

RBR

Conductivity Calibration Certificate

RBRlegato[®] C.T.D, Teledyne Webb Slocum, dry bay (1000dbar) s/n: 208548
References: Autosal8400B#66289, MS-315#15506, SSW P164, RC#002

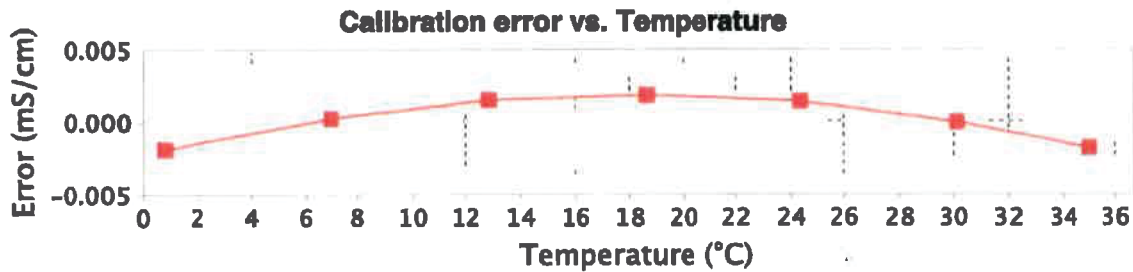
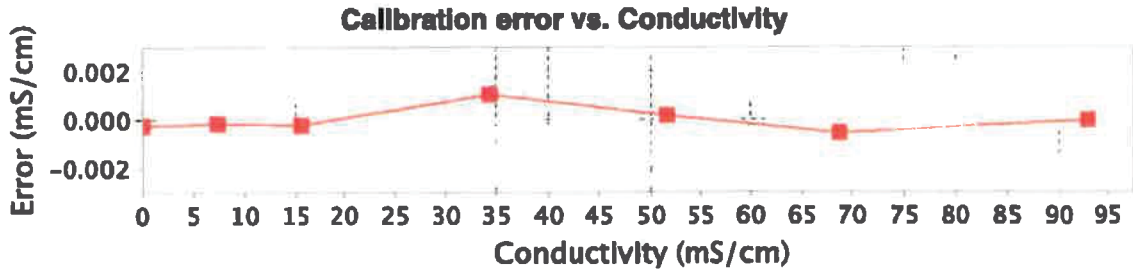


Reference Resistance (ohm)	Reference Conductivity (mS/cm)	Voltage Ratio, V	Measured Conductivity (mS/cm)	Calibration Error (mS/cm)		Coefficients
open	0.0000	-0.000101	-0.0002	-0.0002		C0: 19.000571E-3
694.033	7.4333	0.038968	7.4331	-0.0002	(K) C2:	190.26297
331.927	15.5424	0.081588	15.5422	-0.0002	X0:	1.001942
150.016	34.3894	0.180652	34.3904	0.0010	X1:	499.5609E-6
100.011	51.5839	0.271020	51.5841	0.0002	X2:	-10.285944E-6
75.019	68.7691	0.361340	68.7686	-0.0006	X3:	1.8469999E-6
55.516	92.9277	0.488317	92.9277	-0.0000	X4:	-947.2E-12
					X5:	211.199E-15
					X6:	14.996294
						10

Bath	Voltage Ratio	Temperature (ITS-90)	Salinity (PSS-78)	Conductivity (mS/cm)
T15S35	0.2253948	14.99629	34.9903	42.9033
T25S35	0.2729994	23.94909	34.9884	51.9610

Cell Constant @T15S35 = 5.15896 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: 2022-01-26
Issue Date: 2022-01-26
File Name: 208548_20220126_1822C.rsk

Operator: Jwang

Approver: I. Shkvetz
ishkvorets



Temperature Calibration Certificate

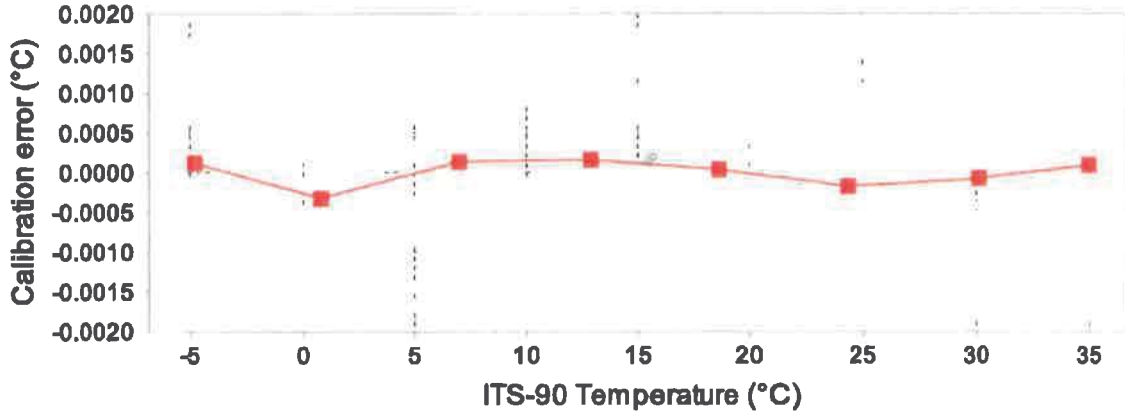
Logger ID: RBRlegato³ Serial No: 208548 Channel No: 2

Reference Temperature, ITS-90	Voltage ratio, V	Measured Temperature, ITS-90	Calibration error	Coefficients
-4.79061	0.746073	-4.79048	0.00012	C0: 3.4549702E-3
0.80338	0.685260	0.80306	-0.00032	C1: -249.0151E-6
6.98836	0.612648	6.98850	0.00014	C2: 2.4820793E-6
12.86432	0.541356	12.86449	0.00016	C3: -86.37298E-9
18.60959	0.472398	18.60963	0.00004	
24.33509	0.406924	24.33491	-0.00017	
30.11593	0.346021	30.11585	-0.00007	
34.99156	0.299615	34.99166	0.00010	


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

$$T_c = \frac{1}{(C_0 + C_1T_m + C_2T_m^2 + C_3T_m^3)} - 273.15$$

Calibration error vs. Temperature



Calibration Date: 2022-01-23
 Issue Date: 2022-01-23
 Calibration ID: 51965

Operator: 
 kmalomy

Approver: 
 kmalorny



Pressure Calibration Certificate

RBRlegato³ C.T.D, Teledyne Webb Slocum, dry bay (1000dbar) s/n: 208548

Instrument rating: 1,000 dbar s/n: M007429

Nominal accuracy: 0.05%FS (0.5 dbar)

Reference Instrument: Mensor CPC6050 s/n: 41000CAM

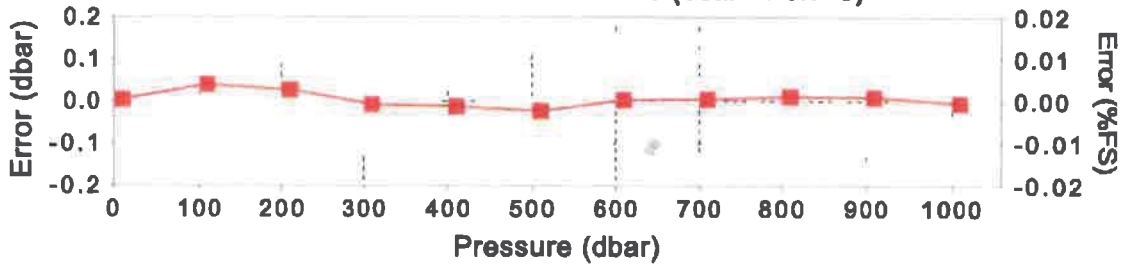
Applied pressure, P _{app} (dbar)	Voltage ratio, V	Measured pressure, P _c (dbar)	Calibration error (dbar)	Coefficients
10.015	0.020583	10.0198	0.0044	C0: -39.479504
109.999	0.061935	110.0391	0.0401	C1: 2.417608E3
209.998	0.103247	210.0252	0.0272	C2: 18.538952
309.998	0.144533	309.9913	-0.0067	C3: -15.778737
409.999	0.185813	409.9877	-0.0113	X0: 10.0154
509.998	0.227076	509.9756	-0.0224	X1: 73.485926E-3
609.996	0.268342	609.9996	0.0036	X2: -10.273125E-6
709.995	0.309590	710.0003	0.0053	X3: -1.7566377E-6
809.999	0.350836	810.0104	0.0114	X4: -172.10323E-6
909.996	0.392073	910.0062	0.0102	X5: 20.748709
1010.010	0.433312	1010.0059	-0.0041	

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

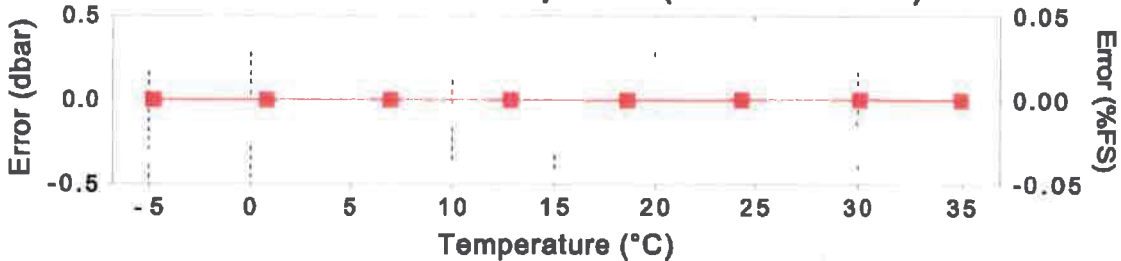
Head (mm) = 295

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

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



Calibration error vs. Temperature (Patm = 10.05 dbar)



Calibration Date: 2022-01-24
 Issue Date: 2022-01-25
 File Name: 208548_20220125_0755P.rsk

Operator: Adam Falicki
 afalicki

Approver: [Signature]
 kmalomy