



## Vibrating Wire Pressure Transducer Calibration Report

(B-2)

Type: SHDate of Calibration: August 26, 2009Serial Number: 0922284Temperature: 24.9 °CPressure Range: 5 MPa†Barometric Pressure: 990.5 mbarCalibration Instruction: VW Pressure TransducersTechnician: Elice

Applied Pressure (MPa)	Gage Reading 1st Cycle	Gage Reading 2nd Cycle	Average Gage Reading	Calculated Pressure (Linear)	Error Linear (%FS)	Calculated Pressure (Polynomial)	Error Polynomial (%FS)
0.0	8998	8998	8998	0.011	0.21	-0.001	-0.02
1.0	8198	8198	8198	0.999	-0.02	1.001	0.02
2.0	7394	7394	7394	1.992	-0.16	2.001	0.02
3.0	6587	6586	6587	2.990	-0.21	2.998	-0.03
4.0	5772	5771	5772	3.996	-0.07	3.998	-0.04
5.0	4949	4949	4949	5.012	0.25	5.001	0.02

(MPa) Linear Gage Factor (G): 0.001235 (MPa/ digit) Regression Zero: 9007Polynomial Gage Factors: A: -5.268E-09 B: -0.001162 C: 10.880Thermal Factor (K): 0.001240 (MPa/ °C)(psi) Linear Gage Factor (G): 0.1790 (psi/ digit)Polynomial Gage Factors: A: -7.63542E-07 B: -0.1684 C: 1576.8Thermal Factor (K): 0.1797 (psi/ °C)

## Calculated Pressures:

Linear,  $P = G(R_0 - R_1) + K(T_1 - T_0) - (S_1 - S_0)**$

Polynomial,  $P = AR_1^2 + BR_1 + C + K(T_1 - T_0) - (S_1 - S_0)**$

†Barometric pressures are absolute. Barometric compensation is not required with vented and differential pressure transducers.

## Factory Zero Reading:

GK-401 Pos. B or F(R<sub>0</sub>): 8972 Temp(T<sub>0</sub>): 25.0 °C †Baro(S<sub>0</sub>): 1011.5 mbar Date: September 10, 2009

\*Initial zero readings must be established in the field following the procedures described in the Instruction Manual. If the Polynomial equation is used the field value of C must be calculated by plugging the initial zero reading into the polynomial equation with the value of P set to zero.

The above instrument was found to be in tolerance in all operating ranges.

The above named instrument has been calibrated by comparison with standards traceable to the NIST, in compliance with ANSI Z540-1.

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48 Spencer St. Lebanon, N.H. 03766 USA

## Vibrating Wire Pressure Transducer Calibration Report

(B-3)

Type: SHDate of Calibration: August 26, 2009Serial Number: 0922289Temperature: 24.9 °CPressure Range: 5 MPa† Barometric Pressure: 990.5 mbarCalibration Instruction: VW Pressure TransducersTechnician: K. S. Logan

Applied Pressure (MPa)	Gage Reading 1st Cycle	Gage Reading 2nd Cycle	Average Gage Reading	Calculated Pressure (Linear)	Error Linear (%FS)	Calculated Pressure (Polynomial)	Error Polynomial (%FS)
0.0	8727	8727	8727	0.008	0.15	-0.002	-0.03
1.0	7918	7919	7919	1.001	0.02	1.003	0.06
2.0	7111	7111	7111	1.993	-0.14	2.000	0.00
3.0	6298	6298	6298	2.992	-0.17	2.999	-0.02
4.0	5480	5480	5480	3.997	-0.07	3.999	-0.03
5.0	4654	4656	4655	5.010	0.20	5.002	0.05

(MPa) Linear Gage Factor (G): 0.001229 (MPa/ digit)Regression Zero: 8733Polynomial Gage Factors: A: -4.122E-09B: -0.001173C: 10.553Thermal Factor (K): 0.000985 (MPa/ °C)(psi) Linear Gage Factor (G): 0.1781 (psi/ digit)Polynomial Gage Factors: A: -5.97357E-07B: -0.1701C: 1529.4Thermal Factor (K): 0.1427 (psi/ °C)

Calculated Pressures:

Linear,  $P = G(R_0 - R_1) + K(T_1 - T_0) - (S_1 - S_0)**$ Polynomial,  $P = AR_1^2 + BR_1 + C + K(T_1 - T_0) - (S_1 - S_0)**$ † Barometric pressures are absolute. Barometric compensation is not required with vented and differential pressure transducers.

Factory Zero Reading:

8713GK-401 Pos. B or F(R<sub>0</sub>):Temp(T<sub>0</sub>): 23.8 °C† Baro(S<sub>0</sub>): 1005.1 mbarDate: September 21, 2009

\*Initial zero readings must be established in the field following the procedures described in the Instruction Manual. If the Polynomial equation is used the field value of C must be calculated by plugging the initial zero reading into the polynomial equation with the value of P set to zero.

The above instrument was found to be in tolerance in all operating ranges.

The above named instrument has been calibrated by comparison with standards traceable to the NIST, in compliance with ANSI Z540-1.

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## Vibrating Wire Pressure Transducer Calibration Report

(B-5)

Type: SDate of Calibration: August 25, 2009Serial Number: 0921904Temperature: 24.6 °CPressure Range: 3 MPa†Barometric Pressure: 999.8 mbarCalibration Instruction: VW Pressure TransducersTechnician: *K. Stogias*

Applied Pressure (MPa)	Gage Reading 1st Cycle	Gage Reading 2nd Cycle	Average Gage Reading	Calculated Pressure (Linear)	Error Linear (%FS)	Calculated Pressure (Polynomial)	Error Polynomial (%FS)
0.0	8934	8939	8937	0.007	0.23	0.002	0.08
0.6	8224	8223	8224	0.598	-0.05	0.599	-0.02
1.2	7505	7505	7505	1.194	-0.19	1.200	-0.01
1.8	6781	6781	6781	1.795	-0.18	1.800	0.01
2.4	6053	6052	6053	2.399	-0.04	2.400	0.00
3.0	5320	5320	5320	3.006	0.22	3.000	-0.01

(MPa) Linear Gage Factor (G): 0.0008294 (MPa/ digit) Regression Zero: 8945Polynomial Gage Factors: A: -3.891E-09 B: -0.0007739 C: 7.2270Thermal Factor (K): 0.0006791 (MPa/ °C)(psi) Linear Gage Factor (G): 0.1202 (psi/ digit)Polynomial Gage Factors: A: -5.63949E-07 B: -0.1122 C: 1047.4Thermal Factor (K): 0.0984 (psi/ °C)

## Calculated Pressures:

Linear,  $P = G(R_0 - R_1) + K(T_1 - T_0) - (S_1 - S_0)**$

Polynomial,  $P = AR_1^2 + BR_1 + C + K(T_1 - T_0) - (S_1 - S_0)**$

†Barometric pressures are absolute. Barometric compensation is not required with vented and differential pressure transducers.

## Factory Zero Reading:

GK-401 Pos. B or F(R<sub>0</sub>): 8920 Temp(T<sub>0</sub>): 20.9 °C †Baro(S<sub>0</sub>): 1005.6 mbar Date: September 21, 2009

\*Initial zero readings must be established in the field following the procedures described in the Instruction Manual. If the Polynomial equation is used the field value of C must be calculated by plugging the initial zero reading into the polynomial equation with the value of P set to zero.

The above instrument was found to be in tolerance in all operating ranges.

The above named instrument has been calibrated by comparison with standards traceable to the NIST, in compliance with ANSI Z540-1.

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