

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0387  
CALIBRATION DATE: 16-Jul-10p

SBE 43 OXYGEN CALIBRATION DATA

**COEFFICIENTS**

Soc = 0.5068  
Voffset = -0.4908  
Tau20 = 1.25

A = -2.7938e-003  
B = 1.3822e-004  
C = -2.6884e-006  
E nominal = 0.036

**NOMINAL DYNAMIC COEFFICIENTS**

D1 = 1.92634e-4 H1 = -3.30000e-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)
1.25	2.00	0.01	0.748	1.25	0.00
1.27	6.00	0.01	0.783	1.27	0.00
1.28	12.00	0.02	0.834	1.29	0.01
1.29	20.00	0.02	0.903	1.30	0.01
1.31	26.00	0.02	0.960	1.32	0.01
1.31	30.00	0.02	1.001	1.32	0.01
4.32	2.00	0.01	1.371	4.29	-0.02
4.34	6.00	0.01	1.482	4.32	-0.01
4.36	20.00	0.02	1.873	4.36	-0.01
4.37	12.00	0.02	1.652	4.36	-0.01
4.38	26.00	0.02	2.052	4.37	-0.00
4.41	30.00	0.02	2.189	4.41	-0.00
6.96	30.00	0.02	3.174	6.96	-0.00
7.05	20.00	0.02	2.726	7.05	0.00
7.05	26.00	0.02	3.009	7.05	0.00
7.05	12.00	0.02	2.372	7.06	0.00
7.06	6.00	0.01	2.113	7.07	0.01
7.09	2.00	0.01	1.947	7.11	0.01

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

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

Date, Delta Ox (ml/l)

