ANSI-ASQ National Accreditation Board

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005 & ANSI/NCSL Z540-1-1994

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CALIBRATION

Valid to: August 31, 2016 Certificate Number: AC-1342

I. Electromagnetic - DC/Low Frequency

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
DC Voltage - Source	(2.2 to 220) mV 200 mV to 2.2 V (2.2 to 11) V (11 to 22) V (22 to 220) V 220 V to 1.1 kV	11 µV/V + 0.48 µV 6.2 µV/V + 0.87 µV 4.2 µV/V + 3 µV 4.2 µV/V + 5.2 µV 6.1 µV/V + 99 µV 8 µV/V + 0.53 mV	Fluke 5720A	OEM and GIDEP Sourced Procedures
DC Voltage - Measure	(2 to 200) mV 200 mV to 2 V (2 to 20) V (20 to 200) V 200 V to 1 kV Up to 2 kV (1 to 20) kV (20 to 70) kV	6.7 µV/V + 0.20 µV 4.3 µV/V + 0.50 µV 4.3 µV/V + 4.8 µV 6.7 µV/V + 98 µV 6.7 µV + 0.63 mV 0.50 mV/V + 11 V 0.50 mV/V + 6.9 V 0.56 mV/V + 51 V	Fluke 8508 Vitrek 4670A	
Charge Analyzer	Up to 1 kV (1 to 5) kV	24 mV/V + 0.50 V 24 mV/V + 12 V	Monroe Electronics 268A	

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
DC Current - Source	(2 to 220) µA 220 µA to 2.2 mA (2.2 to 22) mA (22 to 220) mA 220 mA to 2.2 A (2.2 to 10) A (10 to 10.9) A (10.9 to 20.5) A (10 to 550) A (550 to 1025) A	50 µA/A + 7.2 nA 43 µA/A + 8.4 nA 43 µA/A + 48 nA 55 µA/A + 0.84 µA 97 µA/A + 21 µA 0.60 mA/A + 0.77 mA 0.60 mA/A + 1 mA 1.2 mA/A + 1.4 mA 2.5 mA/A + 0.55 A 2.6 mA/A + 0.55 A	Fluke 5720A Fluke 5522A 50 Turn Coil	OEM and GIDEP Sourced Procedures
DC Current - Measure	(2 to 200) µA (200 µA to 2) mA (2 to 20) mA (20 to 200) mA 200 mA to 2 A (2 to 20) A Up to 1 000 A	15 µA/A + 0.49 nA 15 µA/A + 4.8 nA 17 µA/A + 48 nA 59 µA/A + 0.96 µA 0.23 mA/A + 25 µA 0.49 mA/A + 0.36 mA 2.6 mA/A + 20 mA	Fluke 8508 Empro B1000-100	
Resistance - Source (Fixed Values)	0.001 Ω 0.01 Ω 0.1 Ω 1 Ω 1.9 Ω 10 Ω 19 Ω 100 Ω 190 Ω 1 kΩ 1.9 kΩ 10 kΩ 19 kΩ 100 kΩ 190 kΩ 1 MΩ 1.9 MΩ 10 MΩ 19 MΩ 100 MΩ 100 MΩ to 1 GΩ (1 to 10) GΩ 10 GΩ to 1 TΩ	0.23 mΩ 0.22 mΩ 0.20 mΩ 0.12 mΩ 0.22 mΩ 0.28 mΩ 0.53 mΩ 1.3 mΩ 2.3 mΩ 11 mΩ 20 mΩ 0.11 Ω 0.20 Ω 1.4 Ω 2.6 Ω 25 Ω 51 Ω 0.50 kΩ 1.2 kΩ 14 kΩ 10 mV/V + 1 kΩ 11 mV/V + 0.19 MΩ 21 mV/V + 2.1 MΩ	SRX-0.001 SRX-0.01 SRX-0.1 Fluke 5720A RH9A	

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Resistance - Measure	Up to 2Ω	23 μΩ/Ω + 5.9 μΩ	Fluke 8508A	OEM and GIDEP Sourced Procedures
	(2 to 20) Ω	12 μΩ/Ω + 18 μΩ		
	(20 to 200) Ω	9.8 μΩ/Ω + 80 μΩ		
	200 Ω to 2 kΩ	12 μΩ/Ω + 0.94 mΩ		
	(2 to 20) kΩ	11 μΩ/Ω + 47 mΩ		
	(20 to 200) kΩ	11 μΩ/Ω + 60 mΩ		
	200 kΩ to 2 MΩ	13 μΩ/Ω + 1.2 Ω		
	(2 to 20) MΩ	28 μΩ/Ω + 0.12 kΩ		
	(20 to 200) MΩ	0.15 mΩ/Ω + 1.2 kΩ		
	200 MΩ to 2 GΩ	1.9 mΩ/Ω + 12 kΩ		
at 500 V	200 kΩ to 10 GΩ	61 mΩ/Ω + 0.60 MΩ	Fluke 1555	
at 500 V	(10 to 100) GΩ	0.24 Ω/Ω + 0.60 MΩ		
at 1 kV	200 kΩ to 20 GΩ	60 mΩ/Ω + 0.60 MΩ		
at 1 kV	(20 to 200) GΩ	0.24 Ω/Ω + 0.60 MΩ		
at 2.5 kV	200 kΩ to 50 GΩ	60 mΩ/Ω + 0.60 MΩ		
at 5 kV	200 kΩ to 100 GΩ	60 mΩ/Ω + 0.60 MΩ		
at 5 kV	100 GΩ to 1 TΩ	0.24 Ω/Ω + 0.60 MΩ		
at 10 kV	200 kΩ to 200 GΩ	62 mΩ/Ω + 0.60 MΩ		
at 10 kV	200 GΩ to 2 TΩ	0.24 Ω/Ω + 0.60 MΩ		
AC Voltage - Source	**Up to 2.2 mV**		Fluke 5720A	
	(10 to 20) Hz	0.29 mV/V + 4.8 μV		
	(20 to 40) Hz	0.11 mV/V + 4.8 μV		
	40 Hz to 20 kHz	96 μV/V + 9.6 μV		
	(20 to 50) kHz	0.24 mV/V + 4.8 μV		
	(50 to 100) kHz	0.60 mV/V + 6 μV		
	(100 to 300) kHz	1.3 mV/V + 12 μV		
	(300 to 500) kHz	1.7 mV/V + 24 μV		
	500 kHz to 1 MHz	3.3 mV/V + 24 μV		
	2.2 to 22 mV			
	10 to 20 Hz	0.30 mV/V + 4.8 μV		
	20 to 40 Hz	0.13 mV/V + 4.8 μV		
	40 Hz to 20 kHz	0.12 mV/V + 4.8 μV		
	20 to 50 kHz	0.24 mV/V + 4.8 μV		
	50 to 100 kHz	0.62 mV/V + 6 μV		
	100 to 300 kHz	1.3 mV/V + 12 μV		
	300 to 500 kHz	1.7 mV/V + 24 μV		
	500 kHz to 1 MHz	3.3 mV/V + 24 μV		
	22 to 220 mV			
	10 to 20Hz	0.29 mV/V + 20 μV		
	20 to 40Hz	0.11 mV/V + 8.9 μV		
	40 Hz to 20 kHz	98 μV/V + 8.5 μV		
	20 to 50 kHz	0.24 mV/V + 8.5 μV		
	50 to 100 kHz	0.55 mV/V + 21 μV		
	100 to 300 kHz	1.1 mV/V + 24 μV		
	300 to 500 kHz	1.7 mV/V + 32 μV		
	500 kHz to 1 MHz	3.3 mV/V + 54 μV		

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Voltage - Source (cont.)	**220 mV to 2.2 V**		Fluke 5720A	OEM and GIDEP Sourced Procedures
	10 to 20 Hz	0.29 mV/V + 48 µV		
	20 to 40 Hz	0.11 mV/V + 18 µV		
	40Hz to 20 kHz	57 µV/V + 9.6 µV		
	20 to 50 kHz	91 µV/V + 12 µV		
	50 to 100 kHz	0.13 mV/V + 36 µV		
	100 to 300 kHz	0.50 mV/V + 96 µV		
	300 to 500 kHz	1.2 mV/V + 0.24 mV		
	500 kHz to 1 MHz	2.1 mV/V + 0.36 mV		
	2.2 to 22 V			
	10 to 20Hz	0.29 mV/V + 0.14 mV		
	20 to 40Hz	0.11 mV/V + 41 µV		
	40 Hz to 20 kHz	57 µV/V + 23 µV		
	20 to 50kHz	91 µV/V + 21 µV		
	50 to 100 kHz	0.13 mV/V + 43 µV		
	100 to 300 kHz	0.54 mV/V + 0.10 mV		
	300 to 500 kHz	1.2 mV/V + 0.25 mV		
	500 kHz to 1 MHz	2.1 mV/V + 0.40 mV		
	22 to 220V			
	10 to 20 Hz	0.29 mV/V + 0.12 V		
	20 to 40 Hz	0.12 mV/V + 1.9 mV		
	40 Hz to 20 kHz	75 µV/V + 0.72 mV		
	20 to 50 kHz	0.10 mV/V + 1.2 mV		
	50 to 100 kHz	0.19 mV/V + 3 mV		
	100 to 300 kHz	1.1 mV/V + 19 mV		
	300 to 500 kHz	5.3 mV/V + 48 mV		
	500 kHz to 1 MHz	9.7 mV/V + 96 mV		
	220 V to 1.1 kV			
	15 to 50 Hz	0.29 mV/V + 48 mV		
	50 Hz to 1 kHz	0.11 mV/V + 18 mV		
AC Voltage - Measure	**Up to 200 mV**		Fluke 8508 A	
	1 to 10 Hz	0.20 mV/V + 29 µV		
	10 to 40 Hz	0.17 mV/V + 5 µV		
	40 to 100 Hz	0.14 mV/V + 5 µV		
	100 Hz to 2 kHz	0.17 mV/V + 2 µV		
	2 to 10 kHz	0.17 mV/V + 5 µV		
	10 to 30 kHz	0.42 mV/V + 10 µV		
	30 to 100 kHz	0.93 mV/V + 24 µV		
	200 mV to 2 V			
	1 to 10Hz	0.19 mV/V + 0.33 mV		
	10 to 40 Hz	0.15 mV/V + 30 µV		
	40 to 100 Hz	0.12 mV/V + 24 µV		
	100 Hz to 2 kHz	0.17 mV/V + 24 µV		
	2 to 10 kHz	0.14 mV/V + 24 µV		
	10 to 30 kHz	0.27 mV/V + 48 µV		
	30 to 100 kHz	0.70 mV/V + 0.24 mV		

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Voltage - Measure (cont.)	**2 to 20 V**		Fluke 8508 A	OEM and GIDEP Sourced Procedures
	1 to 10 Hz	0.18 mV/V + 3.3 mV		
	10 to 40 Hz	0.14 mV/V + 0.30 mV		
	40 to 100 Hz	0.11 mV/V + 0.24 mV		
	100 Hz to 2 kHz	0.15 mV/V+ 0.24 mV		
	2 to 10 kHz	0.14 mV/V + 0.24 mV		
	10 to 30 kHz	0.27 mV/V + 0.48 mV		
	30 to 100 kHz	0.69 mV/V + 2.4 mV		
	100 to 300 kHz	3.6 mV/V + 24 mV		
	300 kHz to 1 MHz	12 mV/V + 0.24 mV		
	20 to 200 V			
	1 to 10 Hz	0.19 mV/V + 58 mV		
	10 to 40 Hz	0.15 mV/V + 2.7 mV		
	40 to 100 Hz	0.12 mV/V + 2.4 mV		
	100 Hz to 2 kHz	0.15 mV/V + 2.4 mV		
	2 to 10 kHz	0.14 mV/V + 2.4 mV		
	10 to 30 kHz	0.27 mV/V + 4.8 mV		
	30 to 100 kHz	0.69 mV/V + 24 mV		
	100 to 300 kHz	3.6 mV/V + 0.24 mV		
	300 kHz to 1 MHz	12 mV/V + 2.4 V		
	200 V to 1 kV			
	1 to 10 Hz	0.19 mV/V + 84 mV		
	10 to 40 Hz	0.16 mV/V + 24 mV		
	40 Hz to 10 kHz	0.29 mV/V + 24 mV		
	10 to 30 kHz	0.28 mV/V + 48 mV		
	30 to 100 kHz	0.72 mV/V + 0.24 V		
	1 to 2 kV		Vitrek 4670A	
	20 to 400 Hz	0.86 mV/V + 11 V		
	2 to 20 kV			
	20 to 100 Hz	0.52 mV/V + 49 V		
	20 to 70 kV			
	50 to 60 Hz	0.49 mV/V + 0.21 kV		
AC Current - Source	**Up to 220 µA**		Fluke 5720A	
	10 to 20 Hz	0.38 mA/A + 21 nA		
	20 to 40 Hz	0.30 mA/A + 12 nA		
	40 Hz to 1 kHz	0.27 mA/A + 9.9 nA		
	1 to 5 kHz	0.41 mA/A + 15 nA		
	5 to 10 kHz	1.4 mA/A + 78 nA		
	220 µA to 2.2 mA			
	10 to 20 Hz	0.30 mA/A + 68 nA		
	20 to 40 Hz	0.19 mA/A + 48 nA		
	40 Hz to 1 kHz	0.15 mA/A + 48 nA		
	1 to 5 kHz	0.27 mA/A + 0.13 µA		
	5 to 10 kHz	1.3 mA/A + 0.78 µA		

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Current – Source (cont.)	**2.2 to 22 mA**		Fluke 5720A	OEM and GIDEP Sourced Procedures
	10 to 20 Hz	0.30 mA/A + 0.49 µA		
	20 to 40 Hz	0.20 mA/A + 0.43 µA		
	40 Hz to 1 kHz	0.15 mA/A + 0.43 µA		
	1 to 5 kHz	0.39 mA/A + 0.66 µA		
	5 to 10 kHz	1.4 mA/A + 6 µA		
	22 to 220 mA			
	10 to20 Hz	0.43 mA/A + 7.9 µA		
	20 to 40 Hz	0.37 mA/A + 4.7 µA		
	40 Hz to 1 kHz	0.36 mA/A + 3.9 µA		
	1 to 5 kHz	0.41 mA/A + 4.3 µA		
	5 to 10 kHz	3.3 mA/A + 12 µA		
	220 mA to 2.2 A			
	20 Hz to 1 kHz	0.50 mA/A + 55 µA		
	1 to 5 kHz	4 µA/A + 96 µA		
	5 to 10 kHz	9.3 mA/A + 0.19 mA		
	3 A to 20 A		Fluke 5522A	
	45 Hz to 100 Hz	0.50 mA/A + 1.4 mA		
	100 Hz to 1 kHz	0.70 mA/A + 1.4 mA		
	1 to 5 kHz	20 mA/A + 1.4 mA		
	11 to 20.5 A			
	45 to 100 Hz	0.80 mA/A + 3.4 mA		
	100 Hz to 1 kHz	1 mA/A + 3.4 mA		
	(1 to 5) kHz	20 mA/A + 3.4 mA		
	16.5 to 55 A		Fluke 50 Turn Coil	
	65 Hz	2.8 mA/A + 0.17 A		
	440 Hz	7.9 mA/A + 0.19 A		
	55 to 150)A			
	65 Hz	2.8 mA/A + 0.31 A		
	440 Hz	7.9 mA/A + 0.16 A		
	150 to 550 A			
	65 Hz	2.8 mA/A + 1.3 A		
	440 Hz	7.9 mA/A + 0.41 A		
	550 to 1 025 A			
	65 Hz	2.9 mA/A + 0.71A		
	440 Hz	8 mA/A + 1.2 A		

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Current - Measure	**Up to 200 µA** 10 Hz to 10 kHz 10 to 30 kHz 30 to 100 kHz **200 µA to 2 mA** 10 Hz to 10 kHz 10 to 30 kHz 30 to 100 kHz **2 to 20 mA** 10 Hz to 10 kHz 10 to 30 kHz 30 to 100 kHz **20 to 200 mA** 10 Hz to 10 kHz 10 to 30 kHz **200 mA to 2 A** 10 Hz to 2 kHz 2 to 10 kHz 10 to 30 kHz **2 to 20 A** 10 Hz to 2 kHz 2 to 10 kHz **20 to 1 000 A** 60 to 100 Hz	 0.42 mA/A + 24 nA 0.88 mA/A + 24 nA 4.8 mA/A + 24 nA 0.36 mA/A + 0.24 µA 0.86 mA/A + 0.24 µA 4.8 mA/A + 0.24 µA 0.37 mA/A + 2.4 µA 0.86 mA/A + 2.4 µA 4.8 mA/A + 2.4 µA 0.35 mA/A + 24 µA 0.75 mA/A + 24 µA 0.75 mA/A + 0.25 mA 0.87 mA/A + 0.27 mA 3.6 mA/A + 0.26 mA 0.99 mA/A + 2.4 mA 3.1 mA/A + 2.4 mA 2.6 mA/A + 0.28 A	Fluke 8508A Empro B1000-100	OEM and GIDEP Sourced Procedures
Electrical Simulation of Thermocouple Indicators Type B Type C Type E Type J 	 (600 to 800) ˚C (800 to 1 000) ˚C (1 000 to 1 550) ˚C (1 550 to 1 820) ˚C (0 to 150) ˚C (150 to 650) ˚C (650 to 1 000) ˚C (1 000 to 1 800) ˚C (1 800 to 2 316) °C (-250 to -100) ˚C (-100 to -25) ˚C (-25 to 350) ˚C (350 to 650) ˚C (650 to 1 000) ˚C (-200 to -100) ˚C (-100 to -30) ˚C (-30 to 150) ˚C (150 to 760) ˚C (760 to 1 200) ˚C	 0.53 ˚C 0.43 ˚C 0.37 ˚C 0.41 ˚C 0.36 ˚C 0.30 ˚C 0.37 ˚C 0.61 ˚C 1.0 °C 0.6 ˚C 0.19 ˚C 0.17 ˚C 0.19 ˚C 0.26 ˚C 0.19 ˚C 0.32 ˚C 0.17 ˚C 0.21 ˚C 0.28 ˚C	Fluke 5522A	

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Type K	(-200 to -100) ˚C (-100 to -25) ˚C (-25 to 120) ˚C (120 to 1 000) ˚C (1 000 to 1 372) ˚C	0.57 ˚C 0.22 ˚C 0.19 ˚C 0.31 ˚C 0.48 ˚C	Fluke 5522A	OEM and GIDEP Sourced Procedures
Type L	(-200 to -100) ˚C (-100 to 800) ˚C (800 to 900) ˚C	0.45 ˚C 0.32 ˚C 0.21 ˚C		
Type N	(-200 to -100) ˚C (-100 to -25) ˚C (-25 to 120) ˚C (120 to 410) ˚C (410 to 1 300) ˚C	0.48 ˚C 0.26 ˚C 0.23 ˚C 0.22 ˚C 0.33 ˚C		
Type R	(0 to 250) ˚C (250 to 400) ˚C	0.69 ˚C 0.42 ˚C		
Type S	(400 to 1 000) ˚C (1 000 to 1 767) ˚C	0.48 ˚C 0.6 ˚C		
Type T	(0 to 250) ˚C (250 to 1 000) ˚C (1 000 to 1 400) ˚C (1 400 to 1 767) ˚C	0.57 ˚C 0.43 ˚C 0.44 ˚C 0.57 ˚C		
Type U	(-250 to -150) ˚C (-150 to 0) ˚C (0 to 120) ˚C (120 to 400) ˚C	0.76 ˚C 0.29 ˚C 0.19 ˚C 0.48 ˚C		

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Electrical Simulation of RTDs			Fluke 5522A	OEM and GIDEP Sourced Procedures
Pt 385, 100 Ω	(-200 to 0) ˚C	0.06 ˚C		
	(0 to 100) ˚C	0.08 ˚C		
	(100 to 300) ˚C	0.11 ˚C		
	(300 to 400) ˚C	0.12 ˚C		
	(400 to 630) ˚C	0.14 ˚C		
	(630 to 800) ˚C	0.28 ˚C		
Pt 385, 200 Ω	(-200 to 100) ˚C	0.05 ˚C		
	(100 to 260) ˚C	0.06 ˚C		
	(260 to 300) ˚C	0.14 ˚C		
	(300 to 400) ˚C	0.16 ˚C		
	(400 to 600) ˚C	0.17 ˚C		
	(600 to 630) ˚C	0.19 ˚C		
Pt 385, 500 Ω	(-200 to -80) ˚C	0.07 ˚C		
	(-80 to 100) ˚C	0.07 ˚C		
	(100 to 260) ˚C	0.08 ˚C		
	(260 to 400) ˚C	0.11 ˚C		
	(400 to 600) ˚C	0.12 ˚C		
	(600 to 630) ˚C	0.14 ˚C		
Pt 385, 1000Ω	(-200 to 0) ˚C	0.06 ˚C		
	(0 to 100) ˚C	0.07 ˚C		
	(100 to 260) ˚C	0.07 ˚C		
	(260 to 300) ˚C	0.08 ˚C		
	(300 to 600) ˚C	0.1 ˚C		
	(600 to 630) ˚C	0.28 ˚C		
Pt 3926, 100 Ω	(-200 to 0) ˚C	0.06 ˚C		
	(0 to 100) ˚C	0.08 ˚C		
	(100 to 300) ˚C	0.11 ˚C		
	(300 to 400) ˚C	0.12 ˚C		
	(400 to 630) ˚C	0.14 ˚C		
Capacitance - Source				
10 Hz to 10 kHz	(200 to 400) pF	6 mF/F + 12 pF		
10 Hz to 10 kHz	400 pF to 1.1 nF	6 mF/F + 12 pF		
10 Hz to 3 kHz	(1.1 to 3.3) nF	6 mF/F + 12 pF		
10 Hz to 1 kHz	(3.3 to 11) nF	3 mF/F + 13 pF		
10 Hz to 1 kHz	(11 to 33) nF	3 mF/F + 0.12 nF		
10 Hz to 1 kHz	(33 to 110) nF	3 mF/F + 0.14 nF		
10 Hz to 1 kHz	(110 to 330) nF	3 mF/F + 0.43 nF		
(10 to 600) Hz	330 nF to 1.1 µF	3 mF/F + 1.5 nF		
(10 to 300) Hz	(1.1 to 3.3) µF	3 mF/F + 4.1 nF		
(10 to 150) Hz	(3.3 to 11) µF	3 mF/F + 14 nF		
(10 to 120) Hz	(11 to 33) µF	4.8 mF/F + 41 nF		
(10 to 80) Hz	(33 to 110) µF	5.4 mF/F + 0.16 µF		

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Capacitance - Measure (1 to 100) kHz 300 Hz to 100 kHz (50 to 100) kHz (50 to 200) kHz 50 Hz to 10 kHz 50 Hz to 1 kHz	100 pF to 1 nF (1 to 10) nF (10 to 100) nF 100 to 1 µF (1 to 10) µF (10 to 100) µF	1.3 mF/F + 0.013 pF 1.3 mF/F + 0.17 pF 1.2 mF/F + 2.7 pF 1.2 mF/F + 0.14 nF 1.2 mF/F + 1.1 nF 1.2 mF/F + 1.7 nF	Fluke PM6304	OEM and GIDEP Sourced Procedures
Capacitance - Source (Fixed Values @ 1 kHz)	1 nF 10 nF 100 nF 1 µF	0.8 pF 14 pF 0.14 nF 0.65 nF	Genrad 1409	
Inductance - Source 100 Hz to 10 kHz	100 µH 1 mH 20 mH 100 mH @ (0.1 to 1) kHz 101.88 mH @ 10 kHz	0.85 µH 18 µH 27 µH 0.13 mH 0.15 mH	Genrad 1482-B Genrad 1482-E Genrad 1482-J Genrad 1482-L	
Inductance - Measure (2 to 100) kHz 300 Hz to 100k Hz 100 Hz to 100 kHz (50 to 100) kHz 50 Hz to 10 kHz 50 Hz to 2 kHz	100 µH to 1 mH (1 to 10) mH (10 to 100) mH 100 mH to 1 H (1 to 10) H (10 to 100) H	1.2 mH/H + 23 nH 1.2 mH/H + 0.27 µH 1.2 mH/H + 3.3 µH 1.3 mH/H + 27 µH 1.3 mH/H + 1.1 µH 1.3 mH/H + 3.5 mH	Fluke PM6304	
Oscilloscopes Amplitude Square Wave 50 Ω Load 1 MΩ Load Leveled Sine Wave Time Marker into 50 Ω	 1 mV to 6.6 V p-p 10 Hz to 10 kHz 1 mV to 130 V p-p 10 Hz to 10 kHz **[5 mV to 5.5 V]** 50 kHz to 100 MHz (100 to 300) MHz (300 to 500) MHz (500 to 600) MHz 1 ns to 50 ms 20 ms to 5 s	 3 mV/V + 0.96 mV 3 mV/V + 1.8 mV 42 mV/V + 1.4 mV 48 mV/V + 1.4 mV 66 mV/V + 1.4 mV 72 mV/V + 1.4 mV 1 µs/s + 60 ns 3 µs/s + 9 µs	Fluke 5800	

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
DC Power - Source	Up to 3.06 kW (3.06 to 20.91) kW	20 µW/W + 0.39 W 50 µW/W + 3.1W	Fluke 5522A	OEM and GIDEP Sourced Procedures
AC Power - Source (45 to 65 Hz)	Up to 336.6 W 336.6 W to 2.244 kW (2.244 to 4.59) kW (4.59 to 20.91) kW	50 µW/W + 0.39 W 60 µW/W + 2.8 W 90 µW/W + 2.8 W 50 µW/W + 2.8 W		
Phase	(10 to 500) Hz 500 Hz to 1 kHz (1to 5) kHz (5 to 10) kHz (10 to 30) kHz	1.4° 1.5° 2.2° 3.7° 6.9°		

II. Electromagnetic - RF/Microwave

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
RF Power/Gain - Measure*	(10 to 20) MHz (20 to 50) MHz (50 to 100) MHz 100 MHz to 1 GHz (1 to 4) GHz (4 to 8) GHz (8 to 18) GHz	2.1 % 1.8 % 1.4 % 1.2 % 1.2 % 1.4 % 2.5 %	F1109, 1805B TEGAM	DOD Midas, OEM and GIDEP Sourced Procedures
Frequency Modulation - Measure	Rate: 20 Hz to 10 kHz Deviation: ≤ 40 kHz peak 250 kHz to 10 MHz Rate: 20 Hz to 10 kHz Deviation: ≤ 400 kHz peak 10 MHz to 1.3 GHz	2.4 % + 210 Hz 1.2 % + 210 Hz	HP 8902A w/11722A	
Amplitude Modulation - Measure	Rate: 50 Hz to 10 kHz Depths;(5 to 99) % 150 kHz to 10 MHz Rate 10 MHz to 1.3 GHz Depths (5 to 99) % 50 Hz to 50 kHz	2.4 % + 0.19 % depth 1.2 % + 0.19 % depth		

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Phase Modulation - Measure	Rate: 200 Hz to 10 kHz 150 kHz to 10 MHz Rate: 200 Hz to 20 kHz 10 MHz to 1.3 GHz	4.8 % + 0.32 rad 3.6 % + 0.32 rad	HP 8902A w/11722A	DOD Midas, OEM and GIDEP Sourced Procedures
RF Power - Measure	**(+30 to -20) dBm** 100 kHz to 2.6 GHz **(+20 to -30) dBm** 100 kHz to 4.2 GHz 50 MHz to 26.5 GHz	0.1 dB 4.9 % 3.1 %	HP 8902A with HP 11722A HP 8482A HP 8485A	
Tuned RF Power Relative - Measure	**2.5 MHz to 1.3 GHz** (0 to -10) dB (-10 to -40) dB (-40 to -50) dB (-50 to -80) dB (-80 to -90) dB (-90 to -110) dB (-110 to -127) dB	 0.03 dB 0.06 dB 0.13 dB 0.18 dB 0.16 dB 0.43 dB 0.44 dB	HP 8902A w/11722A	
RF Power - Source	**10 MHz to 2 GHz** (13 to 10) dBm (10 to -10) dBm (-10 to -60) dBm (-60 to -110) dBm **2 to 20 GHz** (13 to 10) dBm (10 to -10) dBm (-10 to -60) dBm (-60 to -110) dBm **20 GHz to 26.5 GHz** (13 to- 10) dBm (-10 to -60) dBm (- 60 to -1) dBm	 1.5 dB 0.73 dB 1.1 dB 1.7 dB 1.6 dB 0.84 dB 1.2 dB 1.8 dB 1.1 dB 1.5 dB 1.8 dB	HP 83630A	

III. Time & Frequency

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Chronometers, Stopwatches, Timers	1 ms to 100 000 s	0.12 ms	HP 53131A	OEM and GIDEP Sourced Procedures
Time - Source	1 ms to 100 000 s	(4.8×10^{-3}) µs	HP 53131A	
Frequency - Measure	150 kHz to 1.3 GHz DC to 3.2 GHz	(2.4×10^{-8}) Hz + 2R (9.4×10^{-6}) Hz + 2R	HP 8902A HP 53131A	
Frequency - Source	(0.01 to 120) Hz 120 Hz to 1.2 kHz (1.2 to 120) kHz 120 kHz to 1.2 MHz (1.2 to 2) MHz 2MHz to 6 GHz 10 MHz to 26.5 GHz	3 µHz/Hz + 61 µHz 3 µHz/Hz + 61 µHz 3 µHz/Hz + 120 µHz 3 µHz/Hz + 10 mHz 3 µHz/Hz + 12 mHz 1.3 µHz/Hz + 0.02 Hz (1.2×10^{-7}) Hz + R	Fluke 5520 HP E4438C HP 83630A	

IV. Thermodynamic

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Humidity	(0 to 90) %RH	1.2 %RH	Vaisala MI70/HMP76B	OEM and GIDEP Sourced Procedures
Temperature - Source (Black Body)	(50 to 100) °C (100 to 500) °C (100 to 1 200) °C	0.63 °C 1.0 °C 2.5 °C	Hart Scientific 9132 Isotech Pegasus R970	
Temperature Measurement	(-200 to 0) °C (0 to 100) °C (100 to 300) °C (300 to 420) °C (420 to 650) °C (650 to 1 200) °C	0.03 °C 0.05°C 0.07 °C 0.11 °C 0.14 °C 0.1 %+ 1.4 °C	Fluke 1523 w/ 5628 PRT Pegasus Type R Thermocouple	
Dew Point	(-40 to 60) °C	2.51 °C	Vaisala Mi70	

V. Mechanical

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Force - Tension/Compression	Up to 500 lbf Up to 1 000 lbf (1 000 to 5 000) lbf (5 000 to 10 000) lbf (10 000 to 50 000) lbf	0.26 lbf 0.68 lbf 6.3 lbf 24 lbf 60 lbf	FSH01043 LSB 352 FSH01065 LSB 400 Futek L2901 Futek	DOD Midas, OEM and GIDEP Sourced Procedures
Scales/Balances	Up to 50 g (50 to 200) g 200 g to 10 kg (10 to 500) kg 25kg to 1000 kg	0.046 mg + 0.6R 0.1 mg + 0.6 R 88.32 mg + 0.6 R 4.5 g + 0.6R (2.7 M) g +0.6R	Class F Weights	
Torque - Measure	Up to 20 in-oz 50 in•lb 250 in•lb 1 000 in•lb 250 ft•lb 1 000 ft•lb	0.5 % rdg + 0.38 in-oz 0.33 % rdg + 0.006 in•lb 0.31 % rdg + 0.04 in•lb 0.31 % rdg + 0.12 in•lb 0.31 % rdg + 1.9 ft•lb 0.31 % rdg + 0.88 ft•lb	Futek Torque Cell 950 DT CDI 1000-F-TTP-CDI	
Torque - Source	(0.07 to 0.28) Nm (0.28 to 8.47) Nm (8.47 to 16.93) Nm (16.93 to 56.44) Nm (56.44 to 67.71) Nm (67.71 to 225.7) Nm (225.7 to 1 221.05) Nm	0.054 % + 0.00018 Nm 0.053 % + 0.0015 Nm 0.015 % + 0.0021 Nm 0.0075 % + 0.022 Nm 0.0029 % + 0.021 Nm 0.0074 % +0.025 Nm 0.0025 % +0.02 Nm	Calibration Arms and Weights	
Pressure - Measure	(-14.7 to 300) psig (15 to 1 000) psig (1 000 to 10 000) psig (0.25 to 2.5) psig	0.09 psi 0.32 psig 3.8 psi 0.0008 psi	Druck DPI 610, Druck PDCR 2200-1000 psi, Druck PDCR 2200, Druck PDCR2200-A145	
Pressure Source	(-14 to -0.43) psig (0 to 1 000) psig (90 to 10 000) psig	0.016 % + 0.0005 psig 0.016 % + 0.0012 psig 0.006 % + 0.008 psig	Mensor CPB5000 Mensor CPB5800	
Sound - Source	114 dB @ 1 kHz (30 to 140) dB	1.3 dB 0.43 dB	Quest QC-10 Quest 2400	
Tachometer (Stroboscope)	Up to 100 rpm (100 to 1 000) rpm (1 000 to 99 999) rpm	0.03 % + 0.014 rpm 0.03 % + 0.14 rpm 0.0 3% + 1.4 rpm	Amprobe TACH20 Ametek TACH20	

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Air Flow	(0 to 30) sccm (30 to 300) sccm (1 to 10) slm (10 to 100) slm (100 to 1 000) slm (0 to 200) sccm	1.35 % rdg + 0.01 sccm 1.35 % rdg + 0.1 sccm 1.35 % rdg + 0.001 slm 1.35 % rdg + 0.01 slm 1.35 % rdg + 0.91 slm 1% rdg + 2 sccm	CME 60B-1-.3-10A Uson Testra 1100	DOD Midas, OEM and GIDEP Sourced Procedures
Air Velocity	(100 to 6 800) fpm	1.3 % + 41 fpm	Omega HHF710-P1-137-0166	
Mass	1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg 25 kg	0.13 mg 0.15 mg 0.17 mg 0.21 mg 0.24 mg 0.42 mg 0.52 mg 0.65 mg 0.74 mg 1.1 mg 1.3 mg 1.8 mg 2.4 mg 4.8 mg 12 mg 24 mg 48 mg 84 mg 0.14 g 0.25 g 0.61 g 3.1 g	Troemner Class F Weights and Balances	DOD Midas, OEM and GIDEP Sourced Procedures NIST 105-1 Handbook Up to Class F only
Surface Plates Repeatability Flatness	Up to 1 in Up to 1 000 arc sec	34 µin /step 12 N arc sec	Rahn Repeat-o-Meter Federal Level System	
Surface Finish - Source	118 µin	2.6 µin	178-602	DOD Midas, OEM and GIDEP Sourced Procedures
Surface Finish - Measure	(0 to 300) µin	5.6 µin	SJ-201 Mitutoyo	

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Vibration	(7 to 100) Hz 100 Hz to 5 kHz (5 to 10) kHz	3.5 % + 0.03 gpk 3.1 % + 0.03 gpk 3.6 % + 0..03 gpk	9100 D Portable Vibration Calibrator	DOD Midas, OEM and GIDEP Sourced Procedures
Leak Standards	0.3175 sccm @ 6.22 psi 0.3921 sccm @ 8.68 psi 0.5545 sccm @ 11.12psi 0.6608 sccm @ 13.08 psi 0.7616 sccm @14.56 psi 0.4350 sccm @ 5.38 psi 0.6411 sccm @ 7.49 psi 0.9769 sccm @ 10.54psi 1.3161 sccm @ 13.30psi 1.6584 sccm @ 15.79psi 1.6813 sccm @ 4.30psi 3.0969 sccm @ 7.27psi 4.8716 sccm @ 10.51psi 6.2687 sccm @ 12.80psi 8.2315 sccm @ 15.76psi 3.4512 sccm @ 4.39psi 5.9868 sccm @ 48.81psi 9.4685 sccm @ 10.35psi 12.7553 sccm @ 13.15psi 15.6443 sccm @ 15.46psi (0.803 to 1.017) sccm (-6.5 to -10.35) psi (31.25 to 102.06) sccm (5.62 to 15.84) psi (35.33 to 113.43) sccm (5.73 to 16.15) psi	0.008 sccm 0.008 sccm 0.009 sccm 0.009 sccm 0.010 sccm 0.007 sccm 0.009 sccm 0.012 sccm 0.015 sccm 0.019 sccm 0.018 sccm 0.032 sccm 0.050 sccm 0.063 sccm 0.083 sccm 0.036 sccm 0.061 sccm 0.096 sccm 0.130 sccm 0.160 sccm 1.21 % + 0.17 sccm 1.21 % + 0.16 sccm 1.21 % + 0.16 sccm	American Specialty Gold Restrictor	
Leak Tester	(0 to 200) sccm	1 % rdg. + 2 sccm	Uson Testra 1100	

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Hardness	49.20 HRC 62.42 HRC 27.11 HRC 29.51 HR45N 47.37 HR45N 70.07 HR45N 82.57 HRBW 62.56 HRBW 45.28 HRBW 82.41 HR30TW 59.90 HR30TW 54.51 HR30TW 91.10 HR15N 81.10 HR15N 74.04 HR15N 92.21 HR15TW 81.07 HR15TW 75.69 HR15TW 76.15 HREW 89.62 HREW 97.23 HREW 712 HK 714 HV 117 HV 393 HV 100HBW 10/500 142HBW 10/3000 163HBW 10/500 197 HBW 3000 239 HBW 10/500 248 HBW 10/3000	1.2 HRC 0.68 HRC 1.2 HRC 1.3 HR45N 1.3 HR45N 0.75 HR45N 1.3 HRBW 1.5 HRBW 2.1 HRBW 1.2 HR30TW 1.2 HR30TW 1.4 HR30TW 0.77 HR15N 1.1 HR15N 1.2 HR15N 1.13 HR15TW 1.13 HR15TW 1.23 HR15TW 1.3 HREW 1.4 HREW 1.3 HREW 36 HK 35 HV 24 HV 28 HV 4.3 HBW 5.7 HBW 7.9 HBW 8.7 HBW 9 HBW 14 HBW	Qualitest USA, L C/David L Ellis Co Buehler	DOD Midas, OEM and GIDEP Sourced Procedures ASTM E18 ASTM E384 ASTM E10
Shore Hardness Type - M Type - A Type - D	37.7 to 87.6 31.8 to 89.4 19.1 to 82.5	3.8 3. 8 3. 8	Shore M TB kit Shore A TB kit Rex D TBK	

VI. Dimensional

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Plug Gages*	(0.05 to 0.5) in (0.5 to 1) in (1 to 2.5) in (2.5 to 4) in (4 to 12) in	(6.5 + 2.6L) µin (7.8 + 2.3L) µin (11 + 4.6L) µin (18 + 3L) µin (13 + 7.7L) µin	Pratt & Whitney Labmaster	OEM and GIDEP Sourced Procedures
Ring Gages*	(0.5 to 1) in (1 to 4) in (4 to 10) in (10 to 40) in	(9 + 19.6L) µin (8.1 + 8.4L) µin (11 + 10.7L) µin [26 + 13 (L-10)] µin		
Gage Blocks*	(0.05 to 1) in (1 to 4) in 6 in 10 in (10 to 40) in	(4 + 0.8L) µin (3.1 + 1.7L) µin 14 µin 23 µin [9.7 + 13 (L-10)] µin		
Thread Plug Gages*	(0.05 to 1) in (1 to 2) in (2 to 12) in (10 to 40) in	100 µin 100 µin 130 µin [68 + 13 (L-10)] µin		
Thread Ring Gages*	(0.19 to 1) in (1 to 2) in (2 to 10) in (10 to 40) in	38 µin 40 µin 77 µin [60 + 13 (L-10)] µin		
OD Micrometers	Up to 12 in	(66 + 9.6L) µin	Grade 2 Gage Blocks	
ID Micrometers	Up to 12 in (12 to 40) in	(66 + 9.5L) µin (150 + 10L) µin		
Calipers	Up to 12 in (12 to 40) in (40 to 80) in (80 to 120) in	(610 + 1.1L) µin (630 + 4.3L) µin (940 + 0.25L) µin (1 000 + 7.5L) µin		
Dial Indicators	Up to 4 in	(62 + 5.6L) µin		
Test Indicators	Up to 0.06 in	(6.2 + 4.4L) µin		

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Height Gages	Up to 12 in (12 to 40) in	(130 + 7L) µin (130 + 13L) µin	Grade 2 Gage Blocks	OEM and GIDEP Sourced Procedures
Optical Length	(0 to 50) mm (50 to 100) mm	(2.1 + 0.005L) µm (2.6 + 0.005L) µm	172-116 Glass Scale 182-512-10 Glass Scale	
Optical Flat - Flatness	Up to 4 in	9.6 µin	157-112 157-111 157-110 157-109	
Distance Measurement	Up to 1 200 in	0.06 in	Fluke 416D	
Protractor/Angle	(30 to 90)°	2.0 arc min	Angle Block Set	
Square/Block Parallelism	(-0.01 to 0.10) in	21 µin	Federal Head/832 Amplifier	

VII. Chemical Quantities

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
pH	4.011 pH 6.987 pH 10.03 pH	0.04 pH 0.04 pH 0.03 pH	pH Solutions	OEM and GIDEP Sourced Procedures
Viscosity @ 25 °C	7.239 cp 100.9 cp 498.1 cp 717.7 cp 4 595 cp 7 686 cp 200 050 cp	0.26 cp 1.1 cp 5.1 cp 7.4 cp 48 cp 80 cp 210 cp	Standard Solutions: S6 S60 D500 N350 S2000 D7500 S8000	

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Conductivity	2 µmhos/cm 10 µmhos/cm 100 µmhos/cm 1 000 µmhos/cm 1 400 µmhos/cm 10 000 µmhos/cm 100 000 µmhos/cm	0.25 µmhos/cm 1.2 µmhos/cm 15 µmhos/cm 120 µmhos/cm 180 µmhos/cm 2 200 µmhos/cm 8 000 µmhos/cm	Conductivity Solutions	OEM and GIDEP Sourced Procedures

VIII. Dimensional Inspection/Measurement

PARAMETER/ EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY (+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Dimensional* (CMM)	X axis to 705 mm Y axis to 1 005 mm Z axis to 605 mm	(7.6 + 4.6L/1 000) um	Mitutoyo CRTAS7106 with TP20 Probe	Costumer Print or Report

Notes:

1. *Calibration and Measurement Capabilities (CMC) (Expanded Uncertainties) are based on approximately a 95% confidence interval, using a coverage of k=2.*
2. *This laboratory offers calibration services in its laboratories and on-site at customer-designated locations. Since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.*
3. *Capabilities denoted with an asterisk (*) cannot be performed on-site.*
4. *This scope also applies to the laboratory's satellite sites at:*
   - *(1) MEXICALI, .B.C .- Calle Gales 1201 Fracc. Villa Fontana, Mexicali, B.C. C.P. 21180. Contact: Mauricio Garayzar. Tels: 01(686) 555-1660, 557-6117. Fax: 01(686) 555-1766 mxl_sales@techmastermx.com*
   - *(2) CD JUAREZ, CHIHUAHUA .- Blvd. Gomez Morin 9050-L8, Col. Partido Senecu, C.P. 32469, Tel 01(656) 687-2471,648-1181 ventasjuarez@techmastermx.com*
   - *(3) Monterrey, NL.- Ave. Ignacio Morones Prieto No. 914 Ote. Int. 112 Col. La Huerta C.P. 67144 Guadalupe, Nuevo León Tels: 01(81)1334-0701 monterrey@techmastermx.com*

   Only one certificate and scope of accreditation is issued with the corporate organization's address.
5. *The use of (R) signifies an expression of the Resolution of the unit under test or monitoring device.*
6. *The use of (L) refers to Length.*
7. *For surface plate flatness, (N) is the length of the surface plate in inches divided by 4.*
8. *This scope is formatted as part of a single document including the Certificate of Accreditation AC-1342.*

Vice President