



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

70506

Customer Information:

Company Atlantic Marine Center

Date 10/8/2012

Contact Richard Conway

PO Number TBD

Serial Number 03P5023

Model Number SBE 03P

Services Requested:

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

Problems Found:

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Services Performed:

1. Performed initial diagnostic evaluation.
2. Performed "Post Cruise" calibration of the temperature sensor.

Special Notes:

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Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 5023
CALIBRATION DATE: 29-Aug-12

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

$g = 4.39249347e-003$
 $h = 6.38807576e-004$
 $i = 2.19894563e-005$
 $j = 1.99807831e-006$
 $f0 = 1000.0$

IPTS-68 COEFFICIENTS

$a = 3.68121232e-003$
 $b = 5.96167204e-004$
 $c = 1.50957879e-005$
 $d = 1.99950712e-006$
 $f0 = 3172.528$

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	3172.528	-1.5000	-0.00000
1.0000	3356.608	1.0000	0.00001
4.5000	3627.135	4.5000	-0.00001
8.0000	3913.003	8.0000	-0.00004
11.5000	4214.641	11.5000	0.00005
15.0000	4532.442	15.0001	0.00006
18.5000	4866.792	18.4999	-0.00008
22.0000	5218.107	22.0000	-0.00003
25.5000	5586.741	25.5000	0.00003
29.0000	5973.043	29.0000	0.00004
32.5000	6377.352	32.5000	-0.00002

Temperature ITS-90 = $1/\{g + h[\ln(f_0/f)] + i[\ln^2(f_0/f)] + j[\ln^3(f_0/f)]\} - 273.15$ (°C)

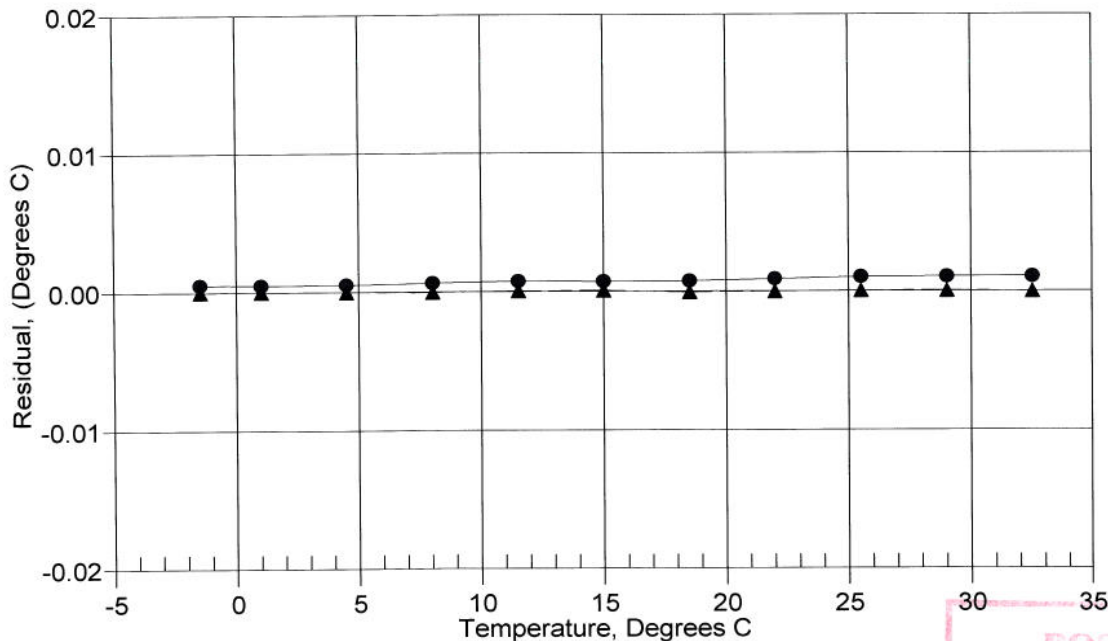
Temperature IPTS-68 = $1/\{a + b[\ln(f_0/f)] + c[\ln^2(f_0/f)] + d[\ln^3(f_0/f)]\} - 273.15$ (°C)

Following the recommendation of JPOTS: T_{68} is assumed to be $1.00024 * T_{90}$ (-2 to 35 °C)

Residual = instrument temperature - bath temperature

Date, Offset(mdeg C)

● 07-Oct-10 0.75
▲ 29-Aug-12 -0.00



POST CRUISE
CALIBRATION



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Temperature Calibration Report

Customer:	Atlantic Marine Center		
Job Number:	70506	Date of Report:	8/29/2012
Model Number	SBE 03P	Serial Number:	03P5023

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: 8/29/2012

Drift since last cal: -0.00040 Degrees Celsius/year

Comments:

'CALIBRATION AFTER REPAIR'

☐ Performed ☒ Not Performed

Date:

Drift since Last cal: Degrees Celsius/year

Comments: