



SEA-BIRD ELECTRONICS, INC.

13431 NE 20th St. Bellevue, Washington 98005 USA

Phone: (425) 643-9866 Fax: (425) 643-9954 www.seabird.com

Service

Report

RMA Number

66963

Customer Information:

Company Pacific Marine Center / NOAA

Date 12/14/2011

Contact LCDR Thomas Peltzer

PO Number TBD

Serial Number 3845414-0317

Model Number SBE 38

Services Requested:

1. Evaluate/Repair Instrumentation.
2. Perform Routine Calibration Service.

Problems Found:

Services Performed:

1. Performed initial diagnostic evaluation.
2. Performed "Post Cruise" calibration of the temperature sensor.
3. Performed complete system check and full diagnostic evaluation.

Special Notes:

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: 0317
CALIBRATION DATE: 01-Dec-11

SBE 38 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = -2.732538e-006
a1 = 2.711979e-004
a2 = -2.056018e-006
a3 = 1.452143e-007

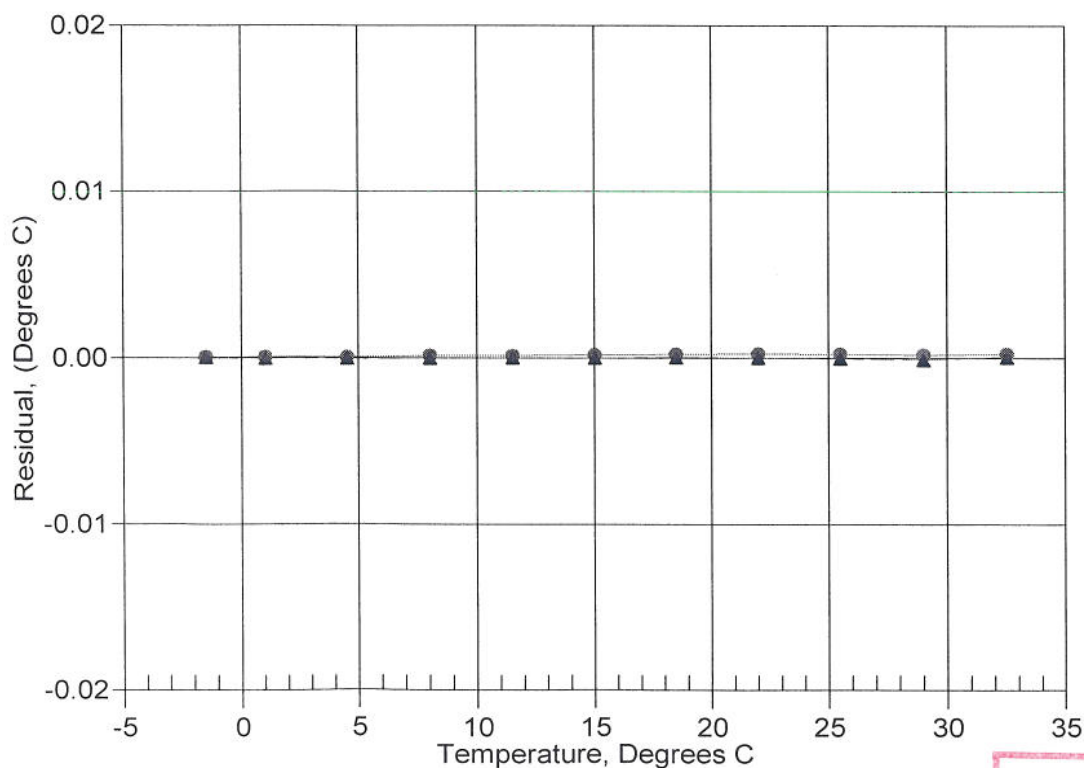
BATH TEMP (ITS-90)	INSTRUMENT OUTPUT	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.50010	835664.7	-1.50007	0.00003
0.99990	745982.1	0.99988	-0.00002
4.49990	638200.5	4.49986	-0.00004
7.99990	547784.9	7.99990	0.00000
11.49990	471679.9	11.49992	0.00002
14.99990	407407.4	14.99992	0.00002
18.49990	352952.0	18.49993	0.00003
21.99990	306670.0	21.99991	0.00001
25.49990	267214.1	25.49988	-0.00002
29.00000	233477.1	28.99991	-0.00009
32.49990	204547.1	32.49997	0.00007

Temperature ITS-90 = $1/\{a_0 + a_1[\ln(n)] + a_2[\ln^2(n)] + a_3[\ln^3(n)]\} - 273.15$ (°C)

Residual = instrument temperature - bath temperature

Date, Delta T (mdeg C)

● 11-Nov-10 0.16
▲ 01-Dec-11 0.00



**POST CRUISE
CALIBRATION**



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Temperature Calibration Report

Customer:	Pacific Marine Center / NOAA		
Job Number:	66963	Date of Report:	12/1/2011
Model Number:	SBE 38	Serial Number:	3845414-0317

Temperature sensors are normally calibrated 'as received', without adjustments, allowing a determination sensor drift. If the calibration identifies a problem, then a second calibration is performed after work is completed. The 'as received' calibration is not performed if the sensor is damaged or non-functional, or by customer request.

An 'as received' calibration certificate is provided, listing coefficients to convert sensor frequency to temperature. Users must choose whether the 'as received' calibration or the previous calibration better represents the sensor condition during deployment. In SEASOFT enter the chosen coefficients. The coefficient 'offset' allows a small correction for drift between calibrations (consult the SEASOFT manual). Calibration coefficients obtained after a repair apply only to subsequent data.

'AS RECEIVED CALIBRATION'

☒ Performed ☐ Not Performed

Date: 12/1/2011

Drift since last cal: -0.00015 Degrees Celsius/year

Comments:

'CALIBRATION AFTER REPAIR'

☐ Performed ☒ Not Performed

Date:

Drift since Last cal: Degrees Celsius/year

Comments: