***Cruise Report (08/04/17 – 26/04/17)***

***AX080417 – Maersk Visby***

***Technical rider: Chris Jacobs***

Travelling from Cape Town at an average speed of 16 knots probes were deployed every 25km (every 48mins) so as to provide a high density voyage. The AX080417 was filled with numerous equipment failures and issues as listed below:

**Tuesday, 12 April**

The MK21 box was swopped out as the initial MK21 box would lag not respond after a few drops. The error message would read: MK21 signature not detected. The computer would then need to be restarted in order to get the MK21 operational again. This problem became worse and so the MK21 box was switched out. After a few days though, the swopped in MK21 box started giving the same issues.

**Wednesday, 13 April**

The computer was swopped out in order to solve the issue mentioned above. This meant that a new cruise had to be started on the new computer hence the two separate batches of files. The serial box was swopped out with the computer so as to compatible with the computer. Unfortunately this also didn’t solve the issue of the MK21 hanging, after a few drops.

**Thursday, 20 April**

A bad batch of XBTs was deployed with the first 50m of the drop spiking. This occurred irrespective of redrops. This was found to happen with two separate boxes of XBTs.

**Friday / Saturday, 21/22 April**

Bad drops were experienced due to bad XBTs (same issue as the previous day). The problem then worsened with the AL registering a loaded canister when doing the check tubes routine. On launching however, the procedure would be halted by the launcher stating that the canister was spent. Despite changing out the canisters, this problem persisted. An initial solution was to use a different batch of XBTs, however this did not solve the issue. The MK21 box was then swopped out in an attempt to fix the problem however this made no change. Finally the AL was swopped out (from ALR04 to ALR05). This solved the problem and drops continued.

**Sunday, 23 April**

At approximately 01h00 (GMT-3), an error alert sounded with the error message reading: no connection between AL and computer. The connections at the computer and serial boxes was checked as well as the connection at the base of the AL. The problem could not be fixed to the time at which it occurred and so the issue would be attended to at first light when visibility was better. Because of the time and nature of the problem, no drops occurred from 01h00 till the issue was resolved (at approximately 09h00). The problem was resolved by switching out the auto launcher and cleaning the connection properly between AL and the CAT5 cable. On further inspection, it was found that the CAT5 cable is fairly old and worn out and so it is advised that a new CAT5 cable be supplied for the AX08 boxes. In the interim, the CAT5 cable from the AX18 boxes will be used for the next AX08 voyage.

**Tuesday, 25 April**

At around 14h00 (GMT-4) a similar problem was experienced as on 23 April whereby no connection was found between the AL and the computer. Due to severe conditions (strong winds and giant swells), the Al was not able to be replaced. The connection at the base of the AL was opened and cleaned in the hope that the connection between the computer and the AL would be cleared. Unfortunately this did not solve the problem and so deployments were suspended at 38.5°N.

Due to the problems which occurred on the voyage, the following are suggested for future AX08 cruises:

* A new cat5 cable be made up for the cruise
* Both MK21 boxes be serviced.
* A trouble shooting manual to be compiled (or updated if there is one),printed and placed in the equipment box for the technical rider to read in case of a problem
* All serial cables to be checked and fixed if broken

Despite all the technical problems experienced, the Maersk Visby is an ideal vessel for all types of deployments with the captain and crew being more than willing to assist even during the early hours of the morning. Thank you to the captain, Aung Thu We Lin, officers and crew of the Maersk Visby for all the effort and assistance especially with all the problems and reloads during the middle of the night and for the great hospitality aboard the cruise.