repeatability) 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: $Q[a, b] = [a^2 + b^2]^{1/2}$