Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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8957

Accredited to ISO/IEC 17025:2017

NDT Global Services Limited

Issue No: 009 **Issue date:** 06 March 2024

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Calibration performed at the above address only

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:		
	Pulser Voltage	14 %	
	Pulser Risetime	6.0 %	
	Pulse duration	3.8 %	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 *0.2 MHz to 30 MHz*	3.4 % at -3 dB point	For instruments designed to comply with BS EN 12668-1:2010, the centre frequency f_0 is calculated using $f_0 = \sqrt{(f_u \times f_l)}$, otherwise the expression $f_0 = (f_u + f_l)/2$ is used.
	Equivalent input noise	15 % of screen height	Using Method B as described in Section 9.4.3.3 of BS EN ISO 22232-1:2020.
	Calibrated attenuator, *0 dB to 70 dB*	0.26 dB to 0.90 dB	
	Vertical Linearity	1.5 % of screen height	
CALIBRATION OF ULTRASONIC TEST BLOCKS			
Linear dimensions	0 mm to 25 mm	5.0 µm	Using micrometer
	25 mm to 50 mm	5.0 µm	Using micrometer
	0 mm to 200 mm	40 µm	Using digital caliper
	0 mm to 300 mm	31 µm	Using height gauge
Hole diameter	0.22 mm to 7.7 mm	25 µm	Using pin gauges
	7.7 mm to 100 mm	40 µm	Using digital caliper
Hole centre to plate edge	Hole diameter to 300 mm	37 µm	Using height gauge
	Hole diameter 200 mm	44 µm	Using digital caliper

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$))	Remarks
CALIBRATION OF ULTRASONIC TEST BLOCKS (continued)			
Hole depth	0 mm to 50 mm 0 mm to 50 mm	44 µm 38 µm	Using digital caliper Using pin and height gauge
Slot width	8 mm to 50 mm 0.22 mm to 30 mm	41 µm 35 µm	Using digital caliper Using height gauge
Slot depth	0 mm to 200 mm 0 mm to 10 mm	39 µm 27 µm	Using digital caliper Using height gauge and dial indicator
Determination of slot centre line	1 mm to 300 mm	36 µm	Using height gauge
END			

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