Pressure Calibration Certificate

RBRlegato³ C.T.D, Teledyne Webb Slocum, 1000dbar, dry bay s/n: 202590

Sensor rating: 1000 dbar s/n: L061043

Nominal accuracy: 0.05%FS (0.5 dbar)

Reference instrument: Mensor CPC6050 s/n: 41000CAM

Applied pressure, P_{app} (dbar)	Voltage ratio, V	Measured pressure, P_{meas} (dbar)	Calibration error (dbar)
10.0564	-0.038955	10.0657	0.0093
110.0000	0.005700	109.9860	-0.0140
209.9970	0.050167	209.9928	-0.0042
309.9970	0.094416	309.9947	-0.0023
410.0000	0.138462	410.0093	0.0093
510.0000	0.182313	510.0320	0.0320
609.9990	0.225934	609.9663	-0.0327
710.0060	0.269415	709.9976	-0.0084
810.0030	0.312713	810.0136	0.0106
910.0020	0.355832	910.0030	0.0010
1010.0000	0.398794	1009.9993	-0.0007

Coefficients

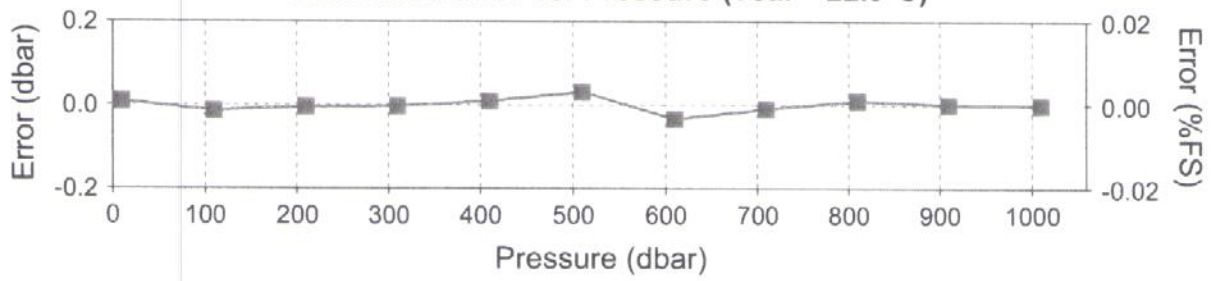
C0:	97.43308
C1:	2.2419001E3
C2:	128.04764
C3:	-25.603596
X0:	10.0598
X1:	-196.72062E-3
X2:	-472.29527E-6
X3:	2.2949243E-6
X4:	-121.21931E-6
X5:	22.9

$$P_{meas} = C_0 + C_1 \cdot V + C_2 \cdot V^2 + C_3 \cdot V^3$$

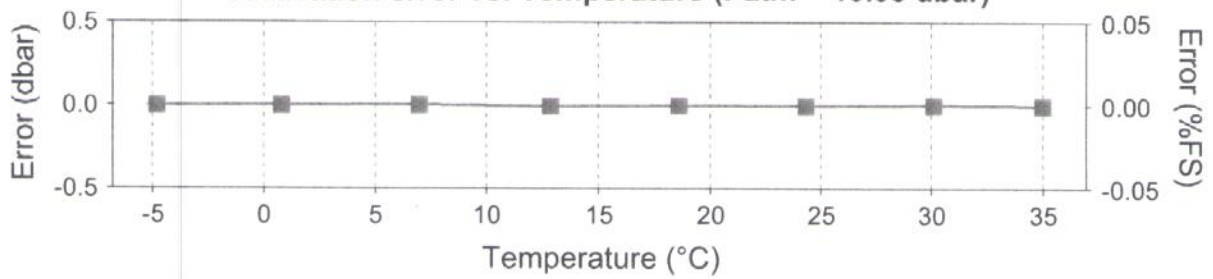
$$P_{tcor} = X_0 + \frac{P_{meas} - X_0 - X_1 \cdot (T - X_5) - X_2 \cdot (T - X_5)^2 - X_3 \cdot (T - X_5)^3}{1 + X_4 \cdot (T - X_5)}$$

Head (mm) = 229

Calibration error vs. Pressure (Tcal = 22.9°C)



Calibration error vs. Temperature (Patm = 10.08 dbar)



Calibration Date: 6/Sep/2019
Issue Date: 6/Sep/2019
File Name: 202590_20190906_1408P.rsk

Operator: dluong

Approver: kmalorny

RBR

Temperature Calibration Certificate

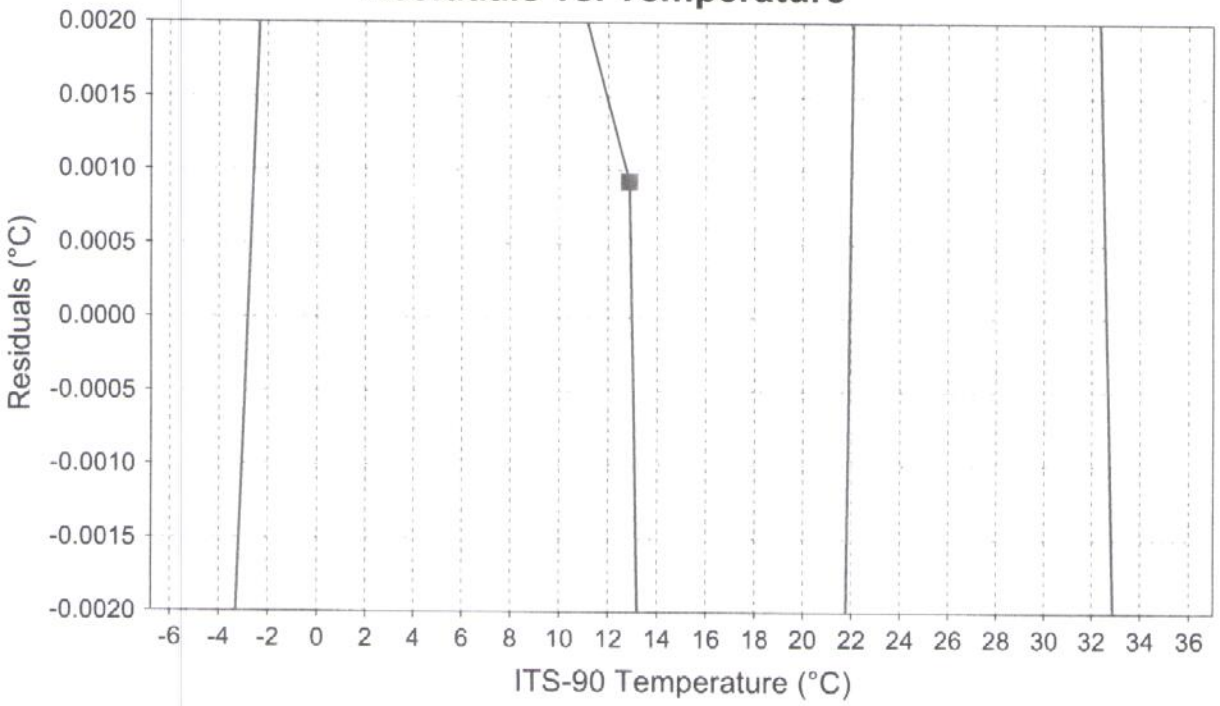
Logger ID: RBRlegato³ Serial No: 202590 Channel No: 8

Reference Temperature, ITS-90	Voltage ratio, V	Measured Temperature, ITS-90	Calibration error
-4.79479	0.888572	-4.80295	-0.00816
0.80052	0.860522	0.81554	0.01503
6.98587	0.824631	6.99048	0.00460
12.86249	0.785659	12.86342	0.00092
18.60780	0.743691	18.55834	-0.04945
24.33424	0.697202	24.37025	0.03601
30.11644	0.648237	30.13549	0.01905
34.99300	0.605654	34.97498	-0.01802

Coefficients

C0:	3.1254499E-3
C1:	-276.16372E-6
C2:	8.525147E-6
C3:	1.0125979E-6

Residuals vs. Temperature



Calibration Date: 5/Sep/2019
Issue Date: 6/Sep/2019
Calibration ID: 35079

Operator: dluong

Approver: _____

RBR

Conductivity Calibration Certificate

RBRlegato³ C.T.D, Teledyne Webb Slocum, 1000dbar, dry bay s/n: 202590

References: Autosal8400B#66289, MS-315#15506, SSW P160, RC#002

Reference Resistance (ohm)	Reference Conductivity (mS/cm)	Voltage Ratio, V	Measured Conductivity (mS/cm)	Calibration Error (mS/cm)
open	0.0000	-0.000209	-0.0005	-0.0005
694.035	7.4343	0.039026	7.4335	-0.0009
331.927	15.5447	0.081834	15.5444	-0.0003
150.017	34.3941	0.181330	34.3961	0.0020
100.015	51.5892	0.272078	51.5903	0.0011
75.018	68.7794	0.362794	68.7787	-0.0007
55.516	92.9410	0.490315	92.9403	-0.0007

Bath	Voltage Ratio	Temperature (ITS-90)	Salinity (PSS-78)	Conductivity (mS/cm)
T15S35	0.2259779	14.93443	35.0024	42.8557
T25S35	0.2853087	25.98823	34.9959	54.1002

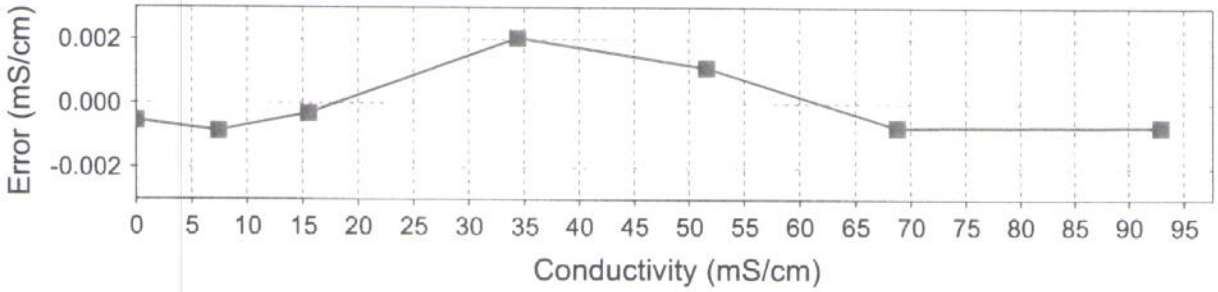
Cell Constant @T15S35 = 5.15970 1/cm

Coefficients

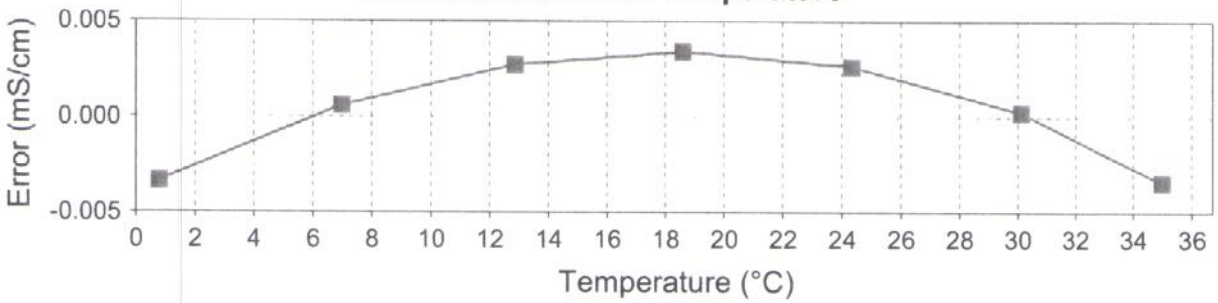
C0:	39.082505E-3
C1:	189.47263
C2:	1.001942
X0:	1.0313833E-3
X1:	-23.998244E-6
X2:	0.0
X3:	0.0
X4:	0.0
X5:	14.934426
X6:	10

$$C_c = \frac{C_0 + C_1 * C_2 * V - X_0 * (T - X_5)}{1 + X_1 * (T - X_5) + X_2 * (P - X_6) + X_3 * (P - X_6)^2 + X_4 * (P - X_6)^3}$$

Calibration error vs. Conductivity



Calibration error vs. Temperature



Calibration Date: 9/Sep/2019
Issue Date: 9/Sep/2019
File Name: 202590_20190909_1302C.rsk

Operator: T. Akuetteh
takuetteh

Approver:
kmalorny

RBR

Temperature Calibration Certificate

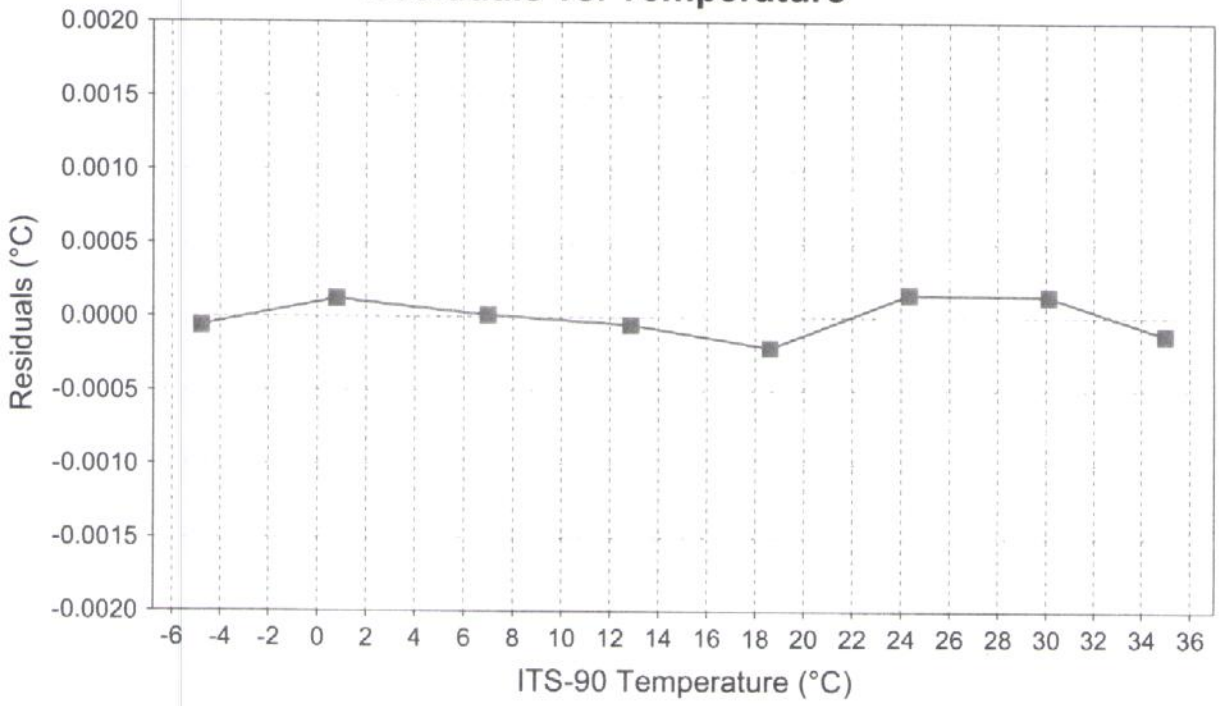
Logger ID: RBRlegato³ Serial No: 202590 Channel No: 2

Reference Temperature, ITS-90	Voltage ratio, V	Measured Temperature, ITS-90	Calibration error
-4.79479	0.725194	-4.79485	-0.00006
0.80052	0.662754	0.80064	0.00012
6.98587	0.589402	6.98588	0.00001
12.86248	0.518474	12.86243	-0.00005
18.60767	0.450787	18.60746	-0.00021
24.33419	0.387233	24.33435	0.00016
30.11644	0.328677	30.11659	0.00014
34.99301	0.284376	34.99289	-0.00012

Coefficients

C0:	3.477563E-3
C1:	-253.96122E-6
C2:	2.481635E-6
C3:	-74.479075E-9

Residuals vs. Temperature



Calibration Date: 5/Sep/2019
Issue Date: 6/Sep/2019
Calibration ID: 35080

Operator: dluong

Approver: kmalorny