

Sea-Bird Electronics, Inc.

13431 NE 20th Street, Bellevue, WA 98005-2010 USA
 Phone: (+1) 425-643-9866 Fax (+1) 425-643-9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1956
 CALIBRATION DATE: 17-Oct-12

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.5562

Voffset = -0.5113

Tau20 = 1.55

A = -1.8928e-003

B = 3.8696e-005

C = -8.5862e-007

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) |
|-------------------|---------------------|-----------------|-----------------------------|----------------------------|--------------------|
| 1.23 | 2.00 | 0.01 | 0.741 | 1.23 | 0.01 |
| 1.23 | 6.00 | 0.01 | 0.769 | 1.24 | 0.01 |
| 1.24 | 12.00 | 0.01 | 0.812 | 1.24 | -0.00 |
| 1.26 | 20.00 | 0.01 | 0.876 | 1.25 | -0.01 |
| 1.26 | 26.00 | 0.01 | 0.925 | 1.26 | -0.01 |
| 1.26 | 30.00 | 0.01 | 0.959 | 1.26 | -0.01 |
| 4.15 | 6.00 | 0.01 | 1.375 | 4.14 | -0.00 |
| 4.15 | 12.00 | 0.01 | 1.521 | 4.16 | 0.00 |
| 4.16 | 20.00 | 0.01 | 1.723 | 4.16 | -0.00 |
| 4.17 | 26.00 | 0.01 | 1.882 | 4.16 | -0.00 |
| 4.17 | 30.00 | 0.01 | 1.994 | 4.17 | -0.00 |
| 4.17 | 2.00 | 0.01 | 1.290 | 4.17 | 0.01 |
| 6.79 | 30.00 | 0.01 | 2.929 | 6.79 | 0.00 |
| 6.80 | 20.00 | 0.01 | 2.491 | 6.80 | 0.00 |
| 6.83 | 26.00 | 0.01 | 2.761 | 6.83 | 0.00 |
| 6.87 | 12.00 | 0.01 | 2.179 | 6.86 | -0.00 |
| 6.91 | 6.00 | 0.01 | 1.953 | 6.91 | 0.00 |
| 6.99 | 2.00 | 0.01 | 1.814 | 6.98 | -0.00 |

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

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

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

Date, Delta Ox (ml/l)

