Ocean Networks Canada

Ferry Maintenance Report – Queen of Alberni

Vessel: Queen of Alberni Date: Sept 29th, 2016

Arrival: 07:30 @ Duke Point terminal, Nanaimo

Reporter: Rowan Fox Staff: Will Glatt, Stephen Phillips, Rowan Fox

Reason for Visit

Standard cleaning on the Seakeeper system. Stephen Phillips joined for taking water samples on the return trip. Test mechanical fit of new Pro-Oceanus pCO2 sensor in the instrument box. Inspect system for solutions to the bubble problem.

Observations

1. No signs of damage in instrument box or mass leaking in tray. Dessicant was very dry.
2. Tubing was only slightly fouled with algae.
3. Optode and BBFL2 covered in algae but cleaned off.
4. Upper deck: measured the met station to be rotated by 43 degrees to the left from the #2 end center line. Entire met station pole is rotated, and needs new mounting hardware, since current hardware is insufficient. Met station has been rotated since Dec 2015. See photos. Also see QoA reports: 20160401 (obvious turn), 20151216 (suspected turn), 20150506 (parallel to ship).
5. After maintenance reassembly of the system, we monitored the bubble issue through the entire run from Tsawassen to Duke Point. We noted that the bubbles were not present while the ship is not moving. Once the ship moves, the bubbles increase. This is evidence that the bubbles are coming from the ocean, and not part of the Seakeeper system.

Actions Taken

1. Arrived at the terminal at 0730.
2. Boarded the ship, met with the Chief Steward. Signed in with the engine room.
3. Shut down seakeeper computer. Begin disassembly of seakeeper.
4. Cleaned the optode & BBFL2. Benchmarks are uploaded into the instruments' device folders on Alfresco. Both instruments responded well to their standards. Optode read 90% saturation and 0% saturation, BBFL2 read ~500 counts for Chl/Diet Coke, and ~300 for CDOM/Sprite Zero.
5. Tested mechanical fit of pCO2 sensor. Looks good, might consider 90 elbows for the water intake/outlet.
6. Reassembled instruments after cleaning.
7. Opened up the floor plate to inspect the gate valves and sea strainer.
8. Disassembled the seachest, and found a loose connection, on the upper compression fitting around main inlet. All other connections were checked for tightness. Reassembled seachest.
9. Cleaned Sea Strainer.
10. Turned both gate valves a small amount to confirm they are still moveable.

11. Powered up system, checked for leaks and data acquisition. No water leaks, but noted significant, minute bubbles in the system.
12. Stephen took water samples on the return trip.
13. Monitored bubbles in the system. While the ship docked in Tsawassen, no bubbles were present. When moving, bubbles were seen.
14. With authorization from Chief Engineer Irik went to the upper decks to inspect met station. Used a protractor to measure the wind sensor at 43 degrees to the left from the #2 end center line. Entire met station is rotated, need to order new hardware to mount the met station pole.
15. Closed up plumbing and computer boxes after water sampling was complete.

Future Actions (High Priority in Red)

1. Met station needs to be reinforced and turned back to parallel to ship.


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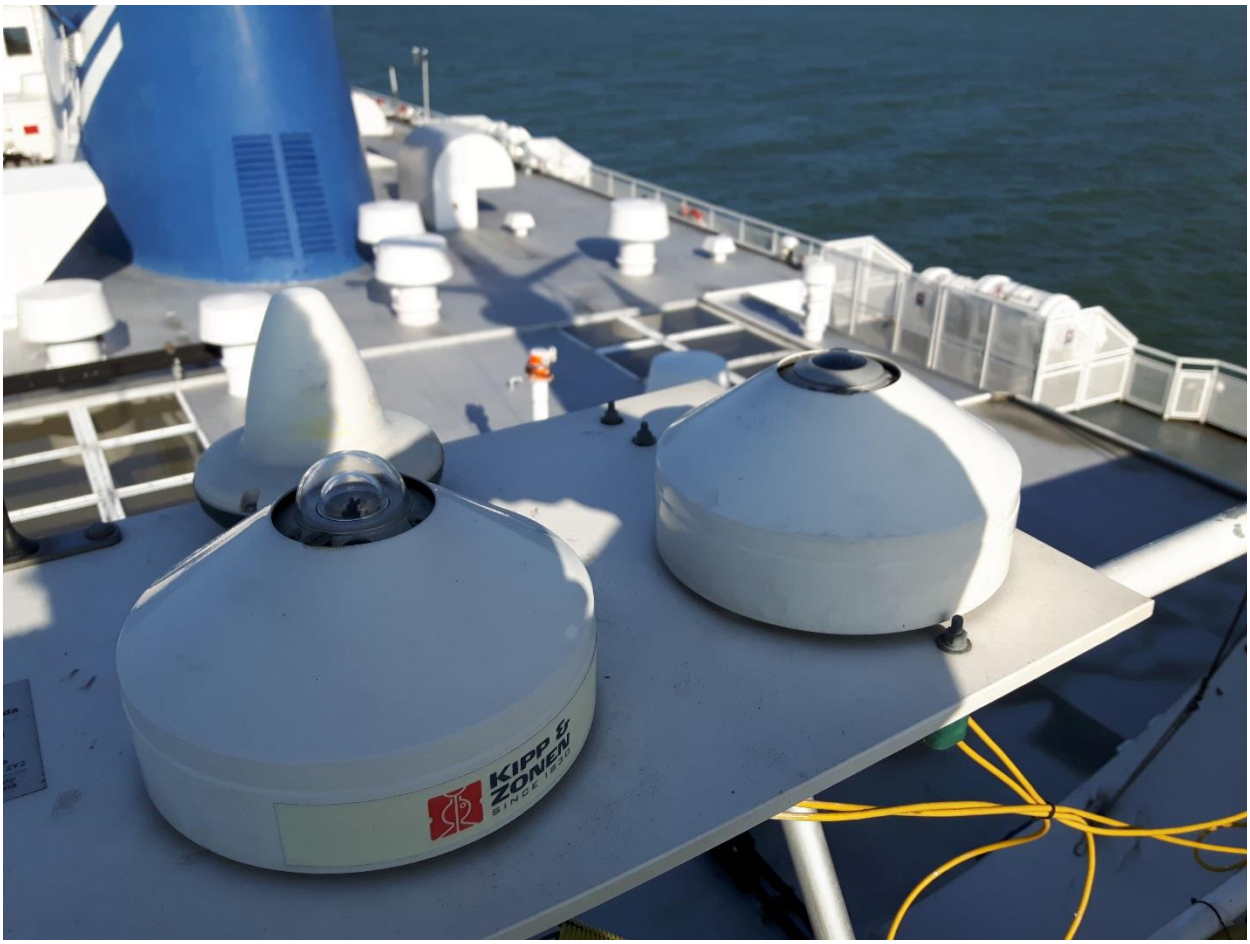
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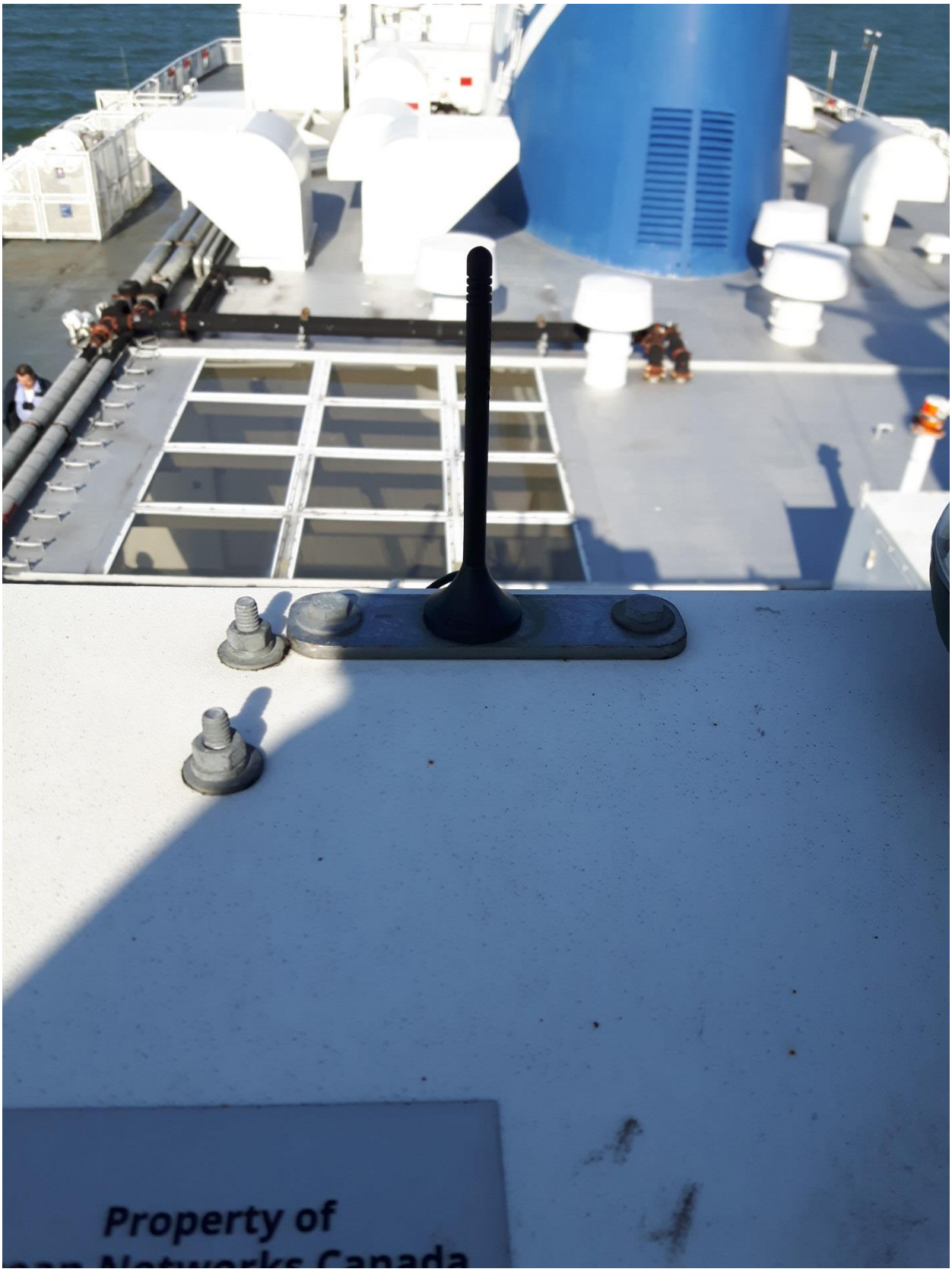
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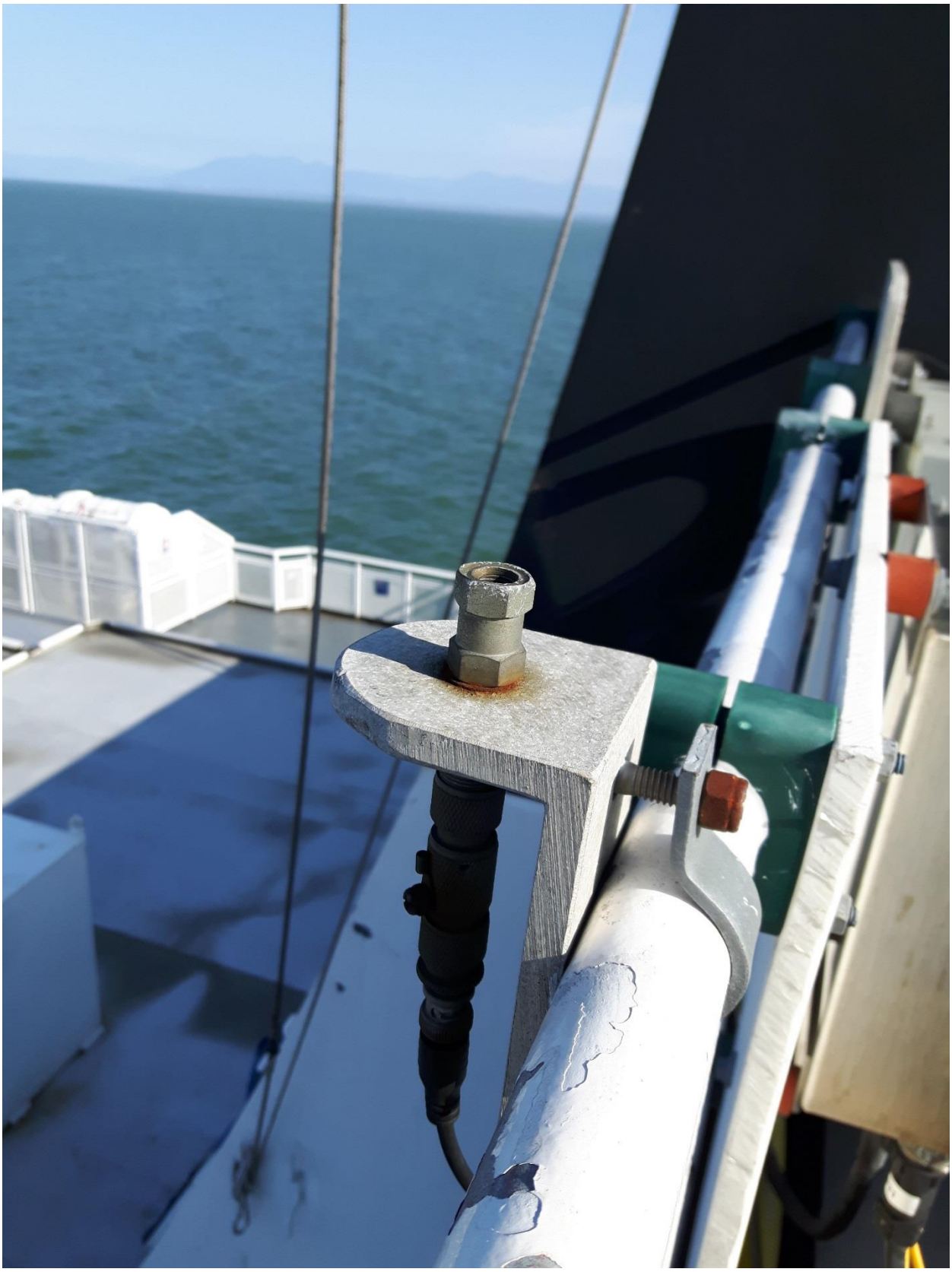

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