FUTEK
ADVANCED SENSOR TECHNOLOGY, INC.

10 Thomas, Irvine, CA 92618 USA
Tel: (949) 465-0900
Fax: (949) 465-0905

Certificate of Calibration

ACCREDITED CALIBRATION Certificate No. 2412.01

Certificate Number: **0000000000**

Sensor Info:

S/N: 000000 **Model**: LSB200
Item #: FSH00096 **Capacity**: 25 lb

Description: LSB200, 25 lb, JR S-Beam Load Cell, Standard, Material - 17-4 PH S.S., #4-40-Thread, Overload Protection, 29 Awg 4 Conductor Spiral Shielded Silicone Cable, 5 ft Long, "No Risk Life Time Warranty"

Customer Name ..... ABC INDUSTRIES, CORP.
Customer Address ..... 1234 CORPORATE DRIVE
City/State/Zip ..... ANYTOWN, PT 01234

Calibration Procedure OP1000

CALIBRATION EQUIPMENT USED

Digital Multimeter:

HP Model: Agilent 34401A, **S/N:** US36134723

Dead Weight(s):

1-10 lb, *Traceability No:* 000000

This certifies that the following sensor has been calibrated using equipment traceable to NIST in accordance with ISO/IEC 17025:2005 & ANSI/NCSL Z540-1-1994.
Supporting documentation relative to traceability is on file and is available for examination upon request.
This certificate shall not be reproduced except in full, without the written approval of FUTEK

Calibration Technician: *Fernando Aguilar*
Issue Date: 10/13/2014 **Re-Calibration Date:** One Year After Issue Date
Calibration Date: 10/10/2014

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Single Channel Item

CALIBRATION DATA

Test Temp: 74 °F (23 °C) **Relative Humidity:** 42 % **Excitation:** 4.99 Vdc

Input Resistance: 351 Ω **Output Resistance:** 352 Ω **Zero Balance:** 0.0103 mV/V

Tension

Load (lb)	Output (mV/V)	Non-Lin. Error (% R.O.)
0	0.0000	0.000
5	0.4488	-0.019
10	0.8977	-0.033
15	1.3469	-0.034
20	1.7961	-0.035
25	2.2461	0.000
0	0.0002	

Standard Deviation: 0.00015354 mV/V
ASTM Uncertainty: 0.00030708 mV/V

* Error and Uncertainty were calculated using Straight Line Method in accordance with ASTM E 74, K = 2.0 or minimum equipment system uncertainty, whichever larger.

Best-Fitted, 3rd Degree Polynomial Equations (Load – x, Output – y):

$y = A_0 + A_1{*}x^1 + A_2{*}x^2 + A_3{*}x^3$

A0 = -0.000009787
A1 = 0.08976751
A2 = -0.000001377
A3 = 1.75919E-07

$x = B_0 + B_1{*}y^1 + B_2{*}y^2 + B_3{*}y^3$

B0 = 0.00010856
B1 = 11.1399
B2 = 0.001867013
B3 = -0.002691193

Best fitted equation was calculated using the Method of Least Squares.

SHUNT CALIBRATION

Direction	Shunt Value (KΩ)	Shunt Connection	Output Value (mV/V)	Equivalent Load (lb)
Tension	60.4	(-Exc) & (-S)	1.4530	16