

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0539  
CALIBRATION DATE: 06-Jan-15

SBE 43 OXYGEN CALIBRATION DATA

## COEFFICIENTS:

Soc = 0.4818  
Voffset = -0.4769  
Tau20 = 1.13

A = -4.4033e-003  
B = 2.2063e-004  
C = -3.2781e-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)
1.24	2.00	0.00	0.744	1.24	-0.00
1.25	6.00	0.00	0.780	1.25	-0.00
1.26	12.00	0.00	0.832	1.26	-0.00
1.27	20.00	0.00	0.903	1.27	0.00
1.29	26.00	0.00	0.960	1.29	0.00
1.30	30.00	0.00	0.999	1.30	0.00
4.03	12.00	0.00	1.617	4.03	0.00
4.04	6.00	0.00	1.458	4.04	0.00
4.05	2.00	0.00	1.352	4.05	-0.00
4.06	20.00	0.00	1.837	4.06	0.00
4.07	26.00	0.00	2.002	4.08	0.01
4.12	30.00	0.00	2.129	4.12	0.00
6.80	12.00	0.00	2.399	6.80	-0.00
6.83	20.00	0.00	2.763	6.82	-0.00
6.85	26.00	0.00	3.040	6.85	-0.00
6.86	2.00	0.00	1.960	6.86	0.00
6.86	6.00	0.00	2.144	6.86	0.00
6.88	30.00	0.00	3.237	6.88	-0.00

Oxygen (ml/l) = Soc \* (V + Voffset) \* (1.0 + A \* T + B \* T<sup>2</sup> + C \* T<sup>3</sup>) \* OxSol(T,S) \* exp(E \* P / 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

