SEA-BIRD SCIENTIFIC
Sea-Bird Scientific
13431 NE 20th Street
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USA

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seabird@seabird.com
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Pressure Test Certificate

Test Date: **2019-08-21**

Description: **SBE-37 Microcat**

Sensor Information:

Model Number: **SBE-37**

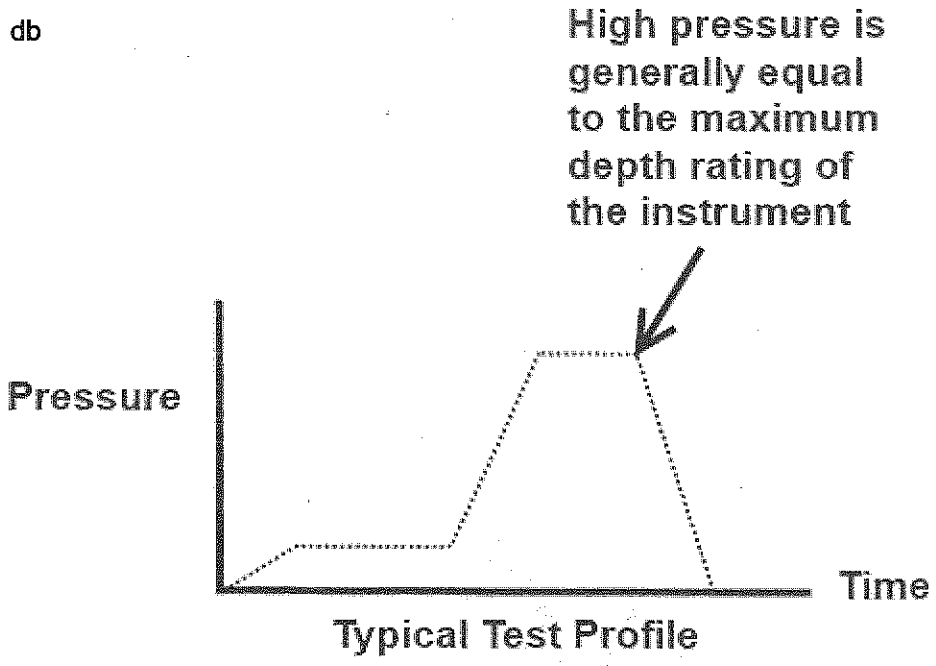
Serial Number: **21146**

Pressure Test Protocol:

Low Pressure Test: **40**	PSI	Held For: **15**	Minutes
High Pressure Test: **2900**	PSI	Held For: **15**	Minutes

Passed Test: **True**

Tested By: **db**



Typical Test Profile

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SENSOR SERIAL NUMBER: 21146
CALIBRATION DATE: 22-Aug-19

SBE 37 V2 PRESSURE CALIBRATION DATA
2901 psia S/N 5059699

COEFFICIENTS:

PA0 =	3.773409e-001	PTCA0 =	5.233178e+005
PA1 =	9.127258e-003	PTCA1 =	-6.749704e+000
PA2 =	3.816526e-011	PTCA2 =	3.700895e-001
PTEMPA0 =	-9.410318e+001	PTCB0 =	1.024660e+002
PTEMPA1 =	3.944904e-002	PTCB1 =	-5.666133e-003
PTEMPA2 =	1.221360e-006	PTCB2 =	0.000000e+000

PRESSURE SPAN CALIBRATION

PRESSURE (PSIA)	INSTRUMENT OUTPUT (counts)	THERMISTOR OUTPUT (counts)	COMPUTED PRESSURE (PSIA)	RESIDUAL (%FSR)
14.65	524921.8	2732.0	14.69	0.00
591.08	587961.1	2732.7	590.94	-0.00
1168.20	651034.8	2733.5	1167.82	-0.01
1738.88	711947.2	2734.2	1725.23	-0.47
2322.75	777217.3	2735.1	2322.83	0.00
2899.87	840193.1	2735.9	2899.73	-0.00
2322.75	777225.2	2735.7	2322.90	0.01
1745.54	714179.1	2735.7	1745.66	0.00
1168.36	651105.0	2736.0	1168.46	0.00
591.15	587999.3	2736.2	591.28	0.00
14.65	524923.1	2736.5	14.68	0.00

THERMAL CORRECTION

TEMP (°C)	THERMISTOR OUTPUT (counts)	INSTRUMENT OUTPUT (counts)
32.50	2941	525127.37
29.00	2866	525073.56
24.00	2759	525008.83
18.50	2639	524958.85
15.00	2562	524938.17
4.50	2331	524933.28
1.00	2254	524951.35

TEMPERATURE (°C)	SPAN
-5.50	102.50
34.49	102.27

y = thermistor output (counts)

$t = PTEMPA0 + PTEMPA1 * y + PTEMPA2 * y^2$

$x = \text{instrument output} - PTCA0 - PTCA1 * t - PTCA2 * t^2$

$n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t^2)$

$\text{pressure (PSIA)} = PA0 + PA1 * n + PA2 * n^2$

Residual (%FSR) = (computed pressure - true pressure) * 100 / Full Scale Range