

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0387
CALIBRATION DATE: 09-May-15

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:
Soc = 0.4765
Voffset = -0.4876
Tau20 = 1.20

A = -2.9863e-003
B = 1.6904e-004
C = -3.0567e-006
E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS
D1 = 1.92634e-4 H1 = -3.300000e-2
D2 = -4.64803e-2 H2 = 5.00000e+3
H3 = 1.45000e+3

BATH OX (ml/l)	BATH TEMP (ITS-90)	BATH SAL (PSU)	INSTRUMENT OUTPUT (VOLTS)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
1.30	2.00	0.00	0.770	1.29	-0.00
1.30	6.00	0.00	0.804	1.30	-0.00
1.30	12.00	0.00	0.856	1.30	0.00
1.31	20.00	0.00	0.926	1.31	0.00
1.33	26.00	0.00	0.987	1.33	0.00
1.33	30.00	0.00	1.026	1.33	0.00
4.05	2.00	0.00	1.371	4.05	-0.00
4.07	20.00	0.00	1.853	4.07	-0.00
4.07	12.00	0.00	1.641	4.07	0.00
4.08	6.00	0.00	1.482	4.08	0.00
4.08	30.00	0.00	2.140	4.08	0.00
4.09	26.00	0.00	2.025	4.09	-0.00
6.82	2.00	0.00	1.975	6.82	0.00
6.83	26.00	0.00	3.060	6.84	0.01
6.83	30.00	0.00	3.253	6.83	-0.00
6.84	6.00	0.00	2.156	6.84	-0.00
6.85	12.00	0.00	2.427	6.85	0.00
6.86	20.00	0.00	2.785	6.85	-0.01

$$\text{Oxygen (ml/l)} = \text{Soc} * (\text{V} + \text{Voffset}) * (1.0 + \text{A} * \text{T} + \text{B} * \text{T}^2 + \text{C} * \text{T}^3) * \text{OxSol}(\text{T}, \text{S}) * \exp(\text{E} * \text{P} / \text{K})$$

V = voltage output from SBE43, T = temperature [deg C], S = salinity [PSU], K = temperature [deg K]

OxSol(T,S) = oxygen saturation [ml/l], P = pressure [dbar]

Residual = instrument oxygen - bath oxygen

