

<mark>Vessel</mark>: Queen of Alberni

Date: Dec 16th 2015

Arrival: 6:45am'sh signed in at Duke point terminal and then with ships Engineering dept upon arrival.

Reporter: Denis Hedji Staff: Denis Hedji, Stephen Phillips and Rowan Fox

Reason for Visit

Sea keeper system stopped working most likely leak sensor trip, and needed to do service on instrumentation

Observations

- 1. The plastic tote underneath instrument housing had seawater which reached the point of the leak sensor.
- 2. Open instrument housing. Had some sea water(drips) sitting in various spots.

Actions Taken

- **1.** Sign in Engineering room
- 2. Open PC housing. Connect keyboard, and mouse. Still powered ON.
- **3.** Remove leak sensor, and install new one.
- **4.** Reset pump control box
- 5. Visually inspect instruments for leaks for several minutes. No leaks were apparent nor visual???
- 6. Power OFF system at PC housing
- 7. Remove instruments Thermosalinograph, BBFL2, Optode sensors
- **8.** Conduct Diet Coke, and Sprite calibration measurement on BBFL2
- 9. Conduct 2 point measurement on Optode
- **10.** Clean and service instruments
- **11.** Remove Pump control box, and mounting bracket to access pump area. Placed desicant inside Pump control box.
- 12. Remove manifold tubing, and replace with new tubing to instruments
- 13. Re-tighten accessible fittings
- 14. Re-install Pump control box, BBFL2, Thermosalinograph, and Optode
- **15.** Power system ON. Notice PC mouse was acting up. Found PS2 connection loose. Re-seat, works OK.
- **16.** Visually inspect system instruments; assuring seawater flow, and no leaks.
- 17. Inspected Sea strainer, and Sea chest. Sea strainer was clean, and Sea chest no leaks within.
- **18.** Monitor data output on PC, re-configured optode to setting=101 output @ interval =1 . SCS connected and was collecting data from each instrument.
- **19.** Dry areas, drain tote, and tape down leak sensor about 2" from bottom of tote. Remove old desicant, and place several fresh bags of desicant within instrument housing

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- **20.** Left behind a spare "new" pump inside white locked tote.
- **21.** Ask permission to access upper deck to inspect upper instrumentation and inspect areas for future installation of the SAS tracker with Stephen Phillips.
- **22.** Sign out from ships Engineering room.
- **23.** @Upper decks, Stephen and Denis look for potential areas for SAS tracker.
- 24. Met with Ships captain (Craig). Introduced ourselves, and Stephen discussed/explain the plan of the SAS tracker. Craig walked us around the potential deck areas, looking for safe areas, where electrical outlets are present. Craig also introduced us with the Master of the ship (*Stephen has his contact info/name along with "Khoda" Ship Engineers for ships contact and approvals*).
- **25.** At upper instrument decks the cables were loose. Perhaps strong wind must have blown them off the rails. Zip-tie cables back to the rails. Inspect connections couple corroded connector shrouds.

Future Actions

- 1. Pull apart at outer instrument housing the seawater intake shut off valves (valve where we take sea water samples from). Corrosion may be building up inside the valve which cause improper shutoff and may cause slow leaks inside the tote.
- 2. Bring glue gun to glue down the PC connectors ie) PS2 cable for keyboard, and mouse
- 3. Bring flat 2 L Diet Coke, and Sprite and leave on ferry
- 4. Meet with ONC "BC Ferries group" staff to discuss and plan QoA SAS tracker install
- 5. Minimize our carry on load on all BC Ferry ships field trips. Carry on tool box has got/ is very heavy to pull and carry down steep + narrow ship /facilities stairs.

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<u>Pictures</u>



Underneath Instrument housing. Water has reached to Leak sensor inside the plastic tote

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SBE thermosalinograph/CT and optode sensors prior to service.

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BBFL2 prior to pop calibration measurements



AADI Optode prior to cleaning/ 2 point cal measurement

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Instrument housing after service

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Outlet valve flange condition

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Intake (right) and Outlet (left) valves

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Sea water Intake "for sampling" valve condition

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Radiometers with GPS, and cell antenna at back

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Upper deck instrumentation cables upon arrival. Lying on warm/hot pipes on floor, and not attached to side railings. Strong winds must have done this.

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MET station.

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The radiometer electronics housing at upper deck; shrouds are corroding.