



# CERTIFICATE OF ACCREDITATION

## ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

### **DGI Metrology/Dimensional Gauge Company**

**2144 Highway 292**

**Inman, SC 29349**

has been assessed by ANAB  
and meets the requirements of international standard

## **ISO/IEC 17025:2005**

and national standard

## **ANSI/NCSL Z540-1-1994**

while demonstrating technical competence in the field of

## **CALIBRATION**

Refer to the accompanying Scope of Accreditation for information regarding the types of calibrations to which this accreditation applies.

AC-1216  
Certificate Number

  
ANAB Approval

Certificate Valid: 02/20/2017-03/04/2018  
Version No. 003 Issued: 02/20/2017



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).



# ANSI-ASQ National Accreditation Board

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

### DGI Metrology/Dimensional Gauge Company

2144 Hwy 292 Inman, SC 29349

Jim Bible Phone: 864-473-1188

Jbible@dimensionalgauge.com www.dimensionalgauge.com

### CALIBRATION

Valid to: March 4, 2018

Certificate Number: AC-1216

#### I. Electromagnetic - DC/Low Frequency

| PARAMETER / EQUIPMENT | RANGE                                                                                                                                             | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                                                                                                                         | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                      |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------|
| DC Voltage - Source   | Up to 330 mV<br>330 mV to 3.3 V<br>(3.3 to 33) V<br>(30 to 330) V<br>330 V to 1.02 kV                                                             | 17.9 $\mu$ V/V + 667 nV<br>9.1 $\mu$ V/V + 1.3 $\mu$ V<br>9.5 $\mu$ V/V + 13.3 $\mu$ V<br>13.3 $\mu$ V/V + 100 $\mu$ V<br>12.2 $\mu$ V/V + 1 mV                                                                                              | Fluke 5522A                     | Industry-Recognized or Manufacturer Procedures |
| DC Voltage - Measure  | (0 to 100) mV<br>100 mV to 1 V<br>(1 to 10) V<br>(10 to 100) V<br>100 to 1000 V                                                                   | 9.0 $\mu$ V/V + 0.3 $\mu$ V<br>8.0 $\mu$ V/V + 0.3 $\mu$ V<br>8.0 $\mu$ V/V + 0.6 $\mu$ V<br>10.0 $\mu$ V/V + 30.8 $\mu$ V<br>10.0 $\mu$ V/V + 0.1 mV                                                                                        | Agilent 3458A                   |                                                |
| DC Current - Source   | Up to 30 $\mu$ A<br>330 $\mu$ A to 3.3 mA<br>(3.3 to 33) mA<br>(33 to 330) mA<br>330 mA to 1.1 A<br>(1.1 to 3) A<br>(3 to 11) A<br>(11 to 20.5) A | 102 $\mu$ A/A + 13.3 nA<br>67.5 $\mu$ A/A + 33.3 nA<br>67.2 $\mu$ A/A + 167 nA<br>66.9 $\mu$ A/A + 1.7 $\mu$ A<br>134 $\mu$ A/A + 26.7 $\mu$ A<br>254 $\mu$ A/A + 26.7 $\mu$ A<br>334 $\mu$ A/A + 333 $\mu$ A<br>667 $\mu$ A/A + 500 $\mu$ A | Fluke 5522A                     |                                                |
| DC Current - Measure  | Up to 100 nA<br>1 $\mu$ A<br>10 $\mu$ A<br>100 $\mu$ A<br>1 mA<br>10 mA<br>100 mA<br>1 A                                                          | 30.0 $\mu$ A/A + 0.04 nA<br>20.0 $\mu$ A/A + 0.04 nA<br>20.0 $\mu$ A/A + 0.1 nA<br>20.0 $\mu$ A/A + 0.81 nA<br>20.0 $\mu$ A/A + 5.19 nA<br>20.0 $\mu$ A/A + 51.88 nA<br>35.0 $\mu$ A/A + 0.52 $\mu$ A<br>110.0 $\mu$ A/A + 10.10 $\mu$ A     | Agilent 3458A                   |                                                |
|                       |                                                                                                                                                   |                                                                                                                                                                                                                                              |                                 |                                                |



| PARAMETER / EQUIPMENT                              | RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                            |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------|
| DC Current - Source<br>Non-Toroidal-type<br>Clamps | (10 to 16.5) A<br>(16.5 to 55) A<br>(55 to 150) A<br>(150 to 1 025) A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3.3 mA/A + 2.31 mA<br>7.3 mA/A + 17.8 mA<br>3 mA/A + 17.8 mA<br>3.1 mA/A + 76.4 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Fluke 5522A<br>with 5500A Coil  | Industry-Recognized<br>or Manufacturer<br>Procedures |
| DC Current - Source<br>Toroidal-type clamps        | (10 to 16.5) A<br>(16.5 to 55) A<br>(55 to 150) A<br>150 A to 1.025 kA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6.0 mA/A + 23.1 mA<br>8.9 mA/A + 162 mA<br>5.8 mA/A + 162 mA<br>5.9 mA/A + 580 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                 |                                                      |
| AC Voltage - Source                                | <b>(1 to 33) mV</b><br>(10 to 45) Hz<br>45 Hz to 10 kHz<br>(10 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br>(100 to 500) kHz<br><b>(33 to 330) mV</b><br>(10 to 45) Hz<br>45 Hz to 10 kHz<br>(10 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br>(100 to 500) kHz<br><b>330 mV to 3.3 V</b><br>(10 to 45) Hz<br>45 Hz to 10 kHz<br>(10 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br>(100 to 500) kHz<br><b>(3.3 to 33) V</b><br>(10 to 45) Hz<br>45 Hz to 10 kHz<br>(10 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br><b>(33 to 330) V</b><br>45 Hz to 1 kHz<br>(1 to 10) kHz<br>(10 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br><b>330 V to 1.02 kV</b><br>45 Hz to 1 kHz<br>(1 to 5) kHz<br>(5 to 10) kHz | 534 µV/V + 4 µV<br>102 µV/V + 4 µV<br>135 µV/V + 4 µV<br>667 µV/V + 4 µV<br>2.3 mV/V + 8 µV<br>5.3 mV/V + 33.3 µV<br>201 µV/V + 5.3 µV<br>98.3 µV/V + 5.3 µV<br>108 µV/V + 5.3 µV<br>234 µV/V + 5.3 µV<br>533 µV/V + 21.3 µV<br>1.3 mV/V + 46.7 µV<br>200 µV/V + 33.3 µV<br>102 µV/V + 40 µV<br>129 µV/V + 40 µV<br>201 µV/V + 33.3 µV<br>467 µV/V + 83.3 µV<br>1.6 mV/V + 400 µV<br>201 µV/V + 533 µV<br>101 µV/V + 400 µV<br>161 µV/V + 400 µV<br>234 µV/V + 400 µV<br>600 µV/V + 1.1 mV<br>128 µV/V + 1.3 mV<br>135 µV/V + 4 mV<br>168 µV/V + 4 mV<br>201 µV/V + 4 mV<br>1.3 mV/V + 33.3 mV<br>201 µV/V + 6.7 mV<br>201 µV/V + 6.7 mV<br>201 µV/V + 6.7 mV | Fluke 5522A                     |                                                      |

| PARAMETER / EQUIPMENT | RANGE                                                                                                                                                                                                          | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                                                                                                                                                | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                      |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------|
| AC Voltage - Measure  | <b>0 to 10 mV</b><br>(1 to 40) Hz<br>40 Hz to 1 kHz<br>(1 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br>(100 to 300) kHz<br>300 kHz to 1 MHz<br>(1 to 4) MHz<br>(4 to 8) MHz                              | 0.30 mV/V + 3.00 µV<br>0.20 mV/V + 1.10 µV<br>0.30 mV/V + 1.10 µV<br>1.00 mV/V + 1.10 µV<br>5.00 mV/V + 1.10 µV<br>40.00 mV/V + 20.00 µV<br>12.00 mV/V + 50.00 µV<br>70.00 mV/V + 70.00 µV<br>200.00 mV/V + 80.00 µV                                                | Agilent 3458A                   | Industry-Recognized or Manufacturer Procedures |
|                       | <b>100 mV</b><br>(1 to 40) Hz<br>40 Hz to 1 kHz<br>(1 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br>(100 to 300) kHz<br>300 kHz to 1 MHz<br>(1 to 2) MHz<br>(2 to 4) MHz<br>(4 to 8) MHz<br>(8 to 10) MHz | 0.08 mV/V + 4.00 µV<br>0.08 mV/V + 2.00 µV<br>0.14 mV/V + 2.00 µV<br>0.30 mV/V + 2.00 µV<br>0.8 mV/V + 2.00 µV<br>3.00 mV/V + 10.00 µV<br>10.00 mV/V + 10.00 µV<br>15.00 mV/V + 10.00 µV<br>40.00 mV/V + 70.00 µV<br>40.00 mV/V + 80.00 µV<br>150.0 mV/V + 100.0 µV |                                 |                                                |
|                       | <b>1 V</b><br>(1 to 40) Hz<br>40 Hz to 1 kHz<br>(1 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br>(100 to 300) kHz<br>300 kHz to 1 MHz<br>(1 to 2) MHz<br>(2 to 4) MHz<br>(4 to 8) MHz<br>(8 to 10) MHz    | 0.08 mV/V + 0.04 mV<br>0.08 mV/V + 0.02 mV<br>0.14 mV/V + 0.02 mV<br>0.30 mV/V + 0.02 mV<br>0.80 mV/V + 0.02 mV<br>3.00 mV/V + 0.10 mV<br>10.00 mV/V + 0.10 mV<br>15.00 mV/V + 0.10 mV<br>40.00 mV/V + 0.70 mV<br>40.00 mV/V + 0.80 mV<br>150 mV/V + 1.00 mV        |                                 |                                                |
|                       | <b>10 V</b><br>(1 to 40) Hz<br>40 Hz to 1 kHz<br>(1 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br>(100 to 300) kHz<br>300 kHz to 1 MHz<br>(1 to 2) MHz<br>(2 to 4) MHz<br>(4 to 8) MHz<br>(8 to 10) MHz   | 0.08 mV/V + 0.40 mV<br>0.08 mV/V + 0.20 mV<br>0.14 mV/V + 0.20 mV<br>0.30 mV/V + 0.20 mV<br>0.80 mV/V + 0.20 mV<br>3.00 mV/V + 1.00 mV<br>10.00 mV/V + 1.00 mV<br>15.00 mV/V + 1.00 mV<br>40.00 mV/V + 7.00 mV<br>40.00 mV/V + 8.00 mV<br>150 mV/V + 10.00 mV       |                                 |                                                |



| PARAMETER / EQUIPMENT | RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                      |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------|
| AC Voltage - Measure  | <b>100 V</b><br>(1 to 40) Hz<br>40 Hz to 1 kHz<br>(1 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br>(100 to 300) kHz<br>300 kHz to 1 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.20 mV/V + 4.00 mV<br>0.20 mV/V + 2.00 mV<br>0.20 mV/V + 2.00 mV<br>0.35 mV/V + 2.00 mV<br>1.20 mV/V + 2.00 mV<br>4.00 mV/V + 30.00 mV<br>15.00 mV/V + 100.00 mV                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Agilent 3458A                   |                                                |
|                       | <b>1000 V</b><br>(1 to 40) Hz<br>40 Hz to 1 kHz<br>(1 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.40 mV/V + 40.00 mV<br>0.40 mV/V + 20.00 mV<br>0.60 mV/V + 20.00 mV<br>1.20 mV/V + 20.00 mV<br>3.00 mV/V + 20.00 mV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                 |                                                |
| AC Current – Source   | <b>(29 to 330) µA</b><br>(10 to 20) Hz<br>(20 to 45) Hz<br>45 Hz to 1 kHz<br>(1 to 5) kHz<br>(5 to 10) kHz<br>(10 to 30) kHz<br><b>330 µA to 3.3 mA</b><br>(10 to 20) Hz<br>(20 to 45) Hz<br>45 Hz to 1 kHz<br>(1 to 5) kHz<br>(5 to 10) kHz<br>(10 to 30) kHz<br><b>(3.3 to 33) mA</b><br>(10 to 20) Hz<br>(20 to 45) Hz<br>45 Hz to 1 kHz<br>(1 to 5) kHz<br>(5 to 10) kHz<br>(10 to 30) kHz<br><b>(33 to 330) mA</b><br>(10 to 20) Hz<br>(20 to 45) Hz<br>45 Hz to 1 kHz<br>(1 to 5) kHz<br>(5 to 10) kHz<br>(10 to 30) kHz<br><b>330 mA to 1.1 A</b><br>(10 to 45) Hz<br>45 Hz to 1 kHz<br>(1 to 5) kHz<br>(5 to 10) kHz | 1.35 mA/A + 66.7 nA<br>1 mA/A + 66.7 nA<br>830 µA/A + 66.7 nA<br>2 mA/A + 100 nA<br>5.33 mA/A + 133 nA<br>10.7 mA/A + 267 nA<br>1.35 mA/A + 100 nA<br>850 µA/A + 100 nA<br>670 µA/A + 100 nA<br>1.33 mA/A + 133 nA<br>3.33 mA/A + 200 nA<br>6.67 mA/A + 400 nA<br>1.2 mA/A + 1.3 µA<br>600 µA/A + 1.3 µA<br>270 µA/A + 1.3 µA<br>530 µA/A + 1.3 µA<br>1.33 mA/A + 2 µA<br>2.67 mA/A + 2.7 µA<br>1.2 mA/A + 13.3 µA<br>600 µA/A + 13.3 µA<br>270 µA/A + 13.3 µA<br>670 µA/A + 33.3 µA<br>1.33 mA/A + 66.7 µA<br>2.67 mA/A + 133 µA<br>1.2 mA/A + 66.7 µA<br>330 µA/A + 66.7 µA<br>4 mA/A + 667 µA<br>16.7 mA/A + 3.3 mA | Fluke 5522A                     | Industry-Recognized or Manufacturer Procedures |

| PARAMETER / EQUIPMENT          | RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                      |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------|
| AC Current - Source<br>(cont.) | <b>(1.1 to 3) A</b><br>(10 to 45) Hz<br>45 Hz to 1 kHz<br>(1 to 5) kHz<br>(5 to 10) kHz<br><b>(3 to 11) A</b><br>(45 to 100) Hz<br>100 Hz to 1 kHz<br>(1 to 5) kHz<br><b>(11 to 20.5) A</b><br>(45 to 100) Hz<br>100 Hz to 1 kHz<br>(1 to 5) kHz                                                                                                                                                                                                                                                                                                                                                                                                                          | 1.2 mA/A + 66.7 µA<br>400 µA/A + 66.7 µA<br>4.01 mA/A + 667 µA<br>16.7 mA/A + 3.3 mA<br><br>400 µA/A + 1.3 mA<br>690 µA/A + 1.3 mA<br>20 mA/A + 1.3 mA<br><br>800 µA/A + 3.3 mA<br>1 mA/A + 3.3 mA<br>20 mA/A + 3.3 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Fluke 5522A                     | Industry-Recognized or Manufacturer Procedures |
| AC Current - Measure           | <b>Up to 100 µA</b><br>(10 to 20) Hz<br>(20 to 45) Hz<br>(45 to 100) Hz<br>100 Hz to 5 kHz<br><b>100 µA to 1 mA</b><br>(10 to 20) Hz<br>(20 to 45) Hz<br>(45 to 100) Hz<br>100 Hz to 5 kHz<br>(5 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br><b>(1 to 10) mA</b><br>(10 to 20) Hz<br>(20 to 45) Hz<br>(45 to 100) Hz<br>100 Hz to 5 kHz<br>(5 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br><b>(10 to 100) mA</b><br>(10 to 20) Hz<br>(20 to 45) Hz<br>(45 to 100) Hz<br>100 Hz to 5 kHz<br>(5 to 20) kHz<br>(20 to 50) kHz<br>(50 to 100) kHz<br><b>100 mA to 1 A</b><br>(10 to 20) Hz<br>(20 to 45) Hz<br>(45 to 100) Hz<br>(5 to 20) kHz<br>(20 to 50) kHz | 4.0 mA/A + 30 nA<br>1.5 mA/A + 30 nA<br>0.6 mA/A + 30 nA<br>0.6 mA/A + 30 nA<br><br>4.0 mA/A + 200 nA<br>1.5 mA/A + 200 nA<br>0.6 mA/A + 500 nA<br>0.3 mA/A + 0.2 uA<br>0.6 mA/A + 0.2 uA<br>4.0 mA/A + 0.4 uA<br>5.5 mA/A + 1.5 uA<br><br>4.0 mA/A + 2.0 uA<br>1.5 mA/A + 2.0 uA<br>0.6 mA/A + 2.0 uA<br>0.3 mA/A + 2.0 uA<br>4.0 mA/A + 4.0 uA<br>5.5 mA/A + 15.0 uA<br>4.0 mA/A + 20.0 uA<br><br>1.5 mA/A + 20.0 uA<br>0.6 mA/A + 20.0 uA<br>0.3 mA/A + 20.0 uA<br>0.6 mA/A + 20.0 uA<br>4.0 mA/A + 40.0 uA<br>5.5 mA/A + 150.0 uA<br>4.0 mA/A + 200.0 uA<br><br>4.0 mA/A + 200.0 uA<br>1.6 mA/A + 200.0 uA<br>0.8 mA/A + 200.0 uA<br>3.0 mA/A + 0.2 mA<br>10.0 mA/A + 0.4 mA | Agilent 3458A                   | Industry-Recognized or Manufacturer Procedures |

| PARAMETER / EQUIPMENT                              | RANGE                                                                                                                                                                                                                                                                                                          | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                                                                                                                                                                                                                                                            | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                            |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------|
| AC Current - Source<br>Non-Toroidal-type<br>Clamps | <b>(45 to 65) Hz</b><br>(10 to 16.5) A<br>(16.5 to 150) A<br>(150 to 1 025) A<br><b>(65 to 100) Hz</b><br>(10 to 16.5) A<br>(16.5 to 150) A<br>(150 to 1 025) A<br><b>(100 to 440) Hz</b><br>(10 to 16.5) A<br>(16.5 to 150) A<br>(150 to 1 025) A                                                             | 3.7 mA/A + 5.29 mA<br>4.1 mA/A + 35.12 mA<br>4 mA/A + 225.39 mA<br><br>9.3 mA/A + 5.29 mA<br>9.5 mA/A + 37.04 mA<br>9.4 mA/A + 230.94 mA<br><br>10 mA/A + 10.58 mA<br>10.9 mA/A + 104.75 mA<br>22 mA/A + 513.16 mA                                                                                                                                                              | Fluke 5522A<br>with 5500A Coil  | Industry-Recognized<br>or Manufacturer<br>Procedures |
| AC Current - Source<br>Toroidal-type Clamps        | <b>(45 to 65) Hz</b><br>(10 to 16.5) A<br>(16.5 to 150) A<br>(150 to 1 025) A<br><b>(65 to 100) Hz</b><br>(10 to 16.5) A<br>(16.5 to 150) A<br>(150 to 1 025) A<br><b>(100 to 440) Hz</b><br>(10 to 16.5) A<br>(16.5 to 150) A<br>(150 to 1 025) A                                                             | 6.7 mA/A + 34.87 mA<br>6.9 mA/A + 289.37 mA<br>10.7 mA/A + 351.19 mA<br><br>11.7 mA/A + 34.87 mA<br>11.8 mA/A + 289.37 mA<br>11.8 mA/A + 1.06 A<br><br>12.2 mA/A + 40 mA<br>13 mA/A + 305.51 mA<br>23.1 mA/A + 1.15 A                                                                                                                                                           |                                 |                                                      |
| Resistance - Source                                | Up to 11 Ω<br>(11 to 33) Ω<br>(33 to 110) Ω<br>(110 to 330) Ω<br>330 Ω to 1.1 kΩ<br>(1.1 to 3.3) kΩ<br>(3.3 to 11) kΩ<br>(11 to 33) kΩ<br>(33 to 110) kΩ<br>(110 to 330) kΩ<br>330 kΩ to 1.1 MΩ<br>(1.1 to 3.3) MΩ<br>(3.3 to 11) MΩ<br>(11 to 33) MΩ<br>(33 to 110) MΩ<br>(110 to 330) MΩ<br>330 MΩ to 1.1 GΩ | 29.9 μΩ/Ω + 670 μΩ<br>23.5 μΩ/Ω + 1 mΩ<br>21.1 μΩ/Ω + 930 μΩ<br>19.5 μΩ/Ω + 1.33 mΩ<br>19.1 μΩ/Ω + 1.33 mΩ<br>18.7 μΩ/Ω + 13.3 mΩ<br>19 μΩ/Ω + 13.3 mΩ<br>18.7 μΩ/Ω + 133.3 mΩ<br>19.1 μΩ/Ω + 133.3 mΩ<br>25.6 μΩ/Ω + 1.33 Ω<br>21.9 μΩ/Ω + 1.33 Ω<br>40.7 μΩ/Ω + 20 Ω<br>86.7 μΩ/Ω + 33.3 Ω<br>167 μΩ/Ω + 1.67 kΩ<br>334 μΩ/Ω + 2 kΩ<br>3.8 mΩ/Ω + 66.7 kΩ<br>10 mΩ/Ω + 333 kΩ | Fluke 5522A                     |                                                      |

| PARAMETER / EQUIPMENT                                                                                                                                                                                                                                                                                                  | RANGE                                                                                                                                                                                                                                                                                                                                     | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                                                                                                                                                                                                                                                                               | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------|
| Resistance - Measure                                                                                                                                                                                                                                                                                                   | Up to 10 Ω<br>100 Ω<br>1 kΩ<br>10 kΩ<br>100 kΩ<br>1 MΩ<br>10 MΩ<br>100 MΩ<br>1 G Ω                                                                                                                                                                                                                                                        | 15.0 μΩ/Ω + 0.1 mΩ<br>12.0 μΩ/Ω + 0.5 mΩ<br>10.0 μΩ/Ω + 0.3 mΩ<br>10.0 μΩ/Ω + 5.0 mΩ<br>17.2 μΩ/Ω + 0.1 Ω<br>15.0 μΩ/Ω + 2.0 Ω<br>50.0 μΩ/Ω + 0.1 kΩ<br>0.5 mΩ/Ω + 1.0 kΩ<br>5.0 mΩ/Ω + 10.0 kΩ                                                                                                                                                                                                    | Agilent 3458A                   | Industry-Recognized or Manufacturer Procedures |
| Capacitance - Source                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |                                                |
| 10 Hz to 10 kHz<br>10 Hz to 10 kHz<br>10 Hz to 3 kHz<br>10 Hz to 1 kHz<br>10 Hz to 1 kHz<br>10 Hz to 1 kHz<br>10 Hz to 1 kHz<br>(100 to 600) Hz<br>(10 to 300) Hz<br>(10 to 150) Hz<br>(10 to 120) Hz<br>(10 to 80) Hz<br>(0 to 50) Hz<br>(0 to 20) Hz<br>(0 to 6) Hz<br>(0 to 2) Hz<br>(0 to 0.6) Hz<br>(0 to 0.2) Hz | (220 to 400) pF<br>400 pF to 1.1 nF<br>(1.1 to 3.3) nF<br>(3.3 to 11) nF<br>(11 to 33) nF<br>(33 to 110) nF<br>(110 to 330) nF<br>330 nF to 1.1 μF<br>(1.1 to 3.3) μF<br>(3.3 to 11) μF<br>(11 to 33) μF<br>(33 to 110) μF<br>(110 to 330) μF<br>330 μF to 1.1 mF<br>(1.1 to 3.3) mF<br>(3.3 to 11) mF<br>(11 to 33) mF<br>(33 to 110) mF | 4.63 mF/F + 6.67 pF<br>3.74 mF/F + 6.67 pF<br>3.45 mF/F + 6.67 pF<br>2.54 mF/F + 6.67 pF<br>2.07 mF/F + 6.67 pF<br>2.54 mF/F + 6.67 pF<br>1.83 mF/F + 20 pF<br>1.69 mF/F + 670 pF<br>1.83 mF/F + 2 nF<br>1.83 mF/F + 6.67 nF<br>2.77 mF/F + 20 nF<br>3 mF/F + 66.7 nF<br>3 mF/F + 200 nF<br>3 mF/F + 670 nF<br>3.26 mF/F + 2 μF<br>3.56 mF/F + 6.67 μF<br>5.08 mF/F + 20 μF<br>7.41 mF/F + 66.7 μF | Fluke 5522A                     |                                                |
| Capacitance - Measure (Constant Current)                                                                                                                                                                                                                                                                               | Up to 2 nF<br>(2 to 20) nF<br>(20 to 200) nF<br>200 nF to 2 μF<br>(2 to 20) μF<br>(20 to 200) μF<br>200 μF to 2 mF<br>(2 to 20) mF<br>(20 to 100) mF                                                                                                                                                                                      | 13.3 mF/F + 66.7 pF<br>6.7 mF/F + 80 pF<br>6.7 mF/F + 400 pF<br>6.7 mF/F + 4 nF<br>6.7 mF/F + 40 pF<br>6.7 mF/F + 400 pF<br>6.7 mF/F + 4 μF<br>6.7 mF/F + 40 μF<br>20 mF/F + 133.3 μF                                                                                                                                                                                                              | RIGOL DM3068                    |                                                |

| PARAMETER / EQUIPMENT                            | RANGE                                                                                                               | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                         | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                      |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------|
| Electrical Simulation of Thermocouple Indicators |                                                                                                                     |                                                                                                                                              |                                 |                                                |
| Type B                                           | (600 to 800) °C<br>(800 to 1 000) °C<br>(1 000 to 1 550) °C<br>(1 550 to 1 820) °C                                  | 0.29 °C + 0.58 % rdg<br>0.23 °C + 0.58 % rdg<br>0.2 °C + 0.58 % rdg<br>0.22 °C + 0.58 % rdg                                                  |                                 |                                                |
| Type C                                           | (0 to 150) °C<br>(150 to 650) °C<br>(650 to 1 000) °C<br>(1 000 to 1 800) °C<br>(1 800 to 2 316) °C                 | 0.2 °C + 1.15 % rdg<br>0.17 °C + 1.15 % rdg<br>0.21 °C + 1.15 % rdg<br>0.33 °C + 1.15 % rdg<br>0.56 °C + 1.15 % rdg                          |                                 |                                                |
| Type E                                           | (-250 to -100) °C<br>(-100 to -25) °C<br>(-25 to 0) °C<br>(0 to 350) °C<br>(350 to 650) °C<br>(650 to 1 000) °C     | 0.33 °C + 1.15 % rdg<br>0.11 °C + 1.15 % rdg<br>0.09 °C + 1.15 % rdg<br>0.09 °C + 0.58 % rdg<br>0.11 °C + 0.58 % rdg<br>0.14 °C + 0.58 % rdg |                                 |                                                |
| Type J                                           | (-210 to -100) °C<br>(-100 to -30) °C<br>(-30 to 150) °C<br>(150 to 760) °C<br>(760 to 1200) °C                     | 0.18 °C + 0.87 % rdg<br>0.11 °C + 0.87 % rdg<br>0.09 °C + 0.87 % rdg<br>0.11 °C + 0.87 % rdg<br>0.15 °C + 0.87 % rdg                         | Fluke 5522A                     | Industry-Recognized or Manufacturer Procedures |
| Type K                                           | (-200 to -100) °C<br>(-100 to -25) °C<br>(-25 to 0) °C<br>(0 to 120) °C<br>(120 to 1 000) °C<br>(1 000 to 1 372) °C | 0.22 °C + 2.31 % rdg<br>0.12 °C + 2.31 % rdg<br>0.11 °C + 2.31 % rdg<br>0.11 °C + 0.87 % rdg<br>0.17 °C + 0.87 % rdg<br>0.27 °C + 0.87 % rdg |                                 |                                                |
| Type L                                           | (-200 to -100) °C<br>(-100 to 800) °C<br>(800 to 900) °C                                                            | 0.25 °C + 0.87 % rdg<br>0.17 °C + 0.87 % rdg<br>0.11 °C + 0.87 % rdg                                                                         |                                 |                                                |
| Type N                                           | (-200 to -100) °C<br>(-100 to -25) °C<br>(-25 to 0) °C<br>(0 to 120) °C<br>(120 to 410) °C<br>(410 to 1 300) °C     | 0.27 °C + 2.31 % rdg<br>0.15 °C + 2.31 % rdg<br>0.13 °C + 2.31 % rdg<br>0.13 °C + 0.87 % rdg<br>0.12 °C + 0.87 % rdg<br>0.18 °C + 0.87 % rdg |                                 |                                                |

| PARAMETER / EQUIPMENT                                    | RANGE                                                                                                                                                                  | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                                                                                        | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                      |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------|
| Electrical Simulation of Thermocouple Indicators (cont.) |                                                                                                                                                                        |                                                                                                                                                                                                             |                                 |                                                |
| Type R                                                   | (0 to 250) °C<br>(250 to 400) °C<br>(400 to 1 000) °C<br>(1 000 to 1 767) °C                                                                                           | 0.38 °C + 0.29 % rdg<br>0.23 °C + 0.29 % rdg<br>0.22 °C + 0.29 % rdg<br>0.27 °C + 0.29 % rdg                                                                                                                |                                 |                                                |
| Type S                                                   | (0 to 250) °C<br>(250 to 1 000) °C<br>(1 000 to 1 400) °C<br>(1 400 to 1 767) °C                                                                                       | 0.31 °C + 0.29 % rdg<br>0.24 °C + 0.29 % rdg<br>0.25 °C + 0.29 % rdg<br>0.31 °C + 0.29 % rdg                                                                                                                |                                 |                                                |
| Type T                                                   | (-250 to -150) °C<br>(-150 to 0) °C<br>(0 to 120) °C<br>(120 to 400) °C                                                                                                | 0.42 °C + 1.73 % rdg<br>0.16 °C + 1.73 % rdg<br>0.11 °C + 0.87 % rdg<br>0.09 °C + . 087 % rdg                                                                                                               |                                 |                                                |
| Type U                                                   | (-200 to 0) °C<br>(0 to 600) °C                                                                                                                                        | 0.37 °C + 1.15 % rdg<br>0.18 °C + 0.87 % rdg                                                                                                                                                                |                                 |                                                |
| Electrical Simulation of RTDs                            |                                                                                                                                                                        |                                                                                                                                                                                                             | Fluke 5522A                     | Industry-Recognized or Manufacturer Procedures |
| Pt 385 (100 Ω)                                           | (-200 to 0) °C<br>(0 to 100) °C<br>(100 to 300) °C<br>(300 to 400) °C<br>(400 to 630) °C<br>(630 to 800) °C                                                            | 0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.36 °C + 0.005 [t]<br>0.38 °C + 0.005 [t]                                                                      |                                 |                                                |
| Pt 3926 (100 Ω)                                          | (-200 to 0) °C<br>(0 to 100) °C<br>(100 to 300) °C<br>(300 to 400) °C<br>(400 to 630) °C                                                                               | 0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.36 °C + 0.005 [t]                                                                                             |                                 |                                                |
| Pt 3916 (100 Ω)                                          | (-200 to -190) °C<br>(-190 to -80) °C<br>(-80 to 0) °C<br>(0 to 100) °C<br>(100 to 260) °C<br>(260 to 300) °C<br>(300 to 400) °C<br>(400 to 600) °C<br>(600 to 630) °C | 0.38 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.38 °C + 0.005 [t] |                                 |                                                |



| PARAMETER / EQUIPMENT                 | RANGE                                                                                                           | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                   | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                      |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------|
| Electrical Simulation of RTDs (cont.) |                                                                                                                 |                                                                                                                                        |                                 |                                                |
| Pt 385 (200 Ω)                        | (-200 to 100) °C<br>(100 to 260) °C<br>(260 to 300) °C<br>(300 to 400) °C<br>(400 to 600) °C<br>(600 to 630) °C | 0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.36 °C + 0.005 [t]<br>0.36 °C + 0.005 [t]<br>0.36 °C + 0.005 [t]<br>0.11 °C + 0.005 [t] | Fluke 5522A                     | Industry-Recognized or Manufacturer Procedures |
| Pt 385 (500 Ω)                        | (-200 to -80) °C<br>(-80 to 100) °C<br>(100 to 260) °C<br>(260 to 400) °C<br>(400 to 600) °C<br>(600 to 630) °C | 0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t] |                                 |                                                |
| Pt 385 (1000 Ω)                       | (-200 to 0) °C<br>(0 to 100) °C<br>(100 to 260) °C<br>(260 to 300) °C<br>(300 to 600) °C<br>(600 to 630) °C     | 0.42 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.35 °C + 0.005 [t]<br>0.38 °C + 0.005 [t] |                                 |                                                |
| PtNi 385 (120 Ω)                      | (-80 to 100) °C<br>(100 to 260) °C                                                                              | 0.35 °C + 0.005 [t]<br>0.36 °C + 0.005 [t]                                                                                             |                                 |                                                |
| Cu 427 (10 Ω)                         | (-100 to 260) °C                                                                                                | 0.40 °C + 0.005 [t]                                                                                                                    |                                 |                                                |
| Frequency                             | 0.01 Hz to 2.000 MHz                                                                                            | 1.7 µHz/Hz + 3.3 µHz                                                                                                                   | Fluke 5522A-SC600               |                                                |



| PARAMETER / EQUIPMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                                                                                                                                                                                                                                                                                                                                                                             | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------|
| <b>Oscilloscopes</b><br><br>Amplitude<br>DC Signal<br>50 Ω Load<br>1 MΩ Load<br><br>Square Wave Signal<br>(10 Hz to 10 kHz)<br>50 Ω Load<br>1 MΩ Load<br>Frequency Spec<br><br>Edge Specs into<br>50 Ω Load<br>Rise Time<br>Amplitude<br>Frequency<br><br>Time Marker into<br>50 Ω Load<br><br>Leveled Sine Wave<br>(5 mV to 5.5 V) p-p<br><br>Wave Generator<br>Square, Sine, Triangle<br>Amplitude<br>Into 1 MΩ Load<br>Into 50 Ω Load<br>Frequency<br><br>Pulse - Generate<br>50 Ω Load<br>Width<br>Period | Up to 6.599 V p-p<br>Up to 130 V p-p<br><br>(1 mV to 6.599 V) p-p<br>(1 mV to 130 V) p-p<br>10 Hz to 10 kHz<br><br>Up to 300 ps<br>4.5 mV to 2.75 V<br>900 Hz to 11 MHz<br><br>5 s to 50 ms<br>20 ms to 100 ns<br>(50 to 20) ns<br>10 ns<br>(5 to 2) ns<br><br>50 kHz<br>50 kHz to 100 MHz<br>(100 to 300) MHz<br>(300 to 600) MHz<br><br>(1.8 mV to 55 V) p-p<br>(1.8 mV to 55 V) p-p<br>10 Hz to 100 kHz<br><br>(4 to 500) ns<br>22 ms to 200 ns<br>45.5 Hz to 5 MHz | 15 mV/V + 26.7 μV<br>300 μV/V + 26.7 μV<br><br>3.3 mV/V + 26.7 μV<br>2.8 mV/V + 26.7 μV<br>1.7 μHz/Hz of setting<br><br>+0 ps / -100 ps<br>13.3 mV/V + 133.3 μV<br>1.7 μHz/Hz of setting<br><br>[(1 000)(time in seconds)<br>+ 16.7)] μs/s<br>1.7 μs/s<br>1.7 μs/s<br>1.7 μs/s<br>1.7 μs/s<br><br>13.3 mV/V + 200 μV<br>23.3 mV/V + 200 μV<br>26.7 mV/V + 200 μV<br>40 mV/V + 200 μV<br><br>20 mV/V + 66.7 μV<br>20 mV/V + 66.7 μV<br>16.7 μHz/Hz + 10 mHz<br><br>33.3 ms/s + 1.3 ns<br>1.7 ms/s | Fluke 5522A-SC600               | Industry-Recognized<br>or Manufacturer<br>Procedures |



## II. Mechanical

| PARAMETER / EQUIPMENT             | RANGE                                                                                                                                                 | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]                                                                       | REFERENCE STANDARD OR EQUIPMENT                 | METHOD(S)                    |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------|
| Vibration                         | 5 Hz<br>300 Hz<br>1 kHz<br>5 kHz<br>10 kHz                                                                                                            | 2.31 % of reading<br>1.67 % of reading<br>1.39 % of reading<br>1.45 % of reading<br>1.61 % of reading                                      | Precision Accelerometer                         | Accelerometer Calibration.02 |
| Impulse Hammers                   | Up to 5 000 lbf                                                                                                                                       | 2.45 % of reading                                                                                                                          | Calibrated Mass and Accelerometers              | Impulse Hammers.01           |
| Force Cells                       | Up to 5 000 lbf                                                                                                                                       | 2.45 % of reading                                                                                                                          |                                                 | Force Cells.01               |
| Pressure (Analog and transducers) | Up to 2 000 psi<br><br>Up to 1 in H <sub>2</sub> O<br>(1 to 3) in H <sub>2</sub> O<br>(3 to 10) in H <sub>2</sub> O<br>(10 to 30) in H <sub>2</sub> O | 0.161 % of reading<br><br>0.0053 % FS + 0.0076% rdg<br>0.0045 % FS + 0.0076% rdg<br>0.0041 % FS + 0.0076% rdg<br>0.0035 % FS + 0.0076% rdg | Precision Pressure Gage<br><br>GE Ruska 7250 lp | Manufacturers Specifications |

## III. Dimensional

| PARAMETER / EQUIPMENT                      | RANGE                                            | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)] | REFERENCE STANDARD OR EQUIPMENT              | METHOD(S)        |
|--------------------------------------------|--------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------|------------------|
| Surface Plates*<br>- Flatness <sup>2</sup> | Up to 43 in Diagonal<br>Larger than (24 x 36) in | 23 µin<br>(1.87 D) µin                                               | Federal Levels                               | Surface Plate.03 |
| Surface Plates*<br>- Repeatability         | (12 x 12) in and greater                         | 12 µin                                                               | Repeat Reading Gage and Electronic Amplifier |                  |

## IV. Acoustics

| PARAMETER / EQUIPMENT                  | RANGE                                                      | CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)] | REFERENCE STANDARD OR EQUIPMENT | METHOD(S)       |
|----------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------|-----------------|
| Microphones                            | (-50 to -20) dB<br>re 1 V/Pa<br>(3 to 100) mV/Pa<br>250 Hz | 0.25 dB                                                              | Precision Microphone            | Microphones.02  |
| Pistonphones<br>(Acoustic Calibrators) | 74 to 135 dB<br>re 1Vpa<br>250 Hz                          | 0.021 dB                                                             | Precision Microphone<br>DMM     | Pistonphones.00 |
| Frequency                              | 250 Hz<br>1kHz                                             | 0.002 Hz                                                             |                                 |                 |
| Total Harmonic Distortion (%)          | <1% of reading                                             | 0.08%                                                                | NI PCI-4461                     |                 |

**Notes:**

1. Calibration and Measurement Capabilities (Expanded Uncertainties) are based on approximately a 95% confidence interval, using a coverage of k=2.
2. D = diagonal length in inches
3. [t] = temperature
4. This laboratory offers resurfacing/recertification.
5. \*Denotes calibrations that can be performed on-site.
6. This scope is formatted as part of a single document including the Certificate of Accreditation No. AC-1216.

  
 Vice President