

SBE 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

87932

Customer Information:

Company Woods Hole Oceangraphic Institution

Date 2/25/2016

Contact Rick Chandler

PO Number TBD

Serial Number 480019

Model Number SBE 48

Services Requested:

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

Problems Found:

1. Instrument, 48-0019, passed all of calibration specs and bench tests. Response times were within expected range, however, we do not have a definitive specification for response time for temperature readings. Suggest contacting tech support if (cont'd)
2. still having issues upon return of instrument.

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: 0019
CALIBRATION DATE: 19-Feb-16

SBE 48 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

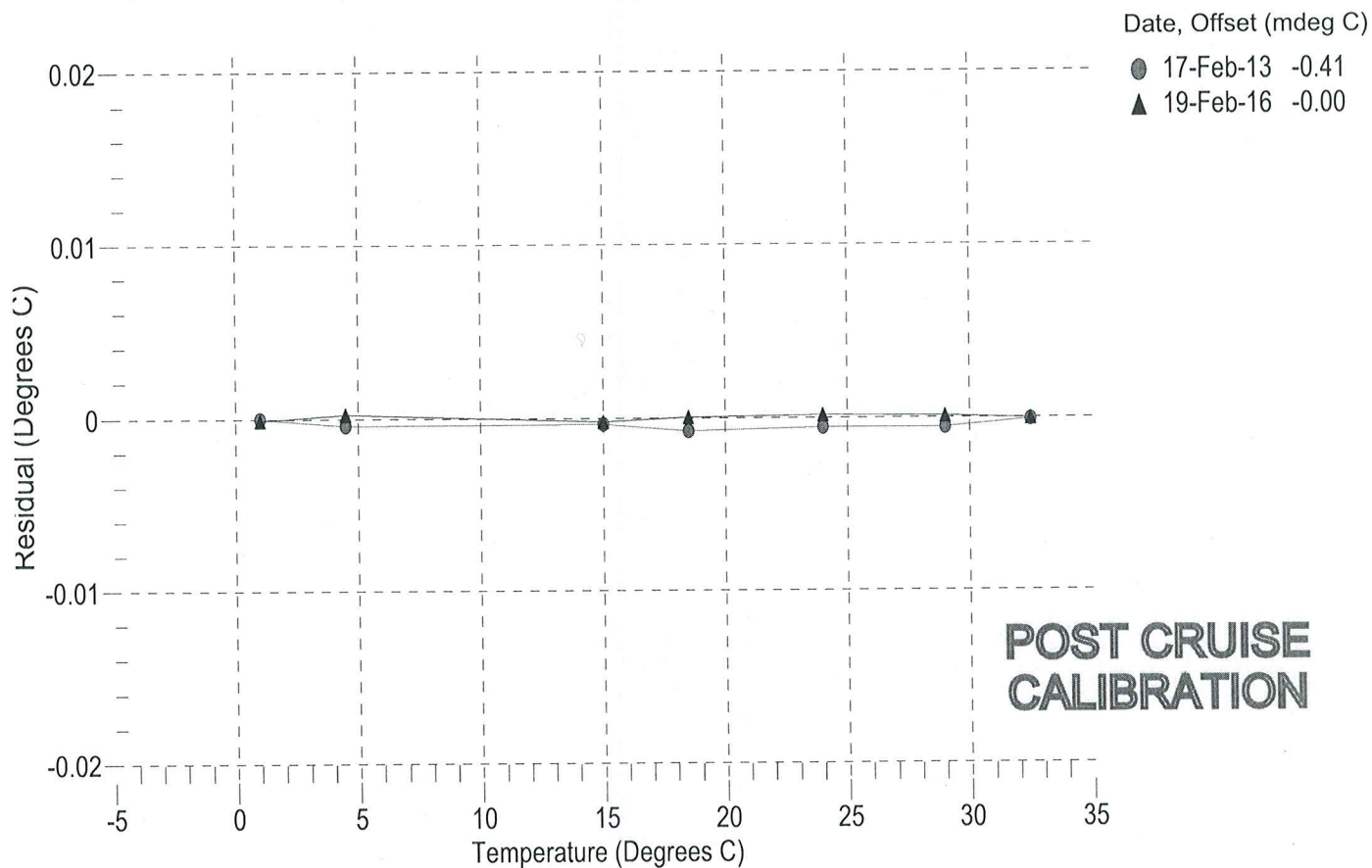
a0 = -2.407645e-004
a1 = 3.173262e-004
a2 = -5.178047e-006
a3 = 2.254826e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	713647.0	0.9999	-0.0001
4.5000	612236.5	4.5002	0.0002
15.0000	394026.5	14.9998	-0.0002
18.5000	342256.9	18.5000	0.0000
24.0000	275901.4	24.0001	0.0001
29.0000	228164.4	29.0001	0.0001
32.5000	200403.9	32.4999	-0.0001

n = Instrument Output (counts)

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

Residual (°C) = instrument temperature - bath temperature





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Temperature Calibration Report

Customer:	Woods Hole Oceanographic Institution		
Job Number:	87932	Date of Report:	2/19/2016
Model Number	SBE 48	Serial Number:	480019

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: 2/19/2016

Drift since last cal: +0.00014 Degrees Celsius/year

Comments:

'CALIBRATION AFTER REPAIR'

☐ Performed ☒ Not Performed

Date:

Drift since Last cal: Degrees Celsius/year

Comments: