Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

7640

Accredited to ISO/IEC 17025:2017

Oceanscan Limited

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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 including the following calibrations and quantities:		Ranges and methods are as defined in BS EN ISO 22232-1:2020.
	Pulser Voltage Pulser Risetime Pulse duration	3.0 V 1.6 ns 0.91 ns	
	Frequency response *0.2 MHz to 30 MHz*	3.8 % 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	7.3 %	Using Method B as described in Section 9.4.3.3 of BS EN ISO 22232-1:2020.
	Gain linearity Vertical Linearity	0.46 dB 0.63 % of screen height	
PHASED ARRAY SETS	As BS EN ISO 18563-1:2022 including the following calibrations and quantities.		Ranges and methods are as defined in BS EN ISO 18563-1:2022
	Pulse Amplitude Pulse Width Pulse risetime	2.5 % of screen height 0.80 % of screen width 0.40 % of screen width	
	Time delay linearity Frequency response *200 kHz to 30 MHz*	0.90 % of screen width 4.0 % at -3 dB point	
	Channel gain variation Equivalent input noise Gain linearity Linearity of vertical display Linearity of time delay	2.5 % 4.6 % 0.70 % 1.1 % of screen height 0.90 % of screen width	

Calibration performed at main address only

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
Calibration of Eddy Current Equipment	Verified in accordance with applicable portions of BS EN ISO 15548-1:2013 and respective manufacturers' specifications.		Verified in accordance with applicable portions of BS EN ISO 15548-1:2013 and respective manufacturers' specifications.
Frequency Generator	100 Hz to 1 MHz	1.8 %	
Source Drive Amplitude	1 V to 15 V *100 Hz to 1 MHz*	3.2 %	
Input Stage Characteristics	1 V to 20 V *10 kHz and 100 kHz*	5.0 %	
Frequency response	10 kHz and 100 kHz nominal	4.1 %	
Amplifier Gain	10 dB to 50 dB *10 kHz nominal*	2.4 %	
Calibration of Alternating Current Field measurement Lizard.			Manufacturers specification and in house procedure TM-074
Voltage DC	+/- 100 V	20 mV	
Frequency Response	1 kHz to 1 MHz	5.9 %	
Amplitude Peak to Peak	4 to 7 Vpp	1.7 %	
DC Resistance	0 Ω to 10 MΩ	1.4 %	
Calibration of Illuminance Meters for a source colour temperature of 2856 K	1 lux to 10 lux 10 lux to 20 lux 20 lux to 200 lux 200 lux to 1000 lux 1000 lux to 2000 lux 2000 lux to 10000 lux 10000 lux to 20000 lux	4.0 % 3.8 % 3.3 % 3.2 % 3.1 % 4.0 % 6.3 %	Calibration by comparison to reference meter

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