Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	LW512109	**Temperature:**	23.2 °C
Model:	PE	**Humidity:**	32%
Calibrated on:	Channel 3 on 8G 5161 LE		

PDA CALIBRATION FACTOR

9.7 g's/volt

R^2: 0.999972 [Chip programmed]

Operator: William Johnson

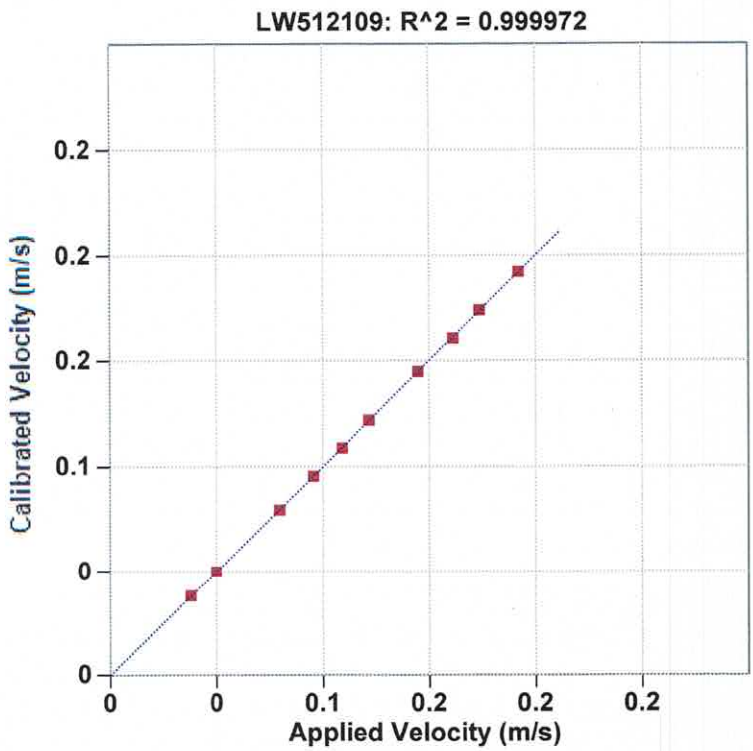
Signed

Calibration valid 2 years

From: OCT 2 4 2024

Ref Acc 1:	LW503311! 10 g's/volt	**Cal on:**	31Jan2024
Ref Acc 2:	LW503313! 10 g's/volt	**Cal on:**	31Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).



Reference Velocity	S/N LW512109 Velocity
m/s	m/s
0.038	0.038
0.050	0.050
0.080	0.080
0.096	0.096
0.109	0.109
0.122	0.122
0.145	0.145
0.161	0.161
0.174	0.174
0.192	0.192

Maximum Acceleration: 20 g's

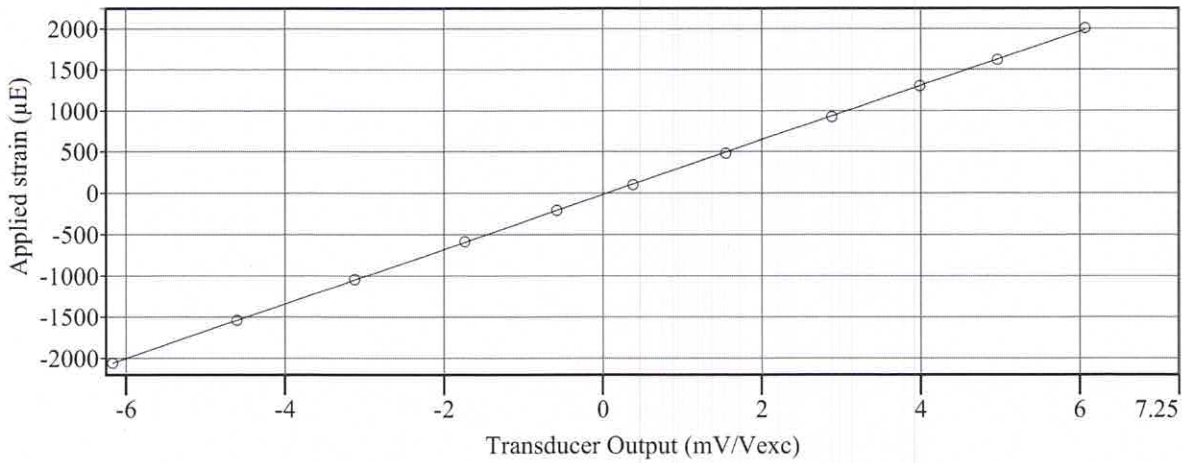
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: 353A
PDI Gage Factor: 95.6
Mean Linear Correlation Coefficient: 0.999951

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-2060.4	-6.169	479.0	1.543
-1542.0	-4.602	925.2	2.879
-1043.3	-3.122	1299.2	3.987
-584.0	-1.737	1620.7	4.963
-210.0	-0.580	2007.9	6.067
98.4	0.381		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: 353A
Calibration Date: OCT 2 4 2024

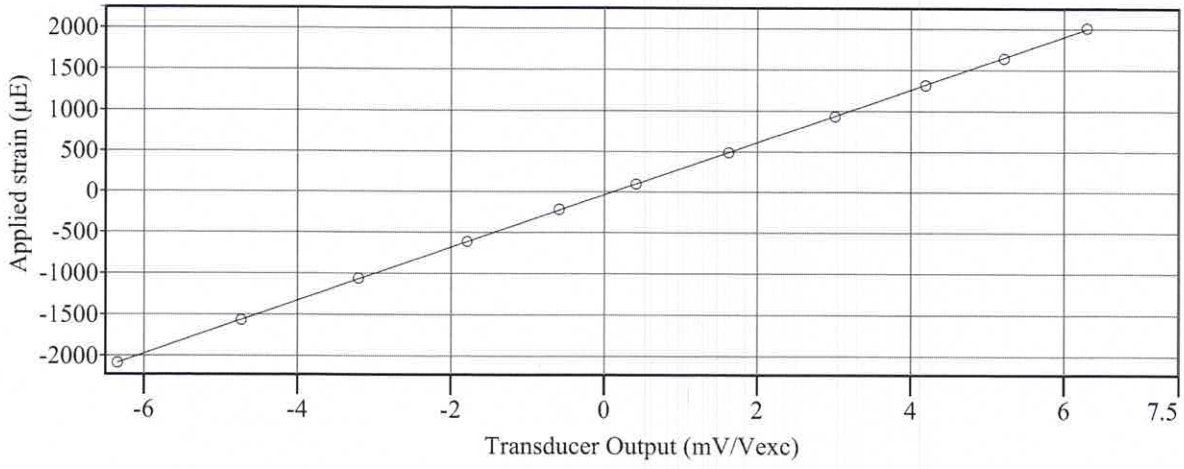
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: 354A
PDI Gage Factor: 93.3
Mean Linear Correlation Coefficient: 0.999972

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-2086.6	-6.346	485.6	1.619
-1568.2	-4.730	931.8	3.009
-1063.0	-3.203	1312.3	4.191
-610.2	-1.788	1640.4	5.214
-216.5	-0.588	2012.2	6.295
98.4	0.416		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: 354A
Calibration Date: OCT 2 4 2024

Pile Dynamics, Inc.

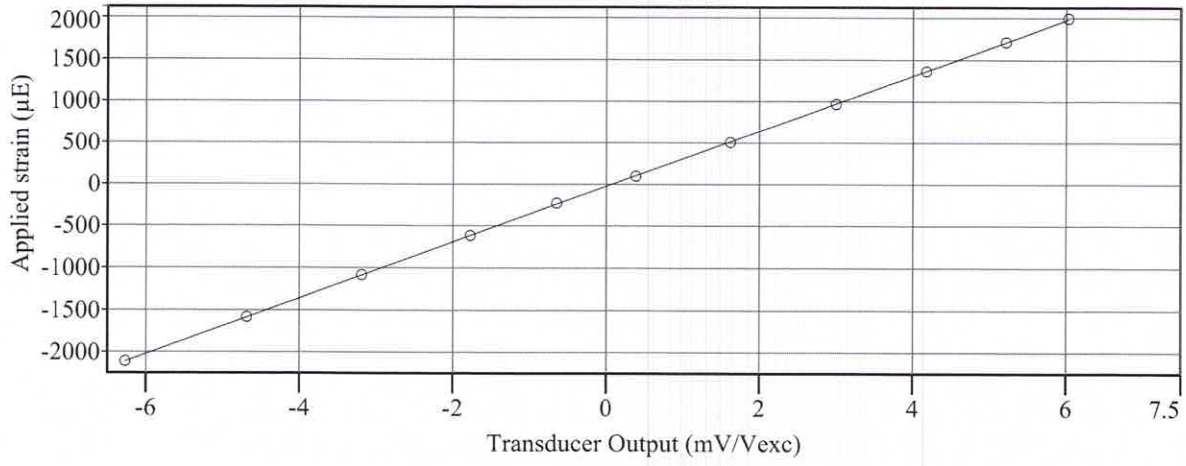
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: 355A
PDI Gage Factor: 96.3
Mean Linear Correlation Coefficient: 0.999980

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-2112.9	-6.271	505.2	1.616
-1581.4	-4.682	971.1	2.998
-1082.7	-3.183	1364.8	4.177
-616.8	-1.771	1712.6	5.213
-229.7	-0.645	1994.8	6.027
98.4	0.387		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: 355A
Calibration Date: OCT 2 4 2024

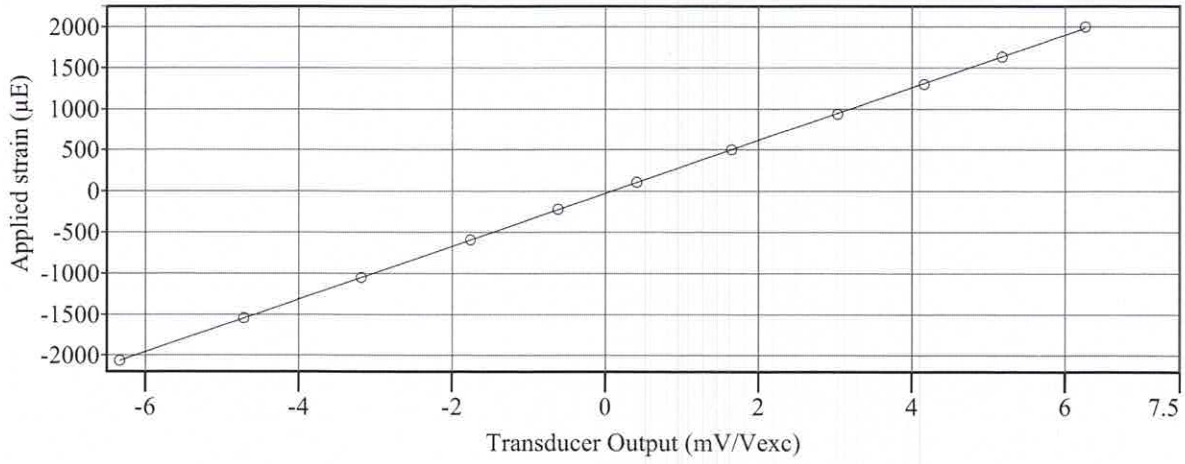
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: 351A
PDI Gage Factor: 92.9
Mean Linear Correlation Coefficient: 0.999974

Table 1: Representative Calibration Data

Applied strain (με)	Gage Output (mV/Vexc)	Applied strain (με)	Gage Output (mV/Vexc)
-2066.9	-6.333	498.7	1.646
-1542.0	-4.713	938.3	3.032
-1049.9	-3.182	1299.2	4.161
-590.6	-1.756	1633.9	5.175
-223.1	-0.616	2001.3	6.263
105.0	0.413		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: 351A
Calibration Date: OCT 2 4 2024

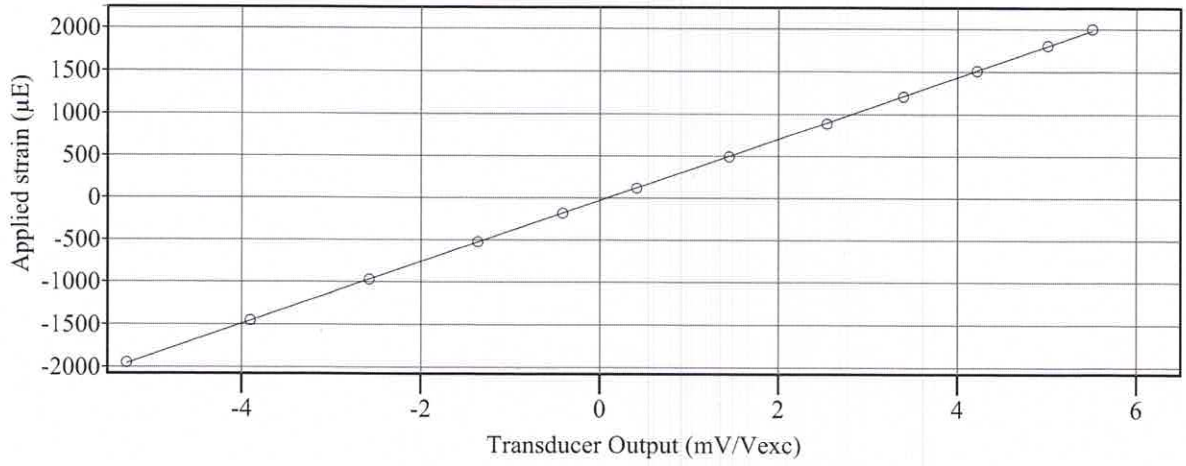
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: 345A
PDI Gage Factor: 105.5
Mean Linear Correlation Coefficient: 0.999958

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-1948.8	-5.287	492.1	1.444
-1450.1	-3.904	885.8	2.540
-971.1	-2.574	1207.3	3.399
-524.9	-1.361	1509.2	4.217
-183.7	-0.415	1804.5	5.010
118.1	0.415	2001.3	5.507

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: 345A
Calibration Date: OCT 2 4 2024

Pile Dynamics, Inc.

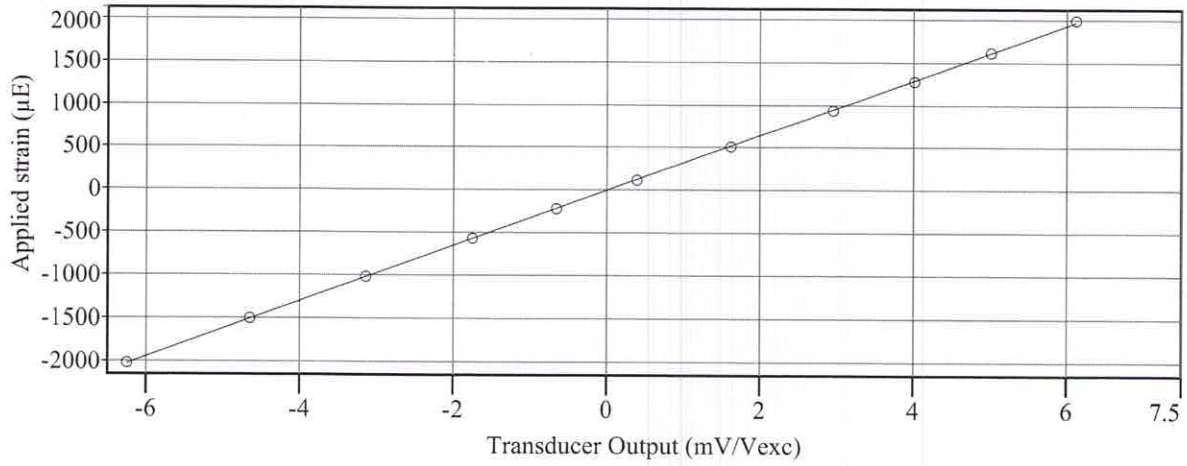
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: 342A
PDI Gage Factor: 93.4
Mean Linear Correlation Coefficient: 0.999935

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-2021.0	-6.250	505.2	1.614
-1502.6	-4.646	936.1	2.953
-1017.1	-3.136	1279.5	4.013
-570.9	-1.747	1614.2	5.008
-223.1	-0.654	1994.8	6.119
111.5	0.394		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman

Signature: Paul Hartman

PDI Gage: 342A

Calibration Date: OCT 2 4 2024

Pile Dynamics, Inc.

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	LW515546	**Temperature:**	22.5 °C
Model:	PE	**Humidity:**	40%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	LW503313! 10 g's/volt	**Cal on:**	31Jan2024
Ref Acc 2:	LW503311! 10 g's/volt	**Cal on:**	31Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

9.9 g's/volt

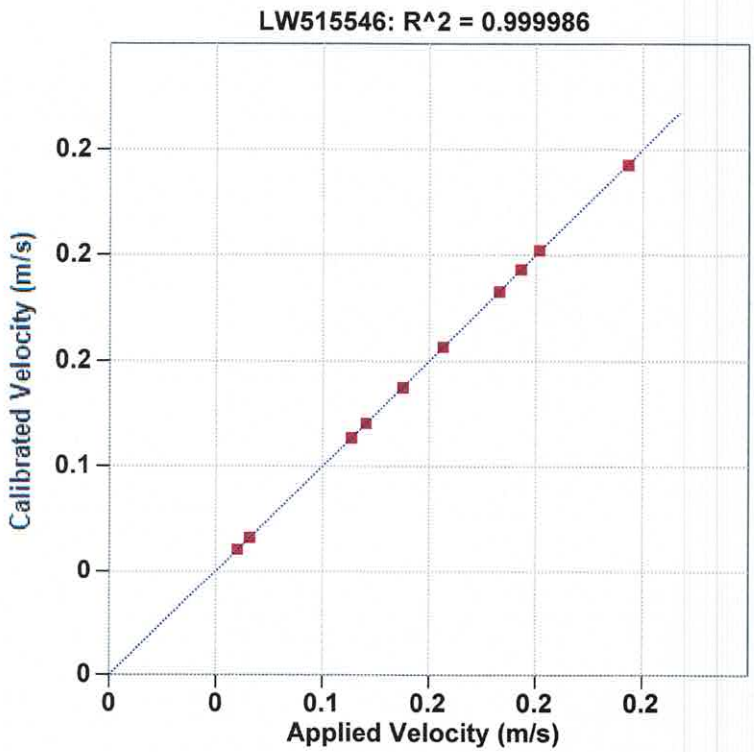
R^2: 0.999986 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 4 2024



Reference Velocity	S/N LW515546 Velocity
m/s	m/s
0.060	0.060
0.066	0.066
0.114	0.113
0.120	0.121
0.138	0.137
0.156	0.157
0.183	0.183
0.193	0.193
0.202	0.202
0.243	0.243

Maximum Acceleration: 27 g's

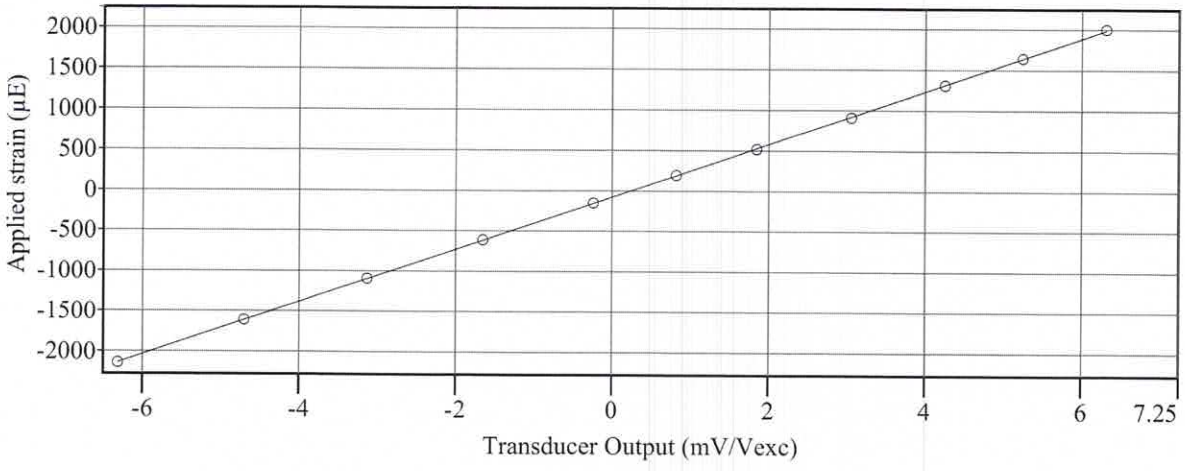
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Y667
PDI Gage Factor: 94.4
Mean Linear Correlation Coefficient: 0.999970

Table 1: Representative Calibration Data

Applied strain (με)	Gage Output (mV/Vexc)	Applied strain (με)	Gage Output (mV/Vexc)
-2139.1	-6.316	518.4	1.848
-1607.6	-4.699	912.1	3.052
-1095.8	-3.128	1305.8	4.251
-610.2	-1.648	1640.4	5.245
-150.9	-0.244	2001.3	6.312
196.9	0.817		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: VANNA OUK Signature: Vanna Ouk

PDI Gage: Y667
Calibration Date: OCT 25 2024

Pile Dynamics, Inc.

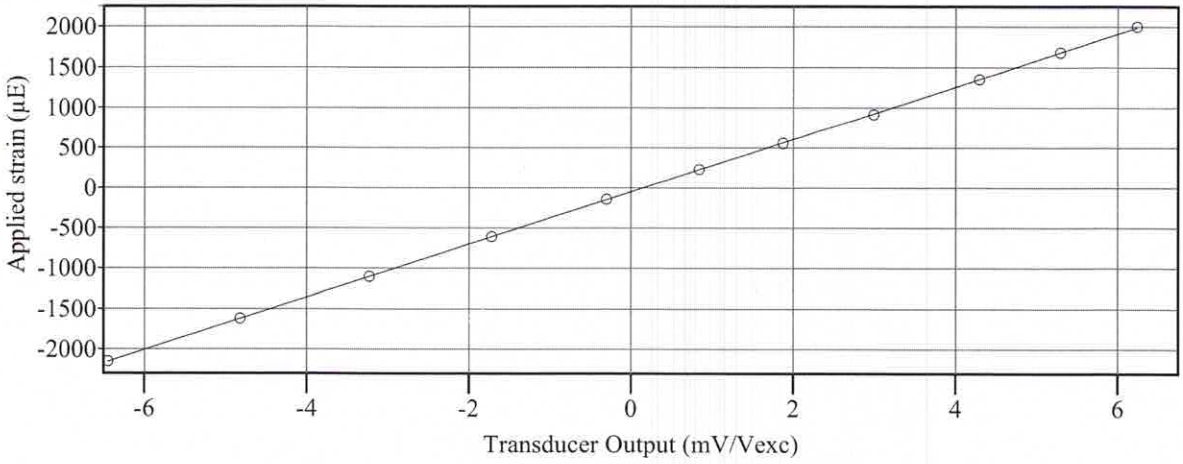
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Y668
PDI Gage Factor: 94.4
Mean Linear Correlation Coefficient: 0.999982

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-2152.2	-6.446	557.7	1.874
-1620.7	-4.818	918.6	2.991
-1102.4	-3.224	1351.7	4.293
-610.2	-1.717	1682.0	5.294
-144.4	-0.304	2001.3	6.237
227.5	0.836		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: VANNA OUK Signature: Vanna Ouk

PDI Gage: Y668
Calibration Date: OCT 2 5 2024

Pile Dynamics, Inc.

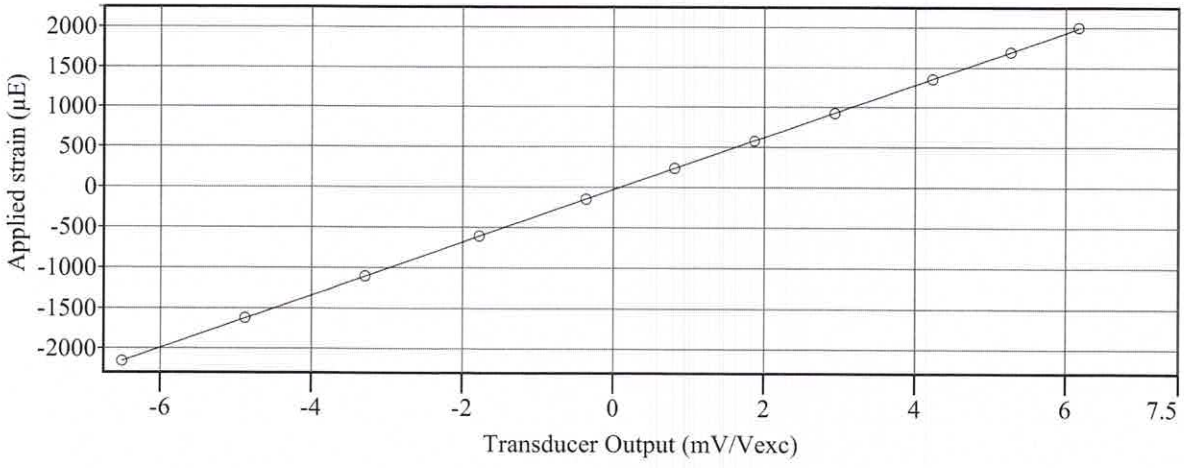
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Y669
PDI Gage Factor: 94.5
Mean Linear Correlation Coefficient: 0.999987

Table 1: Representative Calibration Data

Applied strain (με)	Gage Output (mV/Vexc)	Applied strain (με)	Gage Output (mV/Vexc)
-2158.8	-6.508	577.4	1.869
-1620.7	-4.875	925.2	2.934
-1102.4	-3.287	1351.7	4.232
-610.2	-1.775	1692.9	5.263
-150.9	-0.362	2001.3	6.169
236.2	0.811		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: VANNA OUK Signature: Vannouk

PDI Gage: Y669
Calibration Date: OCT 2 5 2024

Pile Dynamics, Inc.

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	K14255	**Temperature:**	23.3 °C
Model:	KICHER PR	**Humidity:**	32%
Calibrated on:	Channel 4 on 8G 5161 LE		

Ref Acc 1:	78268! 986 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78270! 971 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

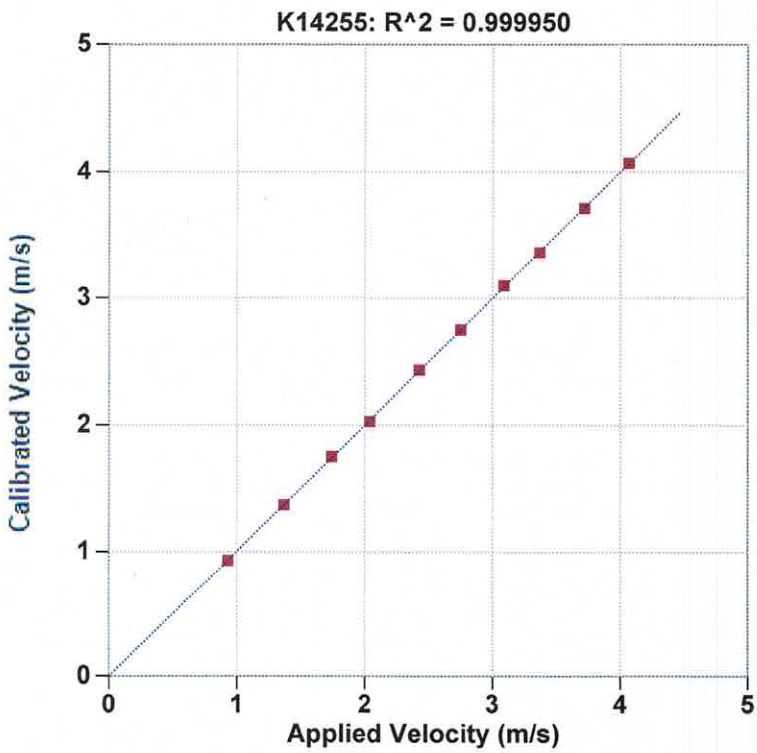
321.6 mv/5000g
(64.3 µv/g)
R^2: 0.999950 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 25 2024



Reference Velocity	S/N K14255 Velocity
m/s	m/s
0.931	0.932
1.372	1.371
1.743	1.753
2.040	2.031
2.430	2.434
2.753	2.750
3.090	3.099
3.372	3.364
3.721	3.713
4.066	4.073

Maximum Acceleration: 885 g's

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	K14256	**Temperature:**	23.3 °C
Model:	KICHER PR	**Humidity:**	32%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	78268! 986 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78270! 971 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

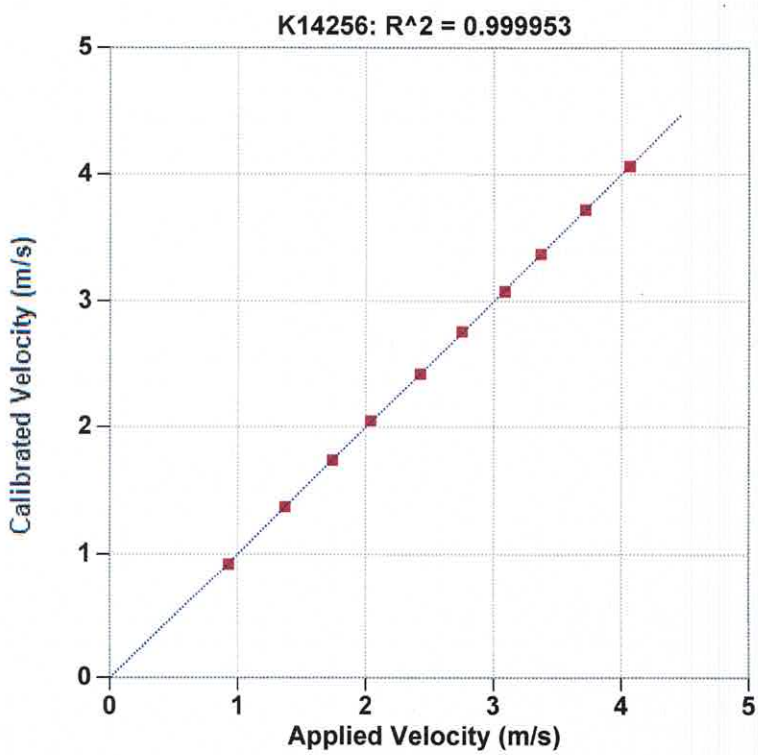
364.3 mv/5000g
(72.9 µv/g)
R^2: 0.999953 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 5 2024



Reference Velocity	S/N K14256 Velocity
m/s	m/s
0.931	0.924
1.372	1.373
1.743	1.739
2.040	2.050
2.430	2.427
2.753	2.765
3.090	3.077
3.372	3.374
3.721	3.721
4.066	4.065

Maximum Acceleration: 885 g's

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	K14257	**Temperature:**	23.3 °C
Model:	KICHER PR	**Humidity:**	32%
Calibrated on:	Channel 4 on 8G 5161 LE		

Ref Acc 1:	78268! 986 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78270! 971 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

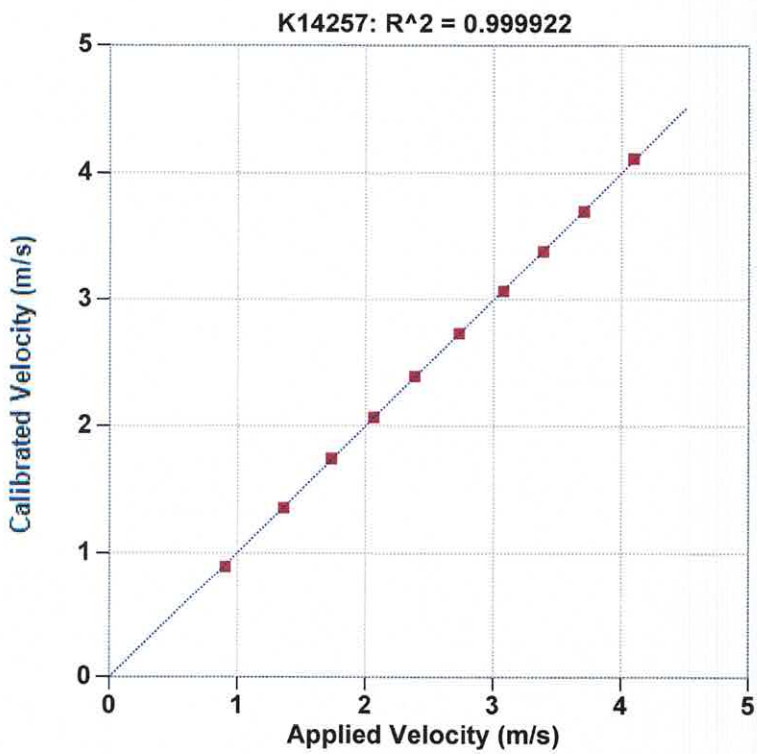
351.0 mv/5000g
(70.2 µv/g)
R^2: 0.999922 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 5 2024



Reference Velocity	S/N K14257 Velocity
m/s	m/s
0.906	0.893
1.364	1.360
1.735	1.744
2.066	2.071
2.388	2.393
2.734	2.732
3.079	3.067
3.390	3.386
3.707	3.700
4.096	4.112

Maximum Acceleration: 889 g's

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	K14258	**Temperature:**	23.3 °C
Model:	KICHER PR	**Humidity:**	32%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	78268! 986 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78270! 971 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

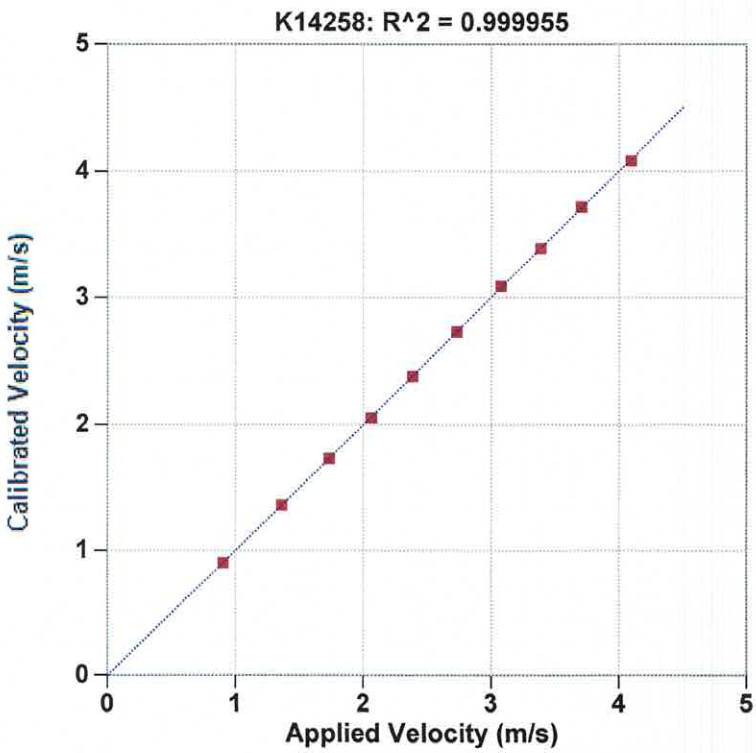
361.8 mv/5000g
(72.4 µv/g)
R^2: 0.999955 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 5 2024



Reference Velocity	S/N K14258 Velocity
m/s	m/s
0.906	0.905
1.364	1.366
1.735	1.733
2.066	2.059
2.388	2.384
2.734	2.733
3.079	3.090
3.390	3.389
3.707	3.718
4.096	4.085

Maximum Acceleration: 889 g's

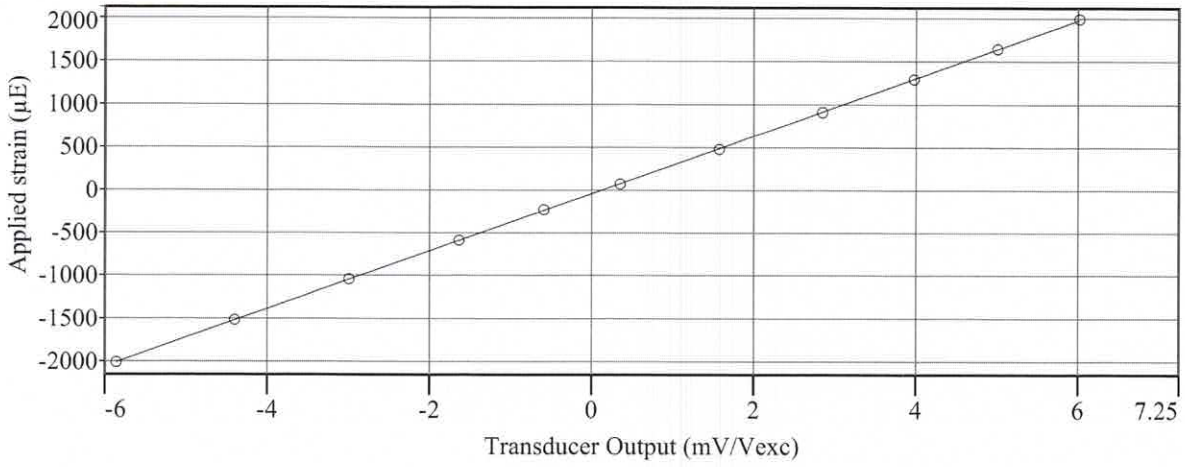
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Z684
PDI Gage Factor: 97.1
Mean Linear Correlation Coefficient: 0.999977

Table 1: Representative Calibration Data

Applied strain (με)	Gage Output (mV/Vexc)	Applied strain (με)	Gage Output (mV/Vexc)
-2010.1	-5.862	479.0	1.571
-1515.7	-4.398	912.1	2.848
-1043.3	-2.990	1292.7	3.976
-590.6	-1.635	1647.0	5.007
-229.7	-0.588	1994.8	6.018
72.2	0.352		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: Z684
Calibration Date: OCT 25 2024

Pile Dynamics, Inc.

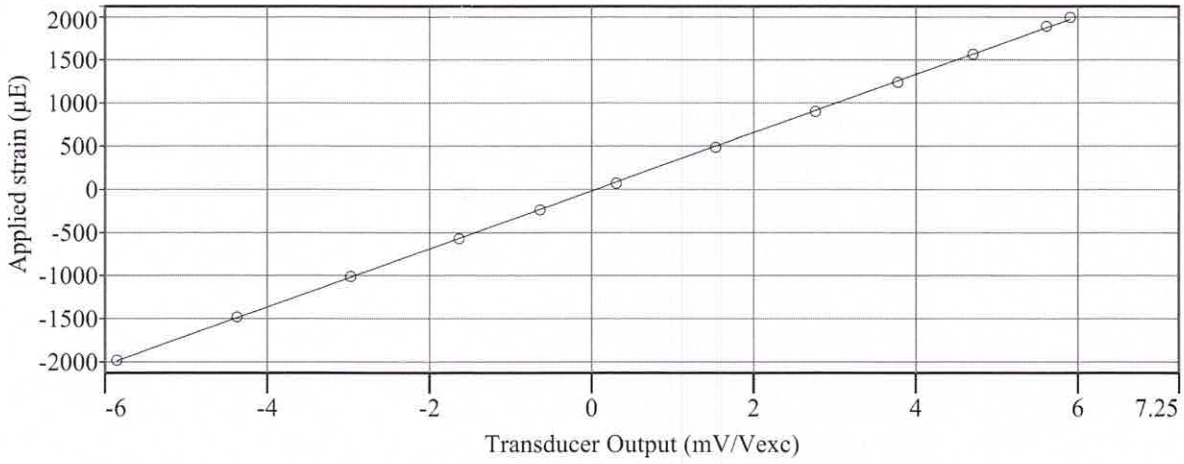
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Z681
PDI Gage Factor: 97.4
Mean Linear Correlation Coefficient: 0.999903

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-1981.6	-5.858	483.4	1.527
-1482.9	-4.371	899.0	2.758
-1010.5	-2.970	1240.2	3.778
-570.9	-1.636	1568.2	4.704
-236.2	-0.636	1892.0	5.612
72.2	0.306	1994.8	5.904

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: Z681
Calibration Date: OCT 2 5 2024

Pile Dynamics, Inc.

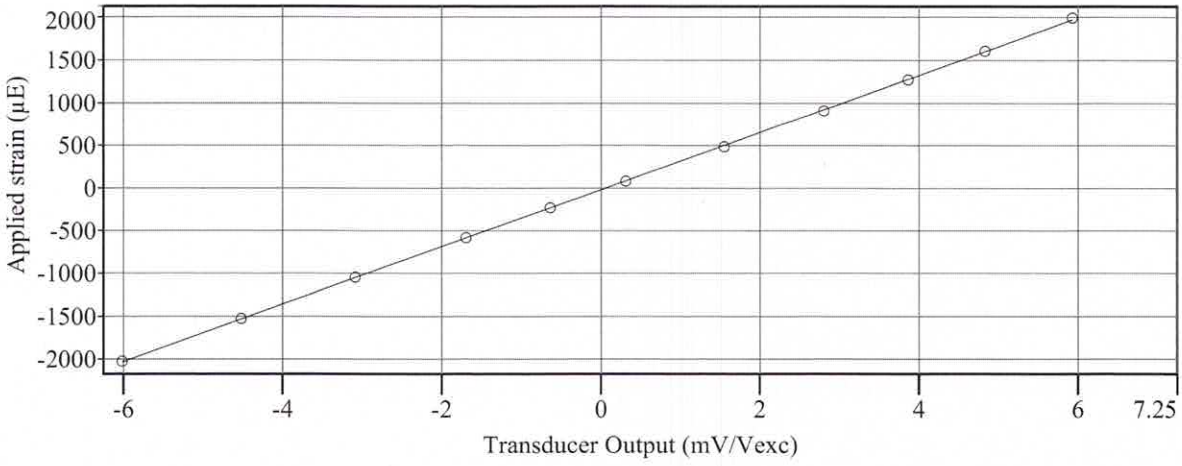
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Z682
PDI Gage Factor: 96.9
Mean Linear Correlation Coefficient: 0.999934

Table 1: Representative Calibration Data

Applied strain (με)	Gage Output (mV/Vexc)	Applied strain (με)	Gage Output (mV/Vexc)
-2027.6	-6.018	485.6	1.547
-1528.9	-4.517	912.1	2.804
-1047.7	-3.086	1273.0	3.865
-584.0	-1.695	1607.6	4.828
-229.7	-0.637	1994.8	5.928
85.3	0.316		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: Z682
Calibration Date: OCT 2 5 2024

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	LW512110	**Temperature:**	23.5 °C
Model:	PE	**Humidity:**	32%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	LW503311! 10 g's/volt	**Cal on:**	31Jan2024
Ref Acc 2:	LW503313! 10 g's/volt	**Cal on:**	31Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

9.7 g's/volt

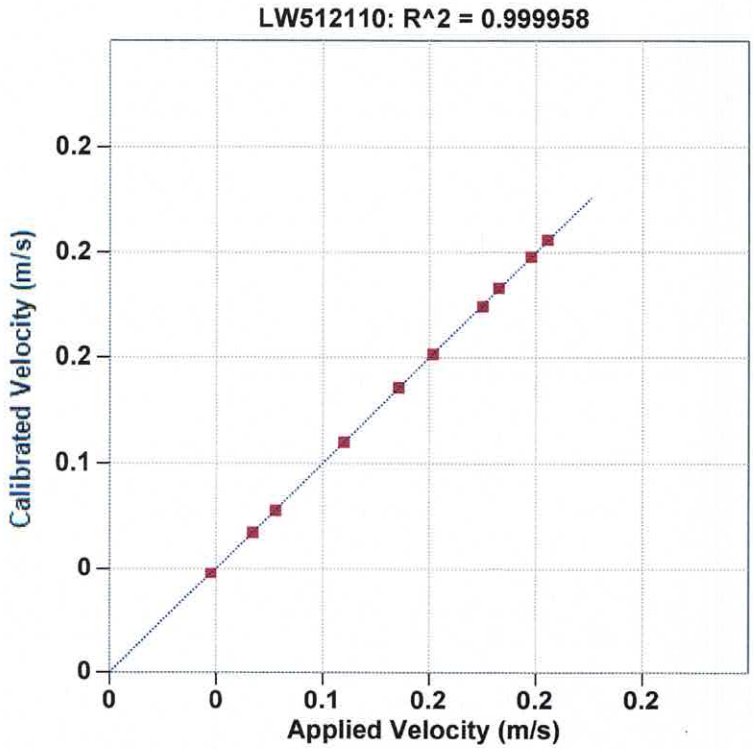
R^2: 0.999958 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 4 2024



Reference Velocity	S/N LW512110 Velocity
m/s	m/s
0.048	0.048
0.067	0.067
0.078	0.078
0.110	0.110
0.136	0.136
0.152	0.151
0.175	0.174
0.183	0.183
0.198	0.198
0.206	0.206

Maximum Acceleration: 22 g's

Accelerometer Calibration Certificate
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.
Calibration performed on OCT 2 8 2024

Serial No:	LW481047	**Temperature:**	23.8 °C
Model:	PE	**Humidity:**	25%
Calibrated on:	Channel 4 on 8G 5161 LE		

Ref Acc 1:	LW423806! 10 g's/volt	**Cal on:**	02Aug2022
Ref Acc 2:	LW423794! 10 g's/volt	**Cal on:**	28Jul2022

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

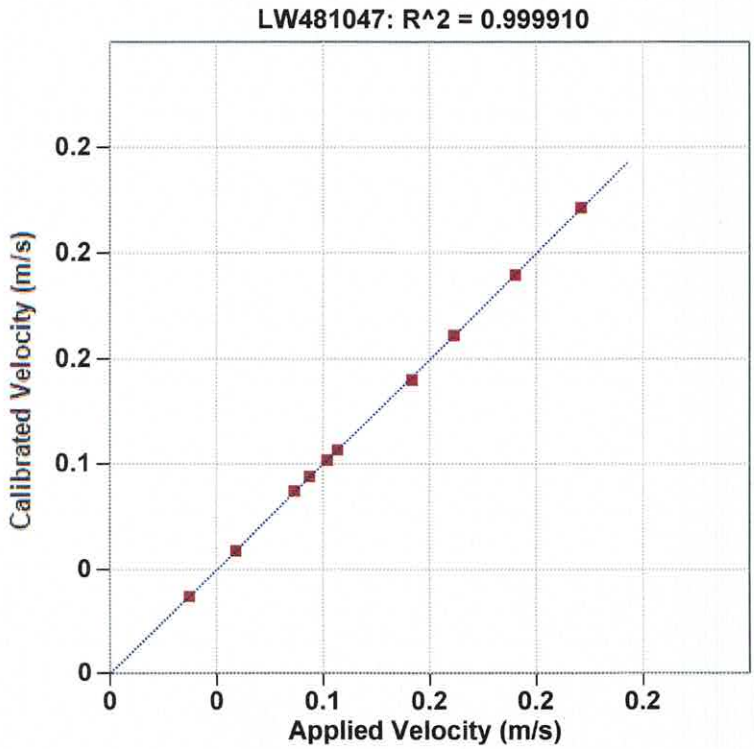
9.8 g's/volt

R^2: 0.999910 [No chip]

Operator: William Johnson

Signed

PILE DYNAMICS, INC.
ORIGINAL COPY



Reference Velocity	S/N LW481047 Velocity
m/s	m/s
0.037	0.037
0.059	0.059
0.086	0.087
0.093	0.094
0.102	0.102
0.107	0.107
0.142	0.140
0.161	0.161
0.190	0.190
0.221	0.221

Maximum Acceleration: 26 g's

Accelerometer Calibration Certificate
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.
Calibration performed on OCT 2 8 2024

Serial No:	LW502680	**Temperature:**	25.1 °C
Model:	PE	**Humidity:**	42%
Calibrated on:	Channel 4 on 8G 5161 LE		

Ref Acc 1:	LW423806! 10 g's/volt	**Cal on:**	02Aug2022
Ref Acc 2:	LW423794! 10 g's/volt	**Cal on:**	28Jul2022

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

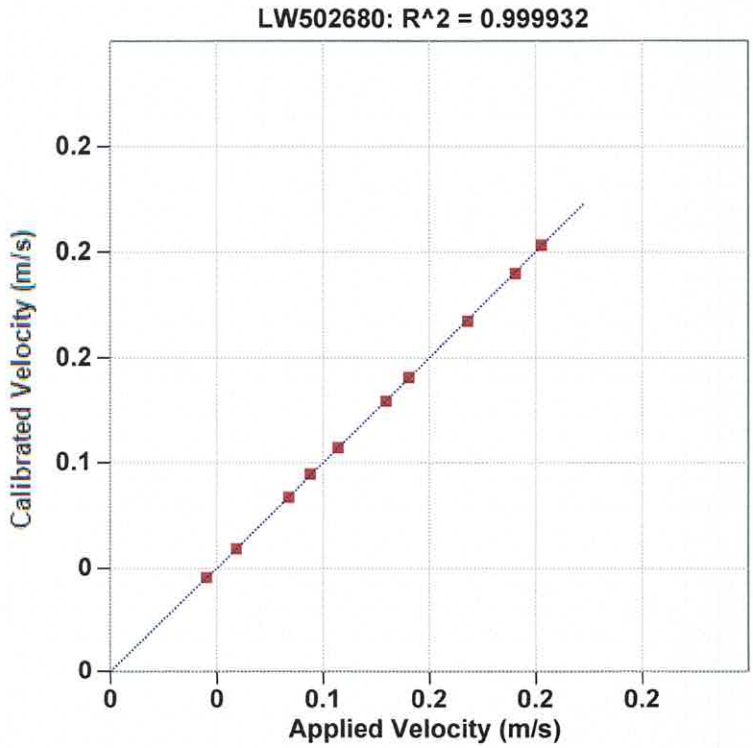
10.4 g's/volt

R^2: 0.999932 [Chip programmed]

Operator: William Johnson

Signed

PILE DYNAMICS, INC.
ORIGINAL COPY



Reference Velocity	S/N LW502680 Velocity
m/s	m/s
0.045	0.045
0.059	0.059
0.084	0.084
0.094	0.095
0.107	0.107
0.130	0.130
0.140	0.141
0.168	0.167
0.191	0.190
0.203	0.203

Maximum Acceleration: 23 g's

Accelerometer Calibration Certificate
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.
Calibration performed on OCT 2 8 2024

Serial No:	LW502681	**Temperature:**	25.1 °C
Model:	PE	**Humidity:**	42%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	LW423806! 10 g's/volt	**Cal on:**	02Aug2022
Ref Acc 2:	LW423794! 10 g's/volt	**Cal on:**	28Jul2022

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

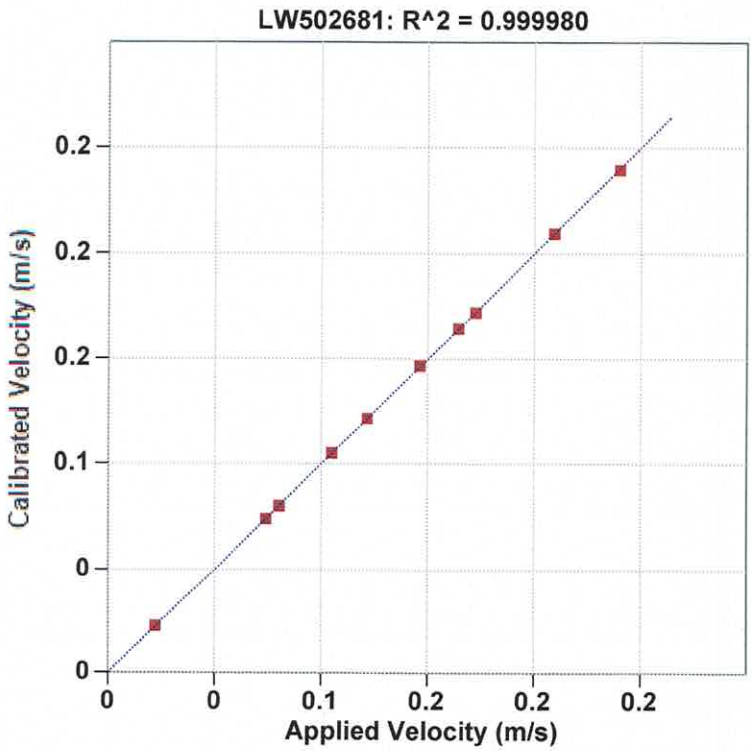
10.1 g's/volt

R^2: 0.999980 [Chip programmed]

Operator: William Johnson

Signed

PILE DYNAMICS, INC.
ORIGINAL COPY



Reference Velocity	S/N LW502681 Velocity
m/s	m/s
0.022	0.022
0.074	0.074
0.080	0.080
0.105	0.105
0.122	0.122
0.146	0.147
0.164	0.165
0.172	0.172
0.209	0.209
0.240	0.240

Maximum Acceleration: 28 g's

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	80609	**Temperature:**	23.3 °C
Model:	PE	**Humidity:**	34%
Calibrated on:	Channel 4 on 8G 5161 LE		

PDA CALIBRATION FACTOR

980.4 g's/volt

R^2: 0.999992 [No chip]

Ref Acc 1:	78268! 986 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78270! 971 g's/volt	**Cal on:**	11Jan2024

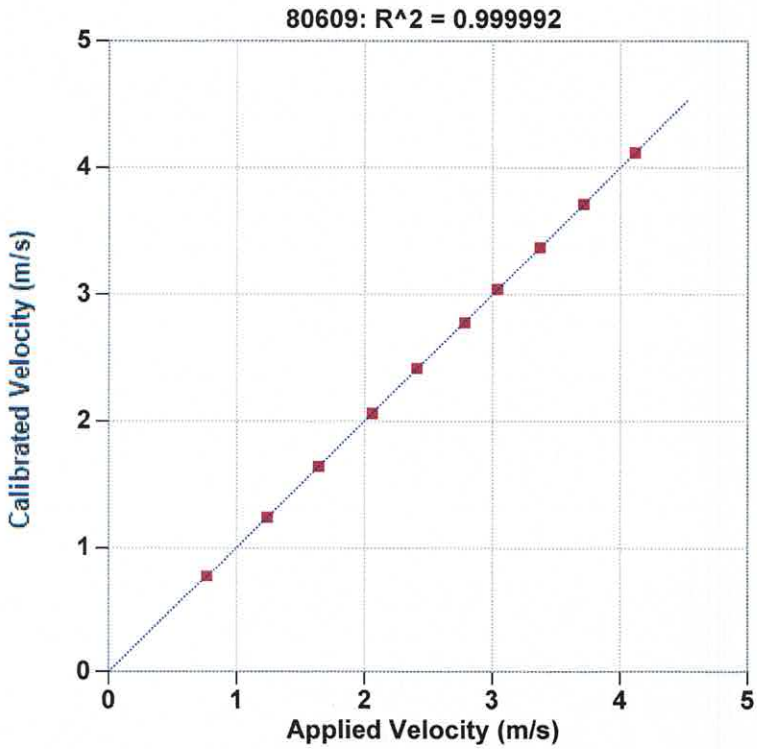
Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 8 2024



Reference Velocity	S/N 80609 Velocity
m/s	m/s
0.767	0.765
1.242	1.243
1.644	1.644
2.064	2.063
2.413	2.418
2.785	2.779
3.040	3.044
3.373	3.375
3.716	3.714
4.117	4.117

Maximum Acceleration: 894 g's

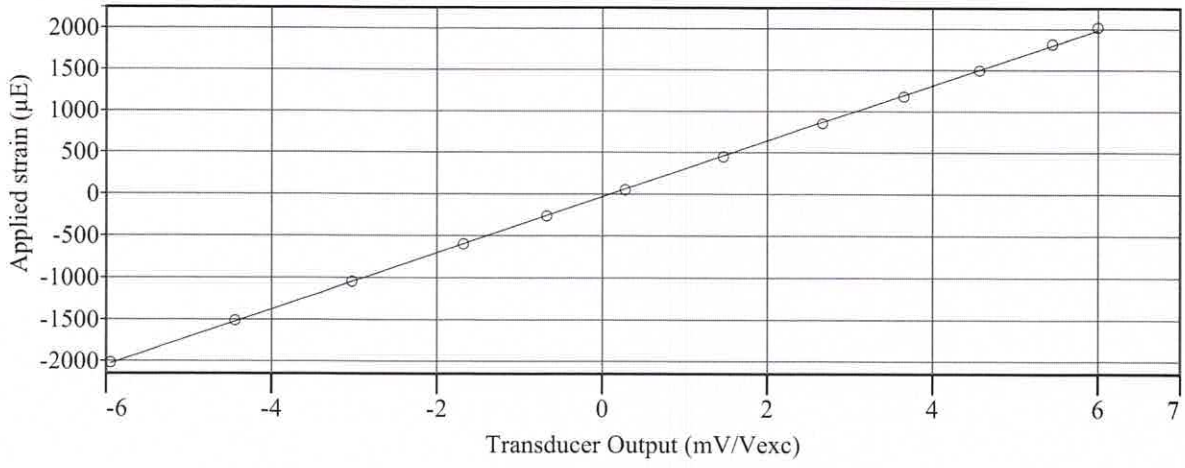
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Z685
PDI Gage Factor: 97.1
Mean Linear Correlation Coefficient: 0.999850

Table 1: Representative Calibration Data

Applied strain (με)	Gage Output (mV/Vexc)	Applied strain (με)	Gage Output (mV/Vexc)
-2016.6	-5.947	446.2	1.462
-1509.2	-4.440	846.5	2.666
-1043.3	-3.026	1181.1	3.650
-597.1	-1.681	1496.1	4.561
-262.5	-0.673	1817.6	5.448
52.5	0.278	2021.0	5.998

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: Z685
Calibration Date: OCT 2 8 2024

Pile Dynamics, Inc.

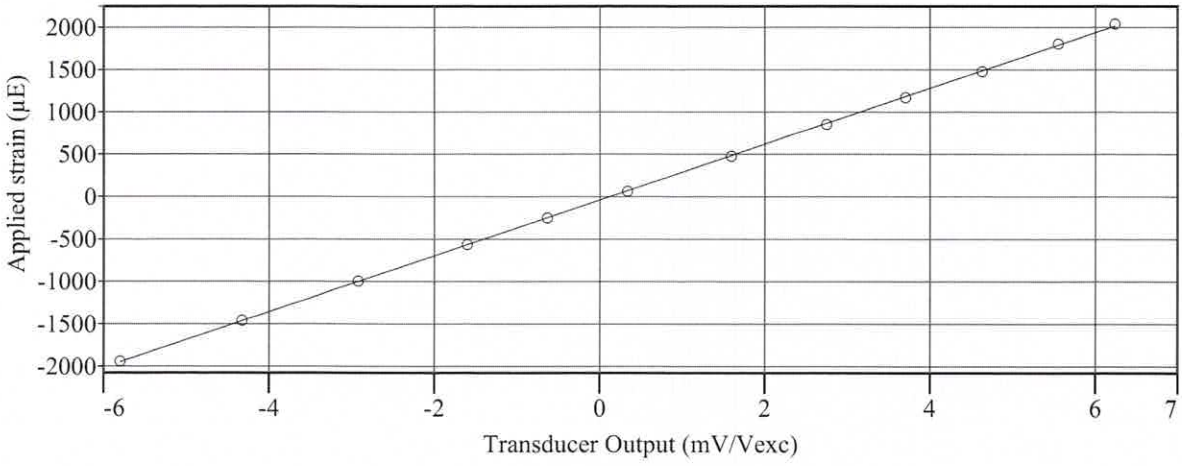
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Z687
PDI Gage Factor: 95.2
Mean Linear Correlation Coefficient: 0.999920

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-1942.3	-5.803	479.0	1.591
-1456.7	-4.327	853.0	2.745
-997.4	-2.920	1168.0	3.703
-564.3	-1.605	1476.4	4.628
-249.3	-0.633	1804.5	5.553
65.6	0.339	2040.7	6.235

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: Z687

Calibration Date: OCT 2 8 2024

Pile Dynamics, Inc.

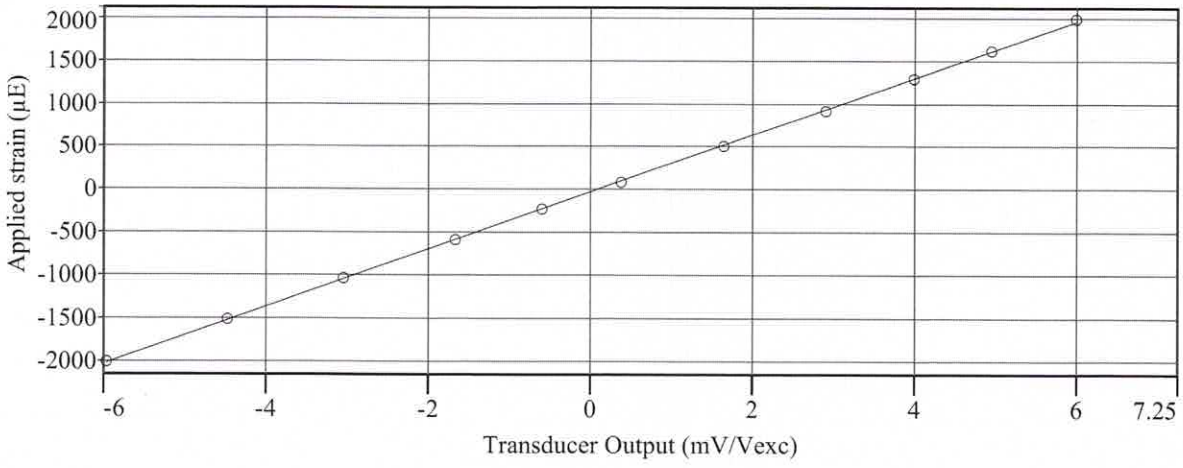
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Z688
PDI Gage Factor: 96.2
Mean Linear Correlation Coefficient: 0.999871

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-2007.9	-5.968	498.7	1.640
-1509.2	-4.473	918.6	2.903
-1036.7	-3.045	1292.7	3.991
-590.6	-1.669	1620.7	4.945
-236.2	-0.596	1994.8	5.991
78.7	0.379		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

OCT 2 8 2024

PDI Gage: Z688
Calibration Date: _____

Pile Dynamics, Inc.

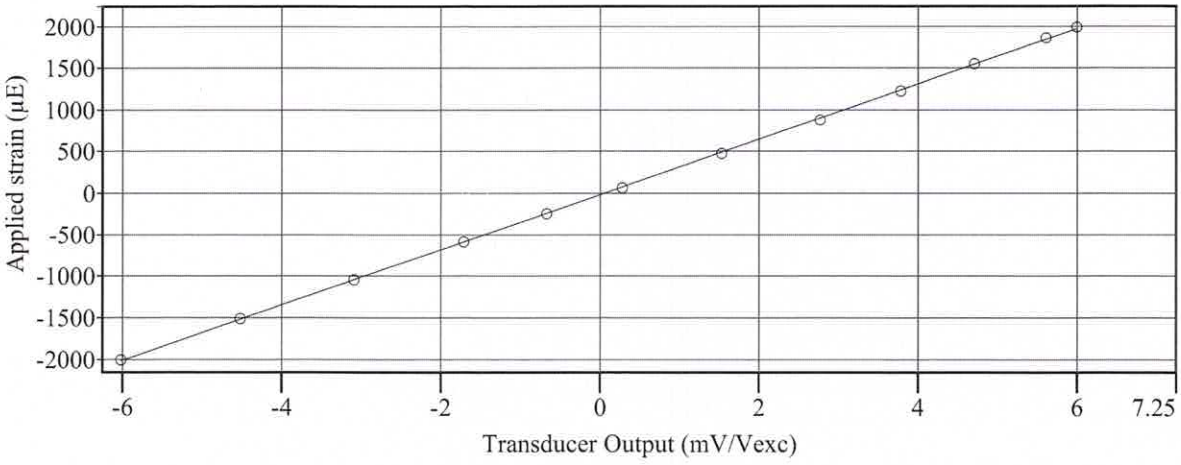
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Z689
PDI Gage Factor: 95.9
Mean Linear Correlation Coefficient: 0.999892

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-2001.3	-6.020	472.4	1.526
-1509.2	-4.519	879.3	2.766
-1043.3	-3.091	1227.0	3.783
-584.0	-1.714	1548.6	4.708
-242.8	-0.670	1863.5	5.610
65.6	0.281	1994.8	5.995

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: Z689
Calibration Date: OCT 2 8 2024

Pile Dynamics, Inc.

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	K14234	**Temperature:**	23.2 °C
Model:	KICHER PR	**Humidity:**	33%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	78270! 971 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78268! 986 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

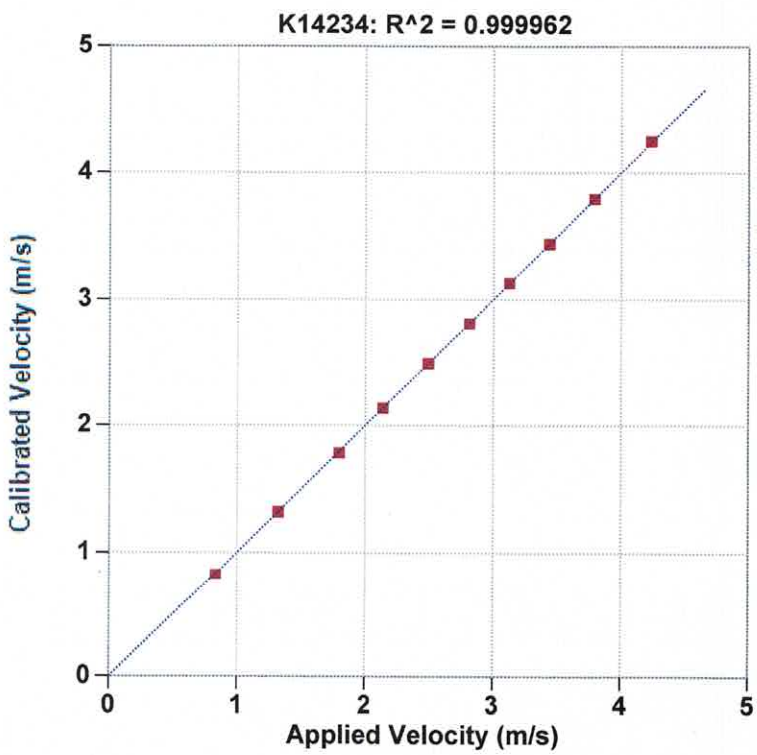
369.8 mv/5000g
(74.0 µv/g)
R^2: 0.999962 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 8 2024



Reference Velocity	S/N K14234 Velocity
m/s	m/s
0.833	0.825
1.324	1.323
1.799	1.784
2.143	2.140
2.496	2.494
2.814	2.811
3.129	3.132
3.443	3.442
3.795	3.795
4.239	4.249

Maximum Acceleration: 921 g's

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	K14232	**Temperature:**	23.2 °C
Model:	KICHER PR	**Humidity:**	33%
Calibrated on:	Channel 4 on 8G 5161 LE		

Ref Acc 1:	78270! 971 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78268! 986 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

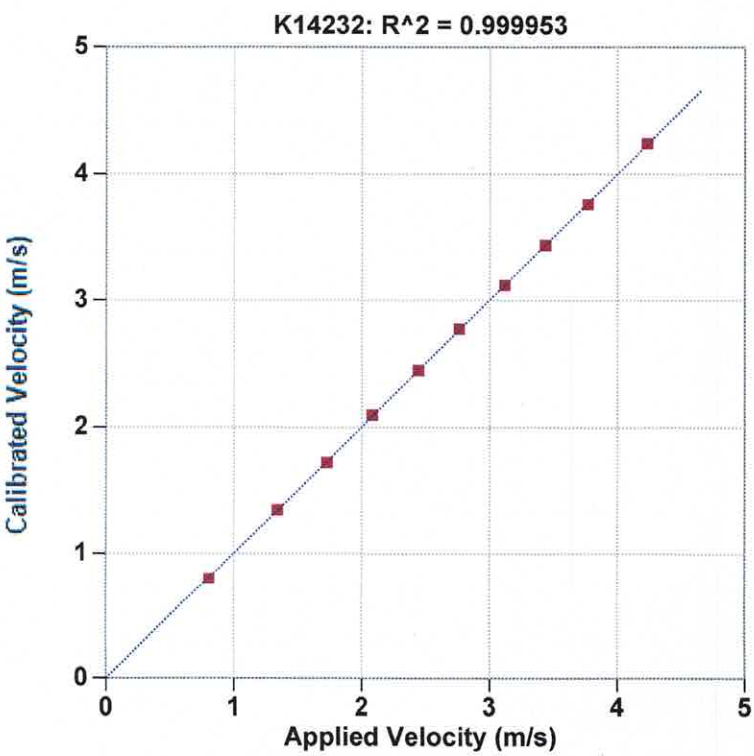
331.8 mv/5000g
(66.4 µv/g)
R^2: 0.999953 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 8 2024



Reference Velocity	S/N K14232 Velocity
m/s	m/s
0.807	0.799
1.345	1.349
1.730	1.722
2.087	2.098
2.447	2.449
2.767	2.776
3.122	3.120
3.440	3.437
3.772	3.760
4.238	4.243

Maximum Acceleration: 923 g's

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	K14237	**Temperature:**	23.2 °C
Model:	KICHER PR	**Humidity:**	33%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	78270! 971 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78268! 986 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

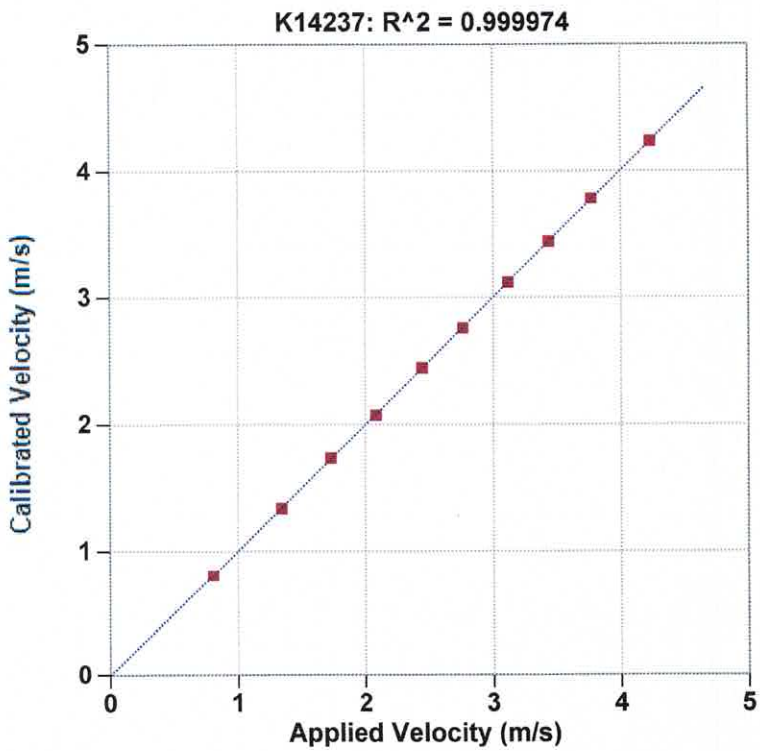
369.2 mv/5000g
(73.8 µv/g)
R^2: 0.999974 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 8 2024



Reference Velocity	S/N K14237 Velocity
m/s	m/s
0.807	0.804
1.345	1.339
1.730	1.735
2.087	2.078
2.447	2.450
2.767	2.761
3.122	3.120
3.440	3.439
3.772	3.780
4.238	4.239

Maximum Acceleration: 923 g's

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Serial No:	K14236	**Temperature:**	23.2 °C
Model:	KICHER PR	**Humidity:**	33%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	78270! 971 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78268! 986 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

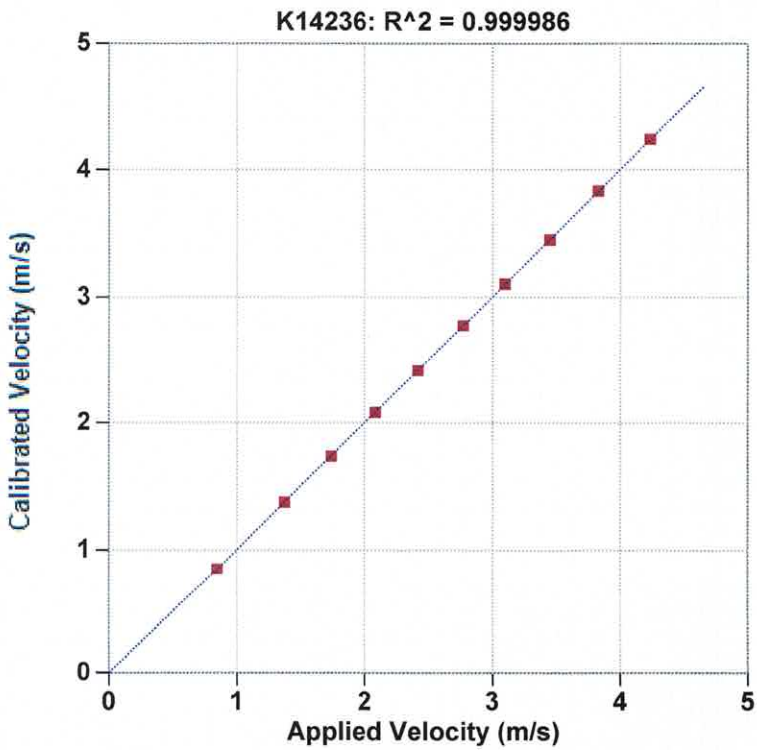
384.1 mv/5000g
(76.8 µv/g)
R^2: 0.999986 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 8 2024



Reference Velocity	S/N K14236 Velocity
m/s	m/s
0.847	0.852
1.375	1.375
1.743	1.736
2.089	2.085
2.420	2.418
2.773	2.778
3.101	3.104
3.453	3.449
3.833	3.834
4.240	4.241

Maximum Acceleration: 924 g's

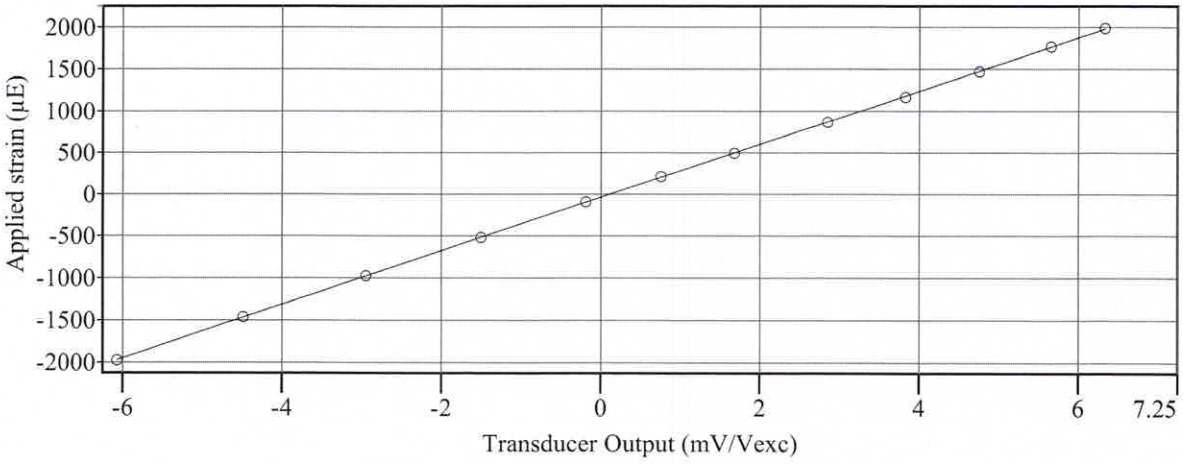
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: 399A
PDI Gage Factor: 92.0
Mean Linear Correlation Coefficient: 0.999975

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-1975.1	-6.071	492.1	1.674
-1463.3	-4.488	866.1	2.850
-971.1	-2.945	1168.0	3.827
-518.4	-1.500	1469.8	4.753
-91.9	-0.186	1765.1	5.654
210.0	0.757	1988.2	6.330

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: 399A
Calibration Date: OCT 2 8 2024

Pile Dynamics, Inc.

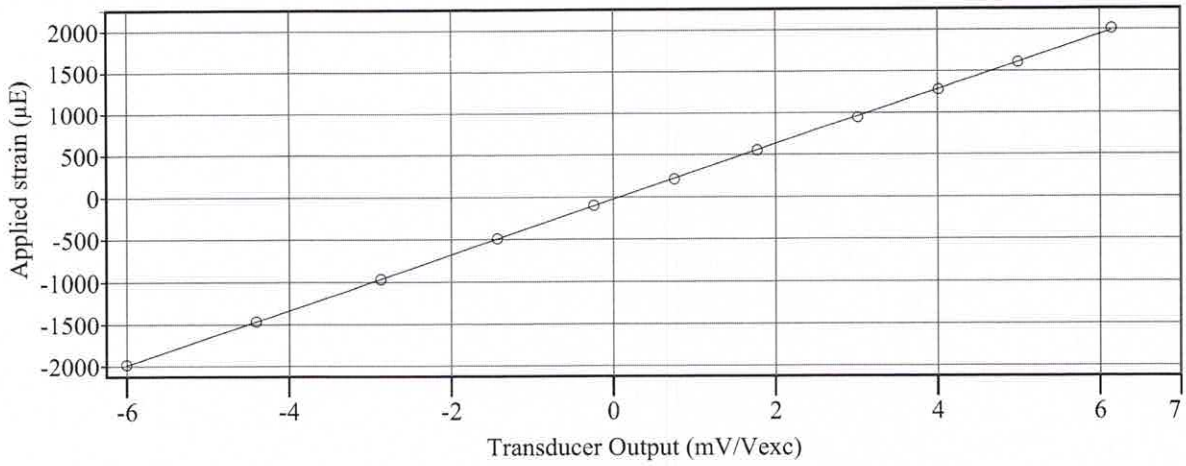
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: 397A
PDI Gage Factor: 94.5
Mean Linear Correlation Coefficient: 0.999939

Table 1: Representative Calibration Data

Applied strain (με)	Gage Output (mV/Vexc)	Applied strain (με)	Gage Output (mV/Vexc)
-1981.6	-6.004	551.2	1.775
-1463.3	-4.405	944.9	3.013
-964.6	-2.868	1279.5	4.012
-492.1	-1.431	1607.6	4.992
-98.4	-0.242	2007.9	6.149
210.0	0.751		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: 397A
Calibration Date: OCT 2 8 2024

Pile Dynamics, Inc.

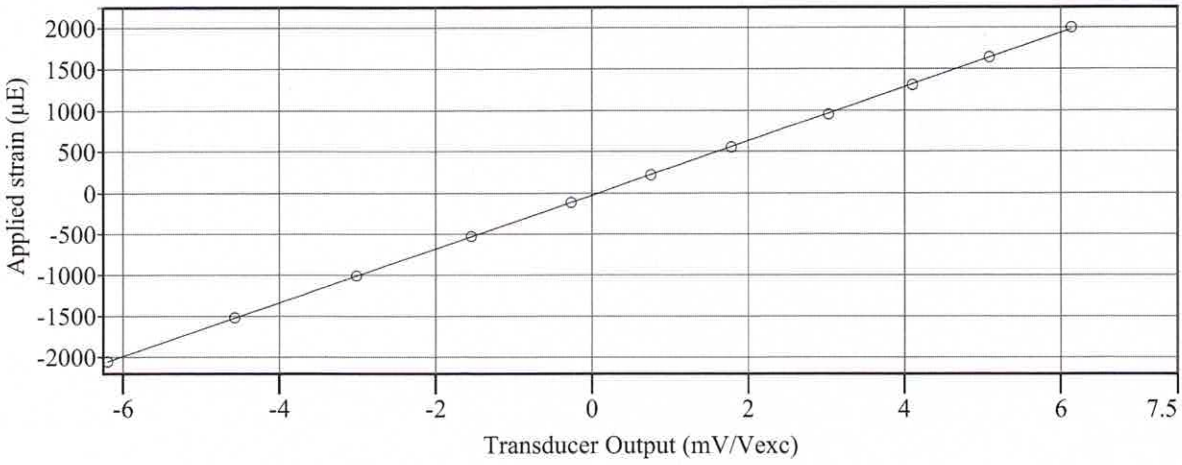
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: 396A
PDI Gage Factor: 94.6
Mean Linear Correlation Coefficient: 0.999956

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-2053.8	-6.195	551.2	1.781
-1517.9	-4.569	953.6	3.030
-1010.5	-3.012	1305.8	4.104
-527.1	-1.542	1640.4	5.085
-111.5	-0.268	2001.3	6.136
216.5	0.755		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: 396A
Calibration Date: OCT 2 8 2024

Pile Dynamics, Inc.

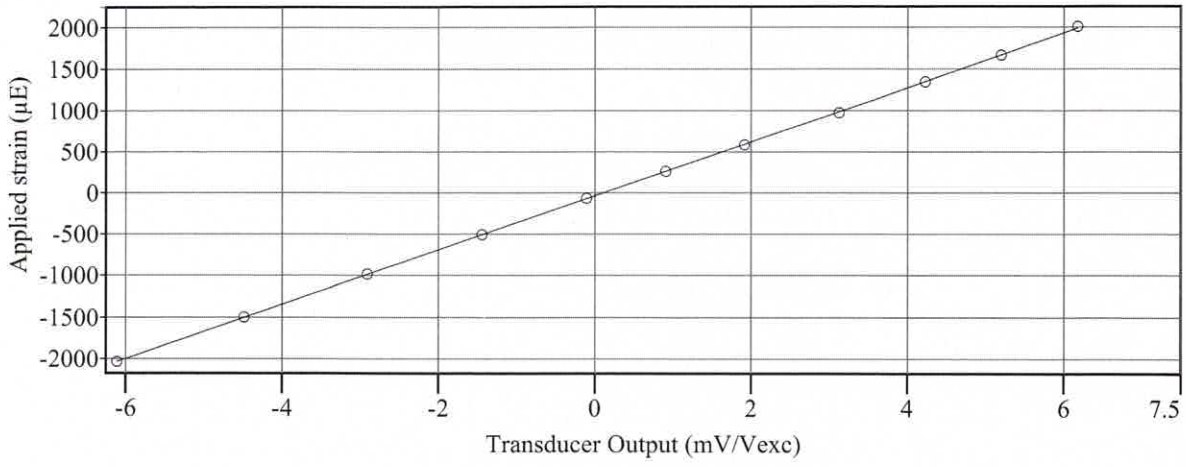
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: 395A
PDI Gage Factor: 94.6
Mean Linear Correlation Coefficient: 0.999962

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-2034.1	-6.108	584.0	1.912
-1496.1	-4.483	977.7	3.124
-984.3	-2.909	1345.1	4.226
-505.2	-1.441	1666.7	5.195
-65.6	-0.108	2007.9	6.175
262.5	0.908		

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: 395A
Calibration Date: OCT 2 8 2024

Pile Dynamics, Inc.

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

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Serial No:	K14259	**Temperature:**	23.5 °C
Model:	KICHER PR	**Humidity:**	32%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	78268! 986 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78270! 971 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

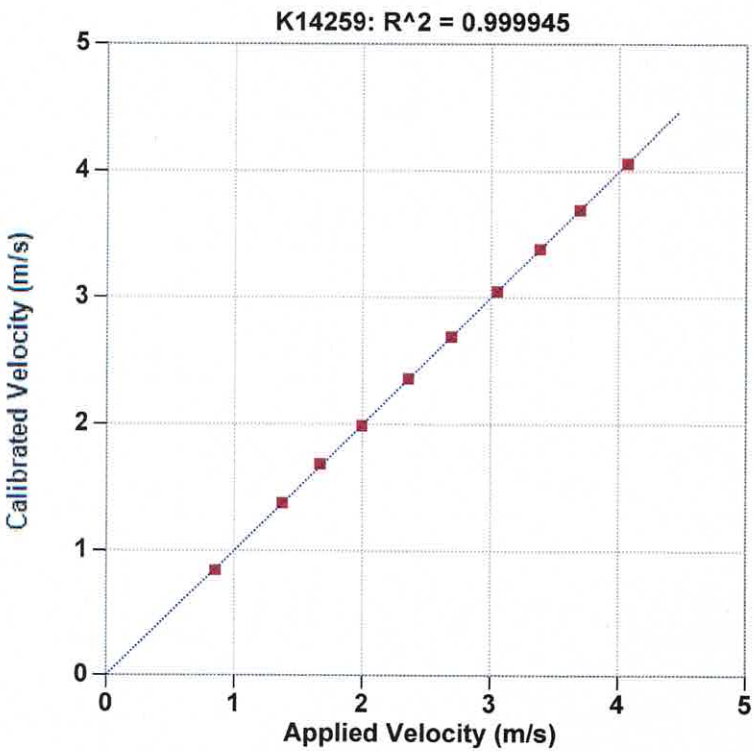
389.7 mv/5000g
(77.9 µv/g)
R^2: 0.999945 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 8 2024



Reference Velocity	S/N K14259 Velocity
m/s	m/s
0.852	0.845
1.377	1.382
1.671	1.691
1.996	1.991
2.359	2.363
2.694	2.693
3.052	3.050
3.388	3.388
3.699	3.695
4.069	4.066

Maximum Acceleration: 883 g's

Certificate of Calibration
Pile Dynamics, Inc.

PILE DYNAMICS, INC. ORIGINAL COPY

Calibrated by Pile Dynamics, Inc.

Serial No:	K14260	**Temperature:**	23.5 °C
Model:	KICHER PR	**Humidity:**	32%
Calibrated on:	Channel 4 on 8G 5161 LE		

Ref Acc 1:	78268! 986 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78270! 971 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

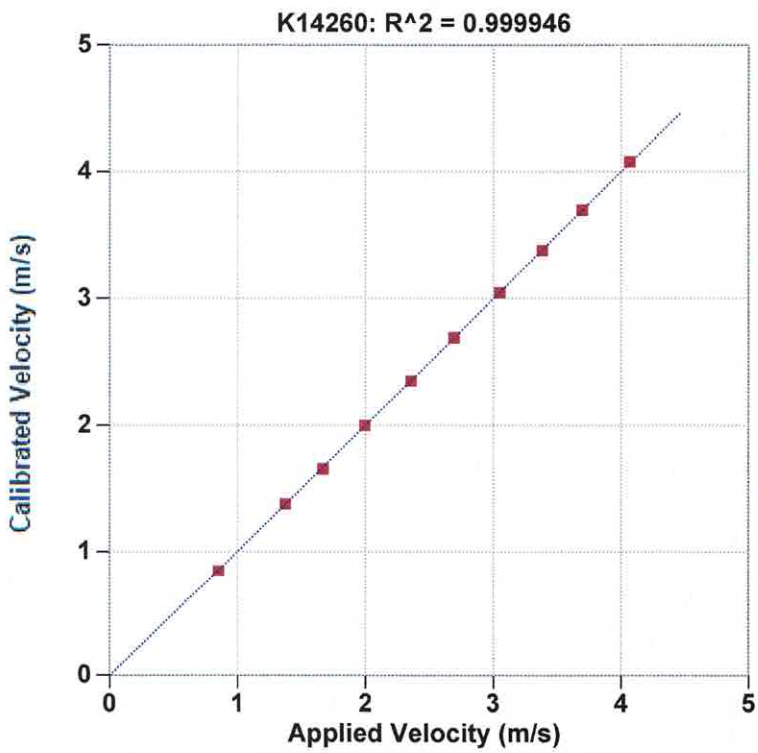
361.2 mv/5000g
(72.2 µv/g)
R^2: 0.999946 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 8 2024



Reference Velocity	S/N K14260 Velocity
m/s	m/s
0.852	0.850
1.377	1.381
1.671	1.656
1.996	2.001
2.359	2.358
2.694	2.695
3.052	3.047
3.388	3.381
3.699	3.697
4.069	4.083

Maximum Acceleration: 883 g's

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

Serial No:	K14127	**Temperature:**	25.1 °C
Model:	KICHER PR	**Humidity:**	48%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	78270! 971 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78268! 986 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

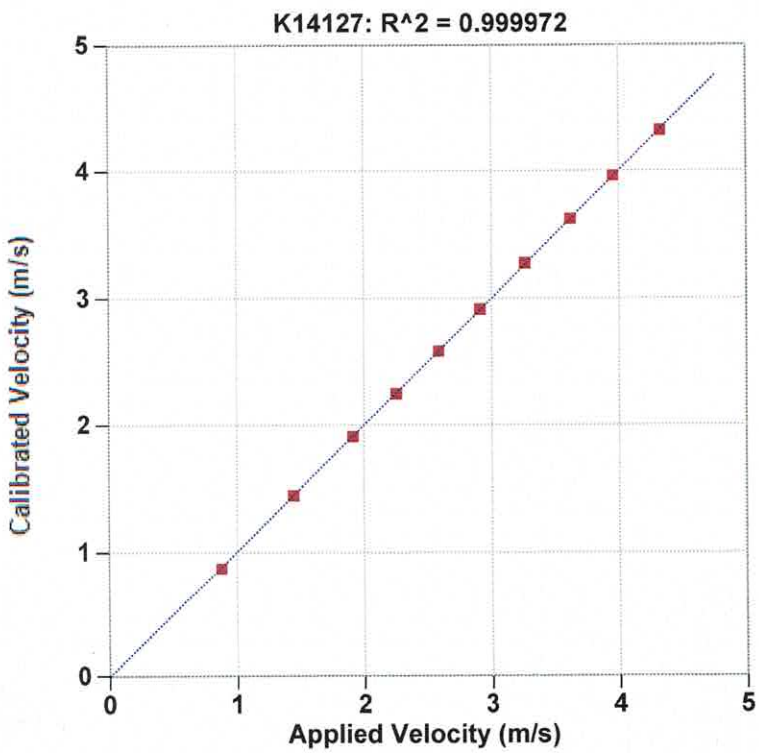
347.4 mv/5000g
(69.5 µv/g)
R^2: 0.999972 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 5 2024



Reference Velocity	S/N K14127 Velocity
m/s	m/s
0.881	0.876
1.447	1.447
1.913	1.909
2.255	2.252
2.588	2.586
2.913	2.919
3.267	3.278
3.623	3.622
3.959	3.962
4.330	4.321

Maximum Acceleration: 921 g's

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ORIGINAL COPY

Version: 2024.35.11 -0.01

Certificate of Calibration
Pile Dynamics, Inc.

Calibrated by Pile Dynamics, Inc.

Serial No:	K14140	**Temperature:**	24.9 °C
Model:	KICHER PR	**Humidity:**	49%
Calibrated on:	Channel 3 on 8G 5161 LE		

Ref Acc 1:	78270! 971 g's/volt	**Cal on:**	11Jan2024
Ref Acc 2:	78268! 986 g's/volt	**Cal on:**	11Jan2024

Reference accelerometer calibrations are traceable to the United States National Institute of Standards and Technology (NIST).

PDA CALIBRATION FACTOR

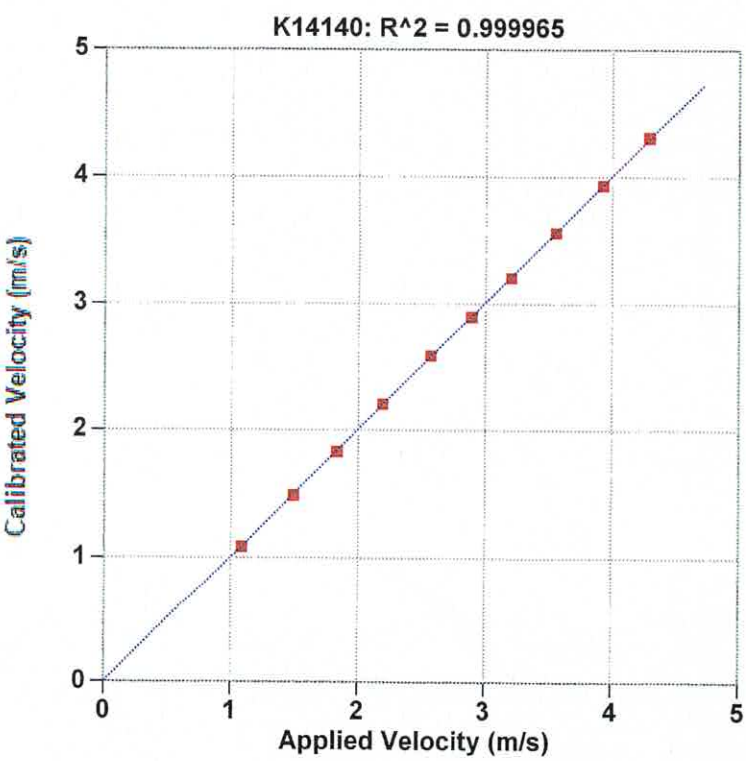
323.5 mv/5000g
(64.7 µv/g)
R^2: 0.999965 [Chip programmed]

Operator: William Johnson

Signed

Calibration valid 2 years

From: OCT 2 8 2024



Reference Velocity	S/N K14140 Velocity
m/s	m/s
1.087	1.088
1.500	1.491
1.837	1.829
2.198	2.203
2.581	2.585
2.897	2.894
3.210	3.204
3.561	3.560
3.932	3.930
4.295	4.306

Maximum Acceleration: 923 g's

PILE DYNAMICS, INC
ORIGINAL COPY

Version: 2024.35.11 -0.04

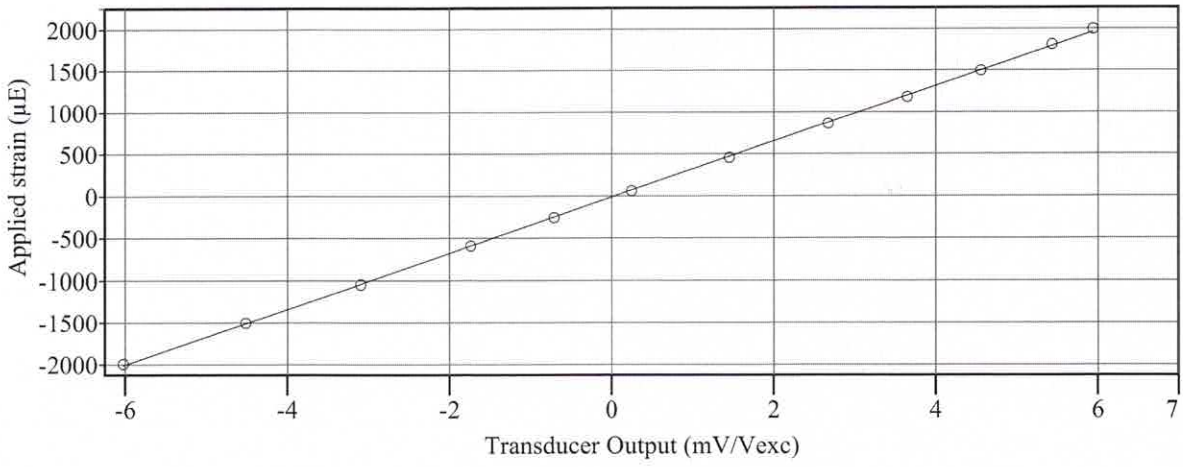
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Z690
PDI Gage Factor: 96.0
Mean Linear Correlation Coefficient: 0.999847

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-1994.8	-6.025	452.8	1.452
-1502.6	-4.511	859.6	2.671
-1043.3	-3.094	1181.1	3.648
-590.6	-1.738	1498.3	4.554
-255.9	-0.710	1811.0	5.436
59.1	0.249	1994.8	5.942

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: Z690

Calibration Date: OCT 2 8 2024

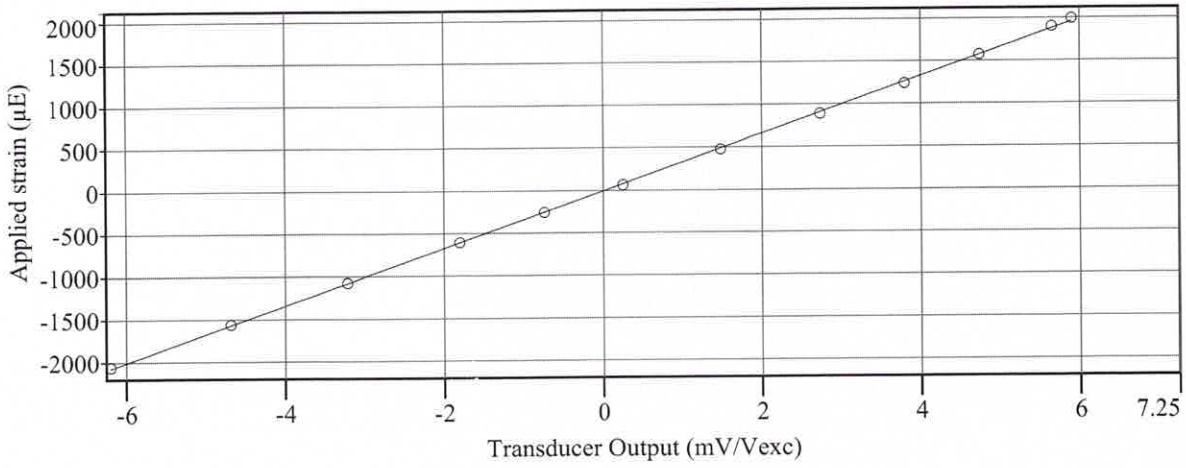
Certificate of Calibration

Pile Dynamics, Inc.
Transducer Model: PDI Strain Transducer
Serial Number: Z691
PDI Gage Factor: 96.4
Mean Linear Correlation Coefficient: 0.999850

Table 1: Representative Calibration Data

Applied strain (μE)	Gage Output (mV/Vexc)	Applied strain (μE)	Gage Output (mV/Vexc)
-2060.4	-6.196	472.4	1.481
-1561.7	-4.681	885.8	2.736
-1076.1	-3.214	1240.2	3.801
-608.0	-1.803	1574.8	4.740
-255.9	-0.739	1902.9	5.655
65.6	0.253	1994.8	5.901

Calibration Curve



PDI Strain Transducer Calibration System (PDI STCS)

PDI STCS Serial Number:	1000HA
Firmware version number:	0.9.0.0
Transducer Gage Length:	3 inches (76.2mm)
Excitation Voltage for Calibration:	5.0 VDC

PDI certifies the above STCS 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.

Calibrated By: Paul Hartman Signature: Paul Hartman

PDI Gage: Z691

Calibration Date: OCT 2 8 2024