Using an Oxyguard 505 with the NXIC-ADC

INTRODUCTION:

The NXIC-ADC integrated with an Oxyguard 505 is configured at Teledyne RD Instruments to operate without any need for operator intervention. The following procedure will explain how to calibrate the sensor using Teledyne RD Instruments CTDPro.

CALIBRATING THE OXYGUARD 505:

Ensure that the outer O-ring is in the upper groove when measuring and the lower groove during transport. Proper calibration required two points, 100% and 0% saturation. The first is done in water saturated air. The second in oxygen purged water. Oxygen purged water can be created by either adding anhydrous sodium sulfite until the crystals stop dissolving or by bubbling nitrogen through the water.

1. Open CTDPro.
2. Select Sensors and select “Calibrate”.
3. In the “Sensor” selection window select “Oxyguard”.
4. Wipe the membrane – it should be clean and dry.
5. Place the probe in water saturated air about ¼” from the sensor out of direct sunlight. Enter “100” as the standard value.

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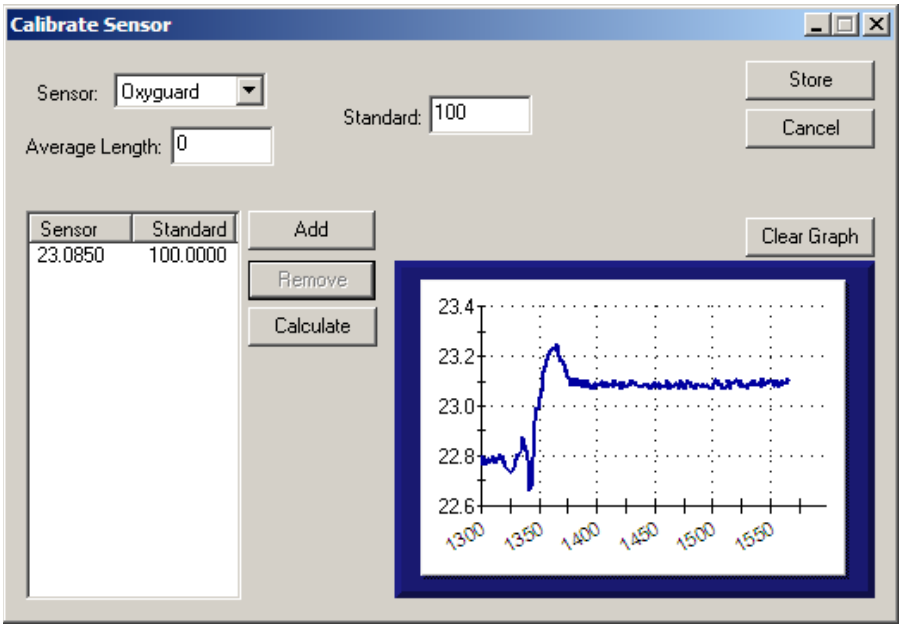
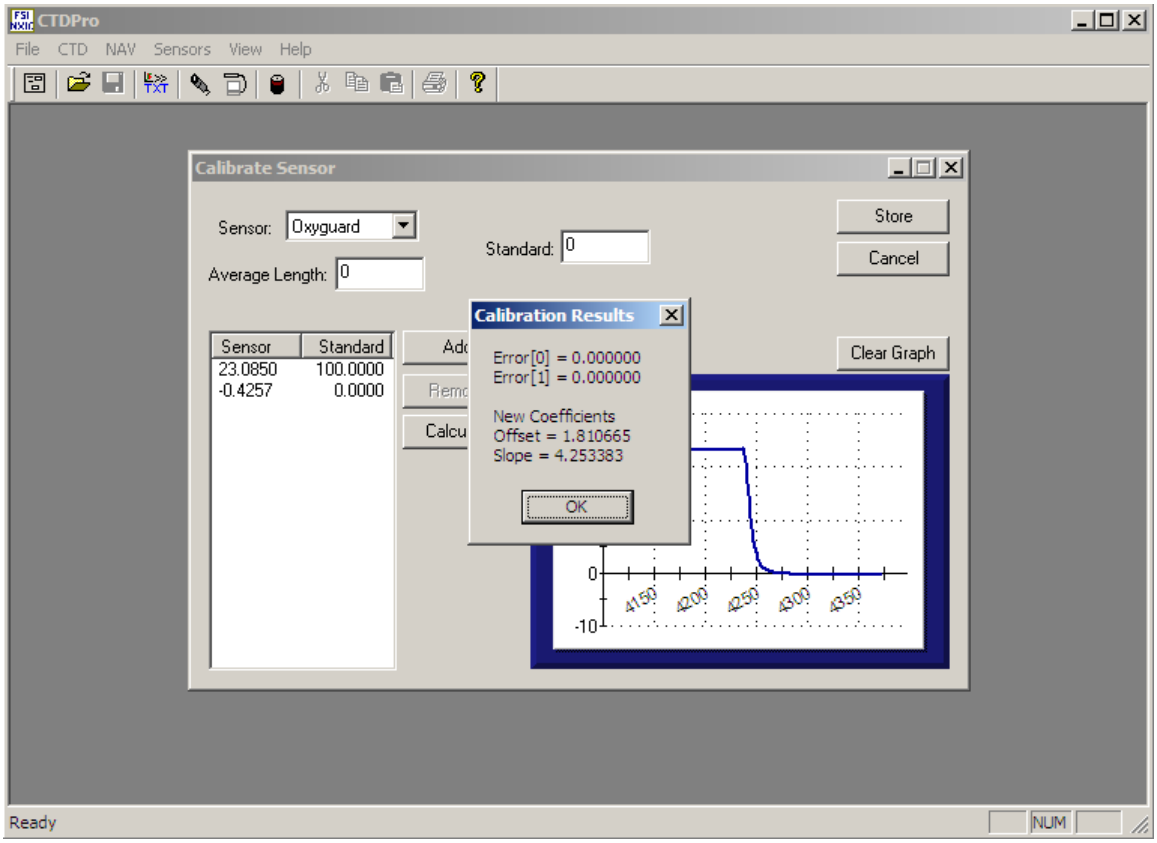


6. The numbers in the Y axis represent the 0-5VDC output of the sensor. The X axis represents time. When the reading is stable. Depress the add button to add the sensor and standard data to the table. If an error is made during the entry of data, the remove button will erase the data entry. Allow the data to stabilize as much as possible before selecting the add button.
7. Next place the sensor in oxygen purged water enter “0” as the standard value.
8. Wait for the reading to stabilize. Depress the add button to add the sensor and standard data to the table. Multiple data points can be taken and they will be averaged when calculated. If an error is made during the entry of data, the remove button will erase the data entry. Allow the data to stabilize as much as possible before selecting the add button.
9. When the points have been sampled and graphed select the calculate button to display the error percentages and calibration coefficients.
10. The Calibration Results display will appear as an overlay on the Calibrate Sensor window.
11. Select store to write the calibration coefficients into the NXIC CTD.



TROUBLESHOOTING:

1. The membrane is tough and can be wiped clean with a soft cloth or paper as needed
2. Should the probe output be significantly reduced by deposits on the membrane the calibration voltage will be reduced and the membrane should be replaced. Refer to the Oxyguard manual *D04SEA_Sea_Profile_505_brochure_gb.pdf* for directions.

Please contact TRDI customer service to request technical support. TRDI can be contacted using any of the following means:

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