



## *Certificate of Calibration*

Transducer Model: PDI Transducer

*Pile Dynamics, Inc.*

Serial Number: B653

PDI Gage Factor: 96.6  $\mu\text{e}/\text{V}$

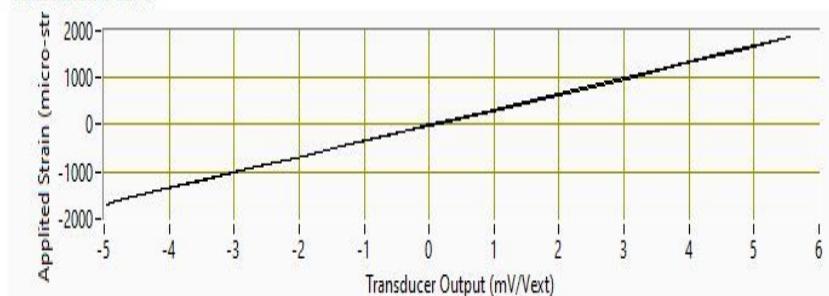
General Gage Factor: 335.2  $\mu\text{e}/\text{mV}/\text{V}_{\text{ext}}$

Initial Offset Voltage: 0.106  $\text{mV}/\text{V}_{\text{ext}}$

Table 1: Representative Calibration Data

Applied Strain (micro-strain)	Transducer Output (mV/V <sub>ext</sub> )	Applied Strain (micro-strain)	Transducer Output (mV/V <sub>ext</sub> )
-39.517	-0.084	75.847	0.300
-184.659	-0.528	378.408	1.222
-456.999	-1.351	681.627	2.126
-695.200	-2.062	988.389	3.028
-926.925	-2.763	1299.104	3.946
-1171.929	-3.479	1617.601	4.875
-1406.413	-4.171	1864.225	5.543
-1619.629	-4.797	1830.010	5.420
-1678.400	-4.965	1508.923	4.485
-1616.307	-4.815	1194.310	3.541
-1408.885	-4.206	888.907	2.619
-1149.612	-3.419	583.097	1.723
-896.031	-2.648	296.225	0.871
-648.642	-1.903	66.929	0.188
-428.017	-1.234	-39.086	-0.118
-210.975	-0.576	-40.403	-0.119

### Calibration Curve



Mean Linear Correlation Coefficient (LCC): 0.999955

LCC Standard Deviation: 1.461856E-5

Calibrated By: DJC

Signature: \_\_\_\_\_

Date and Time: 10/8/2020 7:17 AM

Temperature (Degrees C): 24.3

# Specifications

## PDI Automated Strain Transducer Calibration System (PDI - ASTCS)

ASTCS Serial Number:	PDI CAL 2015-02
ASTCS Software Version Number:	3.001
ASTCS Independant Verification Date:	9/22/2015 1:48 PM
Transducer Gage Length:	3 inches (76.2 mm)
Full Scale Displacement Range:	+/- 0.0075 (inches)
Method for Applying Displacement:	Precision Stepper Motor Connected to Linear Stage
Excitation Voltage for Calibration:	2.5 VDC
Displacement Measurements:	Dual Precision LVDTs, Output Averaged
Displacement Certification:	NIST 274437-07
Linearity Verification Technique:	Linear Correlation Coefficient < 0.9996
Repeatability Verification Technique	Standard Deviation < 0.5% of mean

### ASTCS System Check

Reference Strain Transducer:	B5580
Reference General Gage Factor:	529.70 micro-strain/mV/V
LVDT #1 Sensitivity (inches/volt):	0.0079
LVDT #2 Sensitivity (inches/volt):	0.0081
System Temperature Status	Passed
Date/Time of Last System Check	9/22/2015 1:48 PM

### PDI Strain Transducer Connections

Black	Excitation +
Green:	Excitation -
Red:	Signal +
White	Signal -
Grey/BARE	Shield

NIST Reference:

PDI certifies the above PDI-ASTCS instrument meets or exceeds published specifications and has been verified using standards and instruments whose accuracies are traceable to the National Institute of Standards and Technology (NIST), an accepted value of a natural physical constant or a ratio calibration technique. The calibration of this instrument was performed in accordance with the PDI Quality Assurance program. Measurements and information provided on this report are valid at the time of calibration only.