



# Certificate of Calibration

Transducer Model: BDI ST350

*Pile Dynamics, Inc.*

**Serial Number: 0045**

**PDI Gage Factor: 148.1  $\mu\text{e}/\text{V}$**

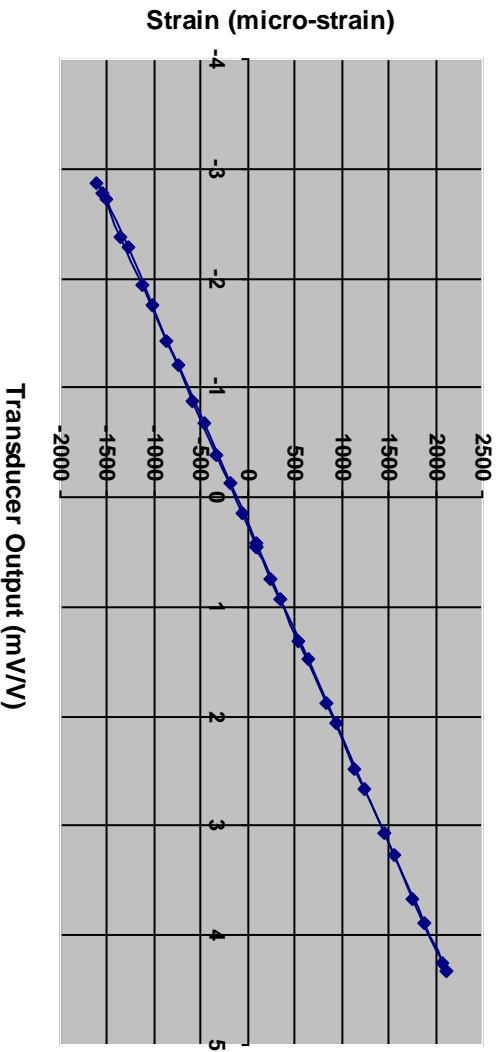
General Gage Factor: 514.3  $\mu\text{e}/\text{mV}/\text{V}_{\text{ext}}$

Initial Offset Voltage: 0.180  $\text{mV}/\text{V}_{\text{ext}}$

Table 1 – Representative Calibration Data

Applied Strain ( $\mu\text{e}$ )	Transducer Output ( $\text{mV}/\text{V}_{\text{ext}}$ )	Applied Strain ( $\mu\text{e}$ )	Transducer Output ( $\text{mV}/\text{V}_{\text{ext}}$ )
97	0.457	354	0.928
-58	0.148	641	1.482
-335	-0.392	939	2.062
-585	-0.884	1246	2.658
-865	-1.426	1557	3.262
-1126	-1.940	1876	3.878
-1352	-2.382	2121	4.333
-1550	-2.775	2079	4.257
-1607	-2.877	1761	3.671
-1516	-2.729	1450	3.067
-1276	-2.282	1144	2.478
-1010	-1.750	839	1.886
-737	-1.213	541	1.313
-464	-0.675	244	0.739
-185	-0.122	99	0.457
91	0.410	97	0.457

## Calibration Curve



Mean Linear Correlation Coefficient (LCC): 9.999564E-1

LCC Standard Deviation: 5.204934E-7

Calibrated By: Vanna Tach

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

Date/Time: 9/16/2016 7:55 AM

Temperature ( $^{\circ}\text{C}$ ): 23.4

# Specifications

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

ASTCS Calibration Information	
ASTCS Serial Number:	ASTCS-0005
ASTCS Software Version:	2.310
ASTCS Independent Verification Date:	11/5/2014 11:54 AM
Strain Transducer Gage Length:	3.0 inches (76.2 mm)
Applied Full Scale Displacement Range:	±7.500000E-3 inches
Method for Applying Displacement:	Precision Step Motor Coupled to Linear Stage
Excitation Voltage for Calibration:	2.5 VDC
Displacement Measurements:	Dual Precision AC LVDT's, Output Averaged
Displacement Certification:	NIST 274437-07
Linearity Verification Technique:	Linear Correlation Coefficient > 0.9999
Repeatability Verification Technique:	Standard Deviation < 0.5 % (of mean)
ASTCS System Check	
Reference Strain Transducer:	4367T
Reference General Gage Factor:	293.000 µε/mV/V
LVDT #1 Sensitivity (inches/volt):	7.916500E-3
LVDT #2 Sensitivity (inches/volt):	8.042000E-3
Date/Time of Last System Check:	9/16/2016 6:44 AM
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.