

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 1266  
CALIBRATION DATE: 10-Apr-12

## SBE 43 OXYGEN CALIBRATION DATA

### COEFFICIENTS

Soc = 0.5343

Voffset = -0.5402

Tau20 = 1.23

A = -3.3869e-003

B = 8.5060e-005

C = -1.5406e-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<br>(ml/l) | BATH TEMP<br>ITS-90 | BATH SAL<br>PSU | INSTRUMENT<br>OUTPUT(VOLTS) | INSTRUMENT<br>OXYGEN(ml/l) | RESIDUAL<br>(ml/l) |
|-------------------|---------------------|-----------------|-----------------------------|----------------------------|--------------------|
| 1.30              | 6.00                | 0.06            | 0.824                       | 1.30                       | 0.00               |
| 1.30              | 12.00               | 0.06            | 0.873                       | 1.30                       | 0.00               |
| 1.30              | 2.00                | 0.06            | 0.793                       | 1.30                       | -0.00              |
| 1.31              | 20.00               | 0.05            | 0.943                       | 1.31                       | 0.00               |
| 1.31              | 26.00               | 0.05            | 0.999                       | 1.31                       | 0.00               |
| 1.31              | 30.00               | 0.05            | 1.040                       | 1.32                       | 0.00               |
| 4.26              | 6.00                | 0.06            | 1.471                       | 4.26                       | -0.00              |
| 4.26              | 12.00               | 0.06            | 1.632                       | 4.26                       | 0.00               |
| 4.27              | 20.00               | 0.05            | 1.857                       | 4.27                       | -0.00              |
| 4.28              | 26.00               | 0.05            | 2.039                       | 4.28                       | 0.00               |
| 4.29              | 30.00               | 0.05            | 2.168                       | 4.29                       | 0.00               |
| 4.29              | 2.00                | 0.06            | 1.375                       | 4.29                       | -0.00              |
| 6.84              | 30.00               | 0.05            | 3.132                       | 6.83                       | -0.00              |
| 6.90              | 26.00               | 0.05            | 2.954                       | 6.90                       | 0.00               |
| 6.90              | 20.00               | 0.05            | 2.667                       | 6.90                       | -0.00              |
| 6.97              | 12.00               | 0.06            | 2.327                       | 6.97                       | 0.00               |
| 7.05              | 6.00                | 0.06            | 2.082                       | 7.05                       | -0.00              |
| 7.14              | 2.00                | 0.06            | 1.931                       | 7.14                       | 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

Date, Delta Ox (ml/l)

