

## Calibration Statement of Scope ISO 17025 (2005)

### **I. MECHANICAL**

Calibration of linear gauges: 0.001 to 12.0 inches (0.0254 to 304.80 mm)  
 Best Uncertainty: 0.00005 inches (0.00127 mm)  
 Comment: NIST Traceable Gage Blocks

### **II. THERMODYNAMICS**

Temperature -20°C to 200°C  
 Best Uncertainty: 0.3°C  
 Comment: Ambient and Gas Temperatures

### **III. FLUID QUANTITIES**

Measurement of Gases: 1 sccm to 13,000 slm  
 Best Uncertainty: 0.2%  
 Comments: Flow units, sccm and slm are defined in SEMI E12

Calibration of Pressure Devices: 1100 to  $1 \times 10^{-6}$  Torr ( $146.65$  to  $1.33 \times 10^{-8}$  kPa)  
 Best Uncertainty: 1.0%  
 Comments: Gauge, negative gauge and absolute

### **IV. ELECTRICAL**

Electrical Calibration of Transducers and Flow meters

<b>Range</b>	<b>Best Uncertainty</b>
(1 to 100) mV	0.006% + 3.5 $\mu$ V
100 mV to 1V	0.006% + 7 $\mu$ V
(1 to 10) V	0.006% + 50 $\mu$ V
(10 to 100) V	0.006% + 0.6 mV
10 mA	0.004 mA
100 mA	0.015 mA
(1 to 100) $\Omega$	0.01 % + 4 m $\Omega$
(100 to 1000) $\Omega$	0.01 % + 40 m $\Omega$
Comment:	HP 34401A

### **V. ON-SITE CALIBRATION SERVICES**

Flow Measurement of Gases: 1 sccm to 13,000 slm  
 Best Uncertainty: 0.2%  
 Comments: Flow units, sccm and slm are defined in SEMI E12

Calibration of Pressure Devices:  $1 \times 10^{-6}$  to 1100 Torr ( $1.33 \times 10^{-8}$  to 146.65 kPa)  
 Best Uncertainty: 0.5 %  
 Comments: Gauge, negative gauge and absolute