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BTCC and Arrival Procedures

Arcadia operates the P&O Cruises Bridge Team Command and Control (BTCC) System. The following article details the BTCC system and how it is implemented in a typical arrival demonstrated by Arcadia's arrival into Los Angeles on 26 May 2011.

The BTCC system was introduced by P&O as a safety net following various incidents and casualties in the marine sector. The system encourages the roles of navigator, co-navigator and operations director to be interlinked, ensuring that if someone 'drops the ball,' so to speak; the other members of the team will catch it.

Under this system there are three levels of manning: green, green enhanced and red. Green manning is the normal operational level and consists of a navigator and co-navigator (who will also be the admin).

The navigator is responsible for conning the ship, implementing the passage plan and collision avoidance.

The co-nav monitors the vessel's position and progress and communicates with the engine control room and others as required. The co-nav will also monitor traffic and significant upcoming points in the passage plan such as giving distances to wheel-over positions and pilot stations to assist the navigator. The co-nav also discusses proposed actions with the navigator and confirms helm and engine orders via a closed loop system.

Green enhanced manning is often used in pilotage waters and the above roles will be supplemented by an operations director. The ops director oversees the operation and monitors the actions of the bridge team to ensure that safe navigation is maintained at all times and that the bridge team are free from distractions by managing communications with other locations on the ship such as with the anchor party and pilot party.

For arrivals and departures the highest level, red manning, is implemented. Here, the Captain will take the charge and the conn, the Deputy Captain will be ops director, the senior officer of the watch will assume the co-nav role and a cadet will be designated admin to allow the co-nav to concentrate supporting the navigator. The junior officer of the watch is then able to go to the foc'sle for mooring stations and the safety officer takes charge of aft mooring. These roles are sometimes switched around for training or to give each member of the team a better understanding of the other team members' roles.

Preparations for our arrival in Los Angeles arrival began the previous evening when at 1851 we completed the changeover from heavy fuel oil to low sulphur marine gas oil as required by Californian state law. At 1954 we closed all discharges for entering within 24 nautical miles of the Californian coast. Environmental regulations are very tight in California, somewhat ironic considering the glow of Los Angeles could be seen from 110 miles away.

The cadet as admin began pre-arrival checks two hours before standby below by completing tasks listed on the arrival checklist. This includes checking the compasses, preparing the Dictaphone and checking the voyage data recorder is working. Boarding arrangements are confirmed with the pilot and anchor parties are confirmed in position. Though the admin is most involved in monitoring the progress with the pre-arrival checklist he reports to the ops director who has ultimate responsibility for ensuring that all the necessary checks are completed. This is common theme within the BTCC system; that not one task is left to just one person but that crosschecks are in place to reduce the chance of human errors.

The admin is also responsible for paper chart fixing which is continued despite Arcadia being a fully ECDIS approved ship.

The Captain and Deputy Captain arrived on the bridge 15 minutes before standby below to familiarise themselves with the situation and complete the 'handover-at-sea' checklist. Standby below was called at 0530 and the Captain took the charge and declared 'red manning' ready to embark the pilot. At standby below the GPS trips were reset so that the trip and river in distances could be recorded for the chief engineer's run figures and the anchors were cleared away. We then switched into hand steering to pick up the pilot.

The Deputy Captain as ops director took charge of the pilot boarding operation monitoring the progress of the pilot boat from the bridge wing and informing the navigator so as to maintain a suitable speed and lee for the pilot boat to come safely alongside.



Red manning: Capt Kevin Oprey, Dep Capt James Brown, 1/O Samson, AB Ronald, 3/O Benji and Cadet Toby- from right to left as you look.

The local pilot and three local police boarded at 0545 and then the final pre-arrival checks were completed such as taking and testing Arcadia's three bow thrusters on bridge control and completing the astern and pod tests. The Deputy Captain conducted the master-pilot interchange and then the pilot took the con for the approach.

At 0621, as the vessel was nearing the berth the Captain took the con of the ship ready to manoeuvre her alongside using the Aziman controls. The turn into Berth 93 in Los Angeles is very tight so an officer was positioned on the starboard wing to give distances off the liberty ship *Lane Victory* which is resident on the next berth and whose bow restricts the available turning space still further. The third officer on the foc'sle gave distances off the berth and the safety officer on the aft mooring deck monitoring the vessel's position relative the gantry cranes on the opposite side of the dock. These internal communications are coordinated by the ops director via VHF radio, again using a closed loop system, leaving the navigator to concentrate solely on the manoeuvre – a vital aspect of the BTCC system. The ops director is also in contact with the gangway party to ensure that Arcadia comes to the best position for a safe and secure tie up with clear and safe access to the ship.

By 0705 Arcadia was alongside, all fast 6+2 forward and aft with two gangways rigged, ready and inspected by the security officer. Another successful arrival had been completed and the passengers were able to go ashore.

Mike Smith