

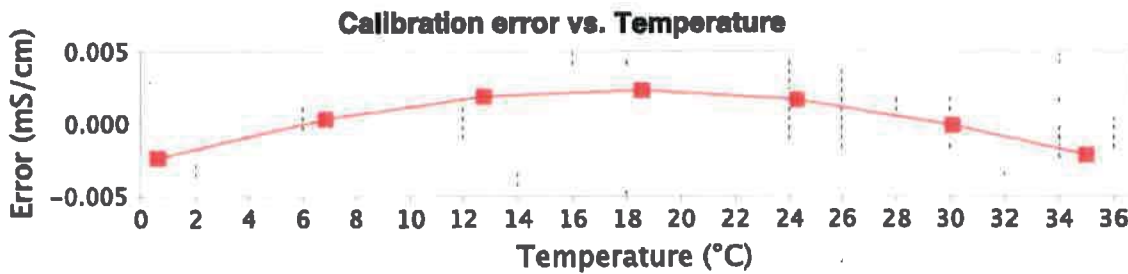
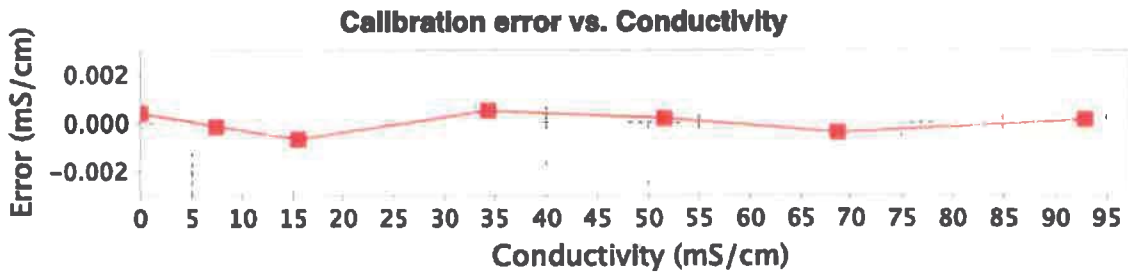
RBR Conductivity Calibration Certificate

RBRlegato³ C.T.D, Teledyne Webb Slocum, dry bay (1000dbar) s/n: 208549
 References: Autosal8400B#66289, MS-315#15506, SSW P164, RC#002


Reference Resistance (ohm)	Reference Conductivity (mS/cm)	Voltage Ratio, V	Measured Conductivity (mS/cm)	Calibration Error (mS/cm)		Coefficients
open	0.0000	-0.000177	0.0004	0.0004		C0: 34.046374E-3
694.033	7.4302	0.038886	7.4300	-0.0001	(K)	C1: 190.19788
331.927	15.5359	0.081500	15.5352	-0.0007		C2: 1.001942
150.016	34.3748	0.180555	34.3753	0.0005		X0: 471.93057E-6
100.011	51.5621	0.270919	51.5622	0.0002		X1: -6.7676006E-6
75.019	68.7400	0.361232	68.7396	-0.0004		X2: 1.8469999E-6
55.516	92.8884	0.488199	92.8885	0.0001		X3: -947.2E-12
						X4: 211.199E-15
						X5: 14.999331
						X6: 10
Bath	Voltage Ratio	Temperature (ITS-90)	Salinity (PSS-78)	Conductivity (mS/cm)		
T15S35	0.2254269	14.99933	34.9935	42.9098		
T25S35	0.2732286	23.98151	34.9928	52.0005		

Cell Constant @T15S35 = 5.15677 1/cm

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



Calibration Date: 2022-01-28
 Issue Date: 2022-01-28
 File Name: 208549_20220128_1315C.rsk

Operator: 
 jwang

Approver: 
 ishkvorets



Temperature Calibration Certificate

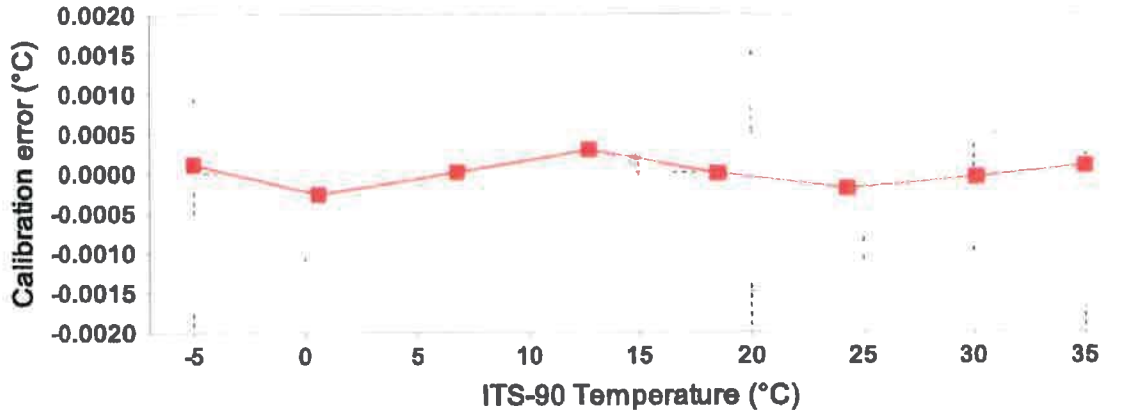
Logger ID: RBRlegato³ Serial No: 208549 Channel No: 2

Reference Temperature, ITS-90	Voltage ratio, V	Measured Temperature, ITS-90	Calibration error	Coefficients
-5.01397	0.724011	-5.01386	0.00011	C0: 3.4864973E-3
0.61312	0.659764	0.61286	-0.00026	C1: -249.43022E-6
6.84635	0.584075	6.84637	0.00002	C2: 2.4892092E-6
12.76367	0.511077	12.76396	0.00029	C3: -82.12922E-9
18.54612	0.441725	18.54612	-0.00000	
24.30265	0.377053	24.30245	-0.00020	
30.10650	0.317946	30.10645	-0.00005	
35.00136	0.273531	35.00145	0.00009	


$$T_m = \ln\left(\frac{1}{V-1}\right)$$


$$T_c = \frac{1}{(C_0 + C_1 T_m + C_2 T_m^2 + C_3 T_m^3)} - 273.15$$

Calibration error vs. Temperature



Calibration Date: 2022-01-24
 Issue Date: 2022-01-24
 Calibration ID: 51996

Operator: 
 kmalomy

Approver: 
 kmalomy



Pressure Calibration Certificate

RBRlegato³ C.T.D, Teledyne Webb Slocum, dry bay (1000dbar) s/n: 208549

Instrument rating: 1,000 dbar s/n: M100245

Nominal accuracy: 0.05%FS (0.5 dbar)

Reference instrument: Mensor CPC8050 s/n: 41000CAM

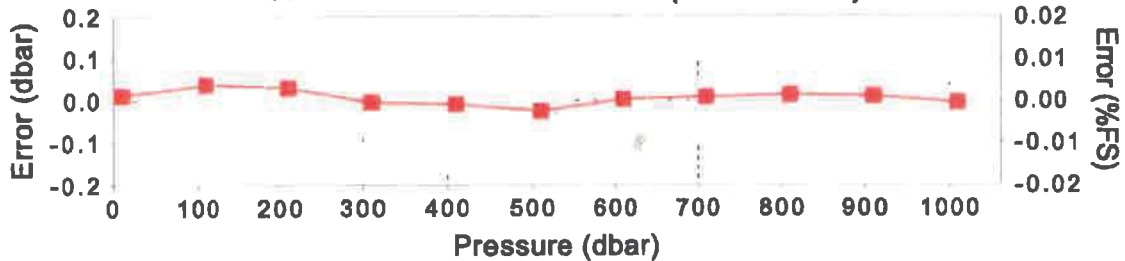
Applied pressure, P _{app} (dbar)	Voltage ratio, V	Measured pressure, P _c (dbar)	Calibration error (dbar)	Coefficients
10.033	0.019318	10.0460	0.0126	C0: -36.007473
109.999	0.061021	110.0369	0.0379	C1: 2.3961138E3
209.998	0.102689	210.0289	0.0309	C2: 25.955307
309.998	0.144319	309.9947	-0.0033	C3: -24.359715
410.000	0.185940	409.9921	-0.0079	X0: 10.0334
510.000	0.227536	509.9758	-0.0242	X1: 65.9019E-3
609.997	0.269135	609.9999	0.0029	X2: 25.784475E-6
709.999	0.310717	710.0067	0.0077	X3: -1.3604702E-6
810.000	0.352295	810.0131	0.0131	X4: -128.72818E-6
909.998	0.393867	910.0083	0.0103	X5: 20.743723
1010.000	0.435439	1009.9958	-0.0042	

$$P_c = X_0 + \frac{P_m - X_0 - X_1(T - X_5) - X_2(T - X_5)^2 - X_3(T - X_5)^3}{1 + X_4(T - X_5)}$$

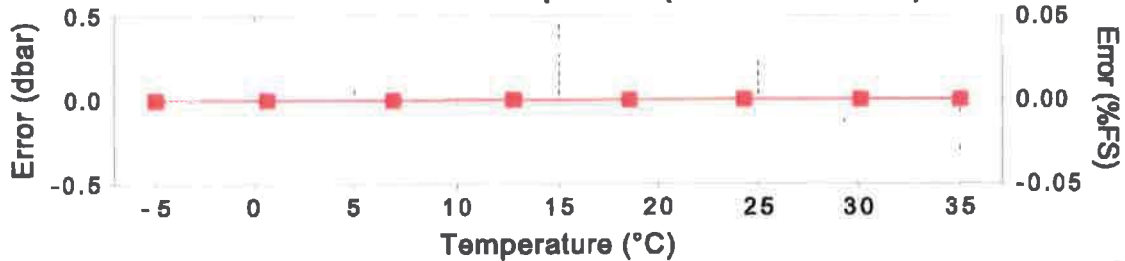
Head (mm) = 275

$$P_m = C_0 + C_1V + C_2V^2 + C_3V^3$$

Calibration error vs. Pressure (Tcal = 20.7°C)



Calibration error vs. Temperature (Patm = 10.03 dbar)



Calibration Date: 2022-01-25
 Issue Date: 2022-01-25
 File Name: 208549_20220125_1032P.rsk

Operator: Adam Fulin
 afalicki

Approver: [Signature]
 kmaiorny