

Ferry Maintenance Report

Vessel: Queen of Alberni

Date: July 4, 2014

Arrival: 12:45PM sailing to Tsawassen. We signed in at terminal supervisor at Duke Point.

Reporter: Chris Sundstrom/Akash Sastri

Staff: Chris Sundstrom, Jeremy Krogh

Reason for Visit

Regular instrument servicing

Observations

1. There were no signs of moisture or leaks In the Instrument Box.
2. The AADI optode had very little or no debris or sediment within the housing.
3. The BBFL2 had a minor partial layer of sediment in the housing and minor fouling on the sensing surface. Minor fouling was noticed on the "bottom" surface of the horizontal housing.
4. The Seabird 45 CT sensor was dirty with eight small mussels found within the housing.
5. The flex tubing was dirty enough to warrant replacement.
6. The sea chest showed no signs of leaks.
7. The inline filter (sea strainer) was checked and proved to be quite clean.
8. The CT connector corrosion has grown slightly but no evidence for signal degradation yet.

Actions Taken

1. Opened both boxes and observed function. Both were working well, no leaks anywhere.
2. Powered down and disassembled instruments in lower assembly.
3. Cleaned and checked over instruments in Engineering room. Eight small Mussels (1/8" to 1/4" long) were found in the CT housing. These were removed during cleaning.

4. Ran pre- and post- calibration with standard solutions and with pink and blue fluorescence test sticks for Chl and CDOM fluorescence.
5. Re-assembled the instruments in the lower box. Replaced all flex tubing with new material.
6. Checked over Sea chest and valves, no leaks apparent.
7. Checked and cleaned the sea strainer.
8. Turned ON the system.
9. No leaks in instrument housing and checked flow output at sea strainer. Flow was good. Visually confirmed flow direction at the BBFL2 and confirmed the volume filled with water and began draining correctly.
10. Signed out at Engineering room.

Future Actions

1. Potentially replace CT sensor so that complete housing strip-down and cleaning can occur. Check with Denis regarding instrument spare situation. Replace CT connectors at the same time (shipboard connector will need to be re-soldered).
2. Monitor growth of Mussels within the system.

Discussion of Test Procedures and Results

The test procedures used are to be documented in the supplemental report, which will also provide preliminary analysis of the data and how potential corrections for BBFL2 signal decay due to biofouling may be applied.

PICTURES



Figure 1: System upon arrival. Note dirty condition of flex tubing



Figure 2: Some Mussels just visible above o-ring on lower end cap of CT unit.

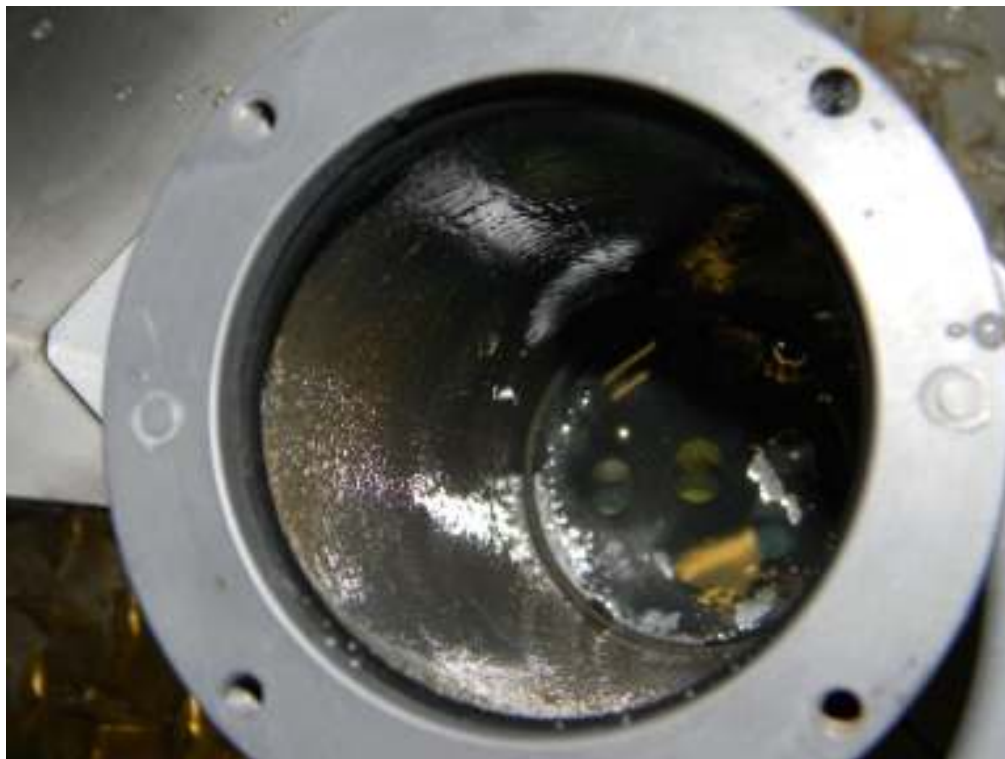


Figure 3: Interior of BBFL2 housing after opening.



Figure 4: Optode upon opening



Figure 5: CT upon opening



Figure 6: System post-cleaning



Figure 7: Sea strainer inspection