



## *Certificate of Calibration*

Transducer Model: PDI Transducer

*Pile Dynamics, Inc.*

Serial Number: B656

PDI Gage Factor: 94.6  $\mu\text{e}/\text{V}$

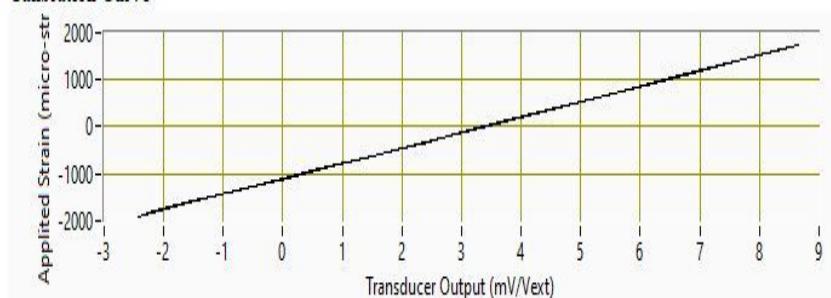
General Gage Factor: 328.3  $\mu\text{e}/\text{mV}/\text{V}_{\text{ext}}$

Initial Offset Voltage: 1.011  $\text{mV}/\text{V}_{\text{ext}}$

Table 1: Representative Calibration Data

Applied Strain (micro-strain)	Transducer Output (mV/Vext)	Applied Strain (micro-strain)	Transducer Output (mV/Vext)
-302.545	2.472	-34.432	3.319
-444.991	2.021	272.956	4.243
-658.515	1.373	574.633	5.162
-839.531	0.812	883.121	6.088
-1076.162	0.095	1192.969	7.014
-1318.864	-0.652	1509.258	7.955
-1581.474	-1.449	1756.587	8.656
-1831.592	-2.210	1714.828	8.525
-1903.958	-2.424	1400.117	7.606
-1799.180	-2.156	1079.261	6.632
-1575.485	-1.509	762.293	5.676
-1341.835	-0.763	449.459	4.719
-1143.578	-0.142	137.829	3.777
-899.113	0.623	-164.954	2.872
-617.868	1.504	-303.467	2.460
-328.608	2.400	-303.860	2.462

### Calibration Curve



Mean Linear Correlation Coefficient (LCC): 0.999952

LCC Standard Deviation: 4.800002E-7

Calibrated By: DJC

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

Date and Time: 10/8/2020 7:20 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.