

# Fixed and Floating Object Incidents whilst under Pilotage

3rd July 2018

## Introduction

For many years the number of Fixed and Floating Object (FFO) claims notified to the Club remained fairly constant, as did the resulting claims, however, in the past couple of years, although the total number of claims has not appreciably changed, the number of high value claims has risen alarmingly.

The Club has seen a succession of extremely costly FFO claims occurring whilst vessels are in harbours or rivers and proceeding under pilotage. Incidents seen in the recent past have included:

- Vessels underway and making way striking vessels secured alongside berths.
- Vessel underway and making way, and those attempting to come alongside to make fast, making hard contact with berths, dolphins and walkways causing significant damage to the structures.
- Vessels attempting to come alongside to moor making contact with container gantry cranes.

Often these FFO claims cause significant damage to third party vessels or take a facility and / or infrastructure out of commission, with large loss of use claims levelled against the vessel, alongside the costs of making good the often-substantial damage and associated survey and legal fees.

## Incident Causation

Examination of the circumstances surrounding the claims has identified, as is usually the case with a major incident, a litany of errors and / or failings in the build up to the occurrence, the sum total of which have led to the incident. One overriding issue, however, has been identified as being prevalent in the majority of the large FFO claims occurring under pilotage in recent years; the lack of action on the part of the vessel's bridge team to intervene in the navigation and manoeuvring of the vessel whilst the pilot has control of the steering and propulsion, until the situation has deteriorated such that an incident is imminent, and intervention by bridge team, if any, is largely ineffective.

The importance of a pilot, as a source of extensive knowledge of a port and its approaches, and a conduit through which information and instructions are passed to facilitate the entry / departure of a vessel cannot be overestimated. Having reviewed the Voyage Data Recorder (VDR) data, in particular the audio, following an incident, it is often apparent that bridge team interaction with the pilot is limited. It is a well-established process that the pilot is on the bridge to offer advice. The responsibility for the safe navigation of the vessel remains with the bridge team at all times, with the Master retaining responsibility for the navigation of the vessel whilst under pilotage apart from when this responsibility is passed to the officer of the watch, usually while the Master rests during long pilotage operations. Far too often, we are encountering evidence that pilots are being given free rein over the navigation of the vessel, such that the bridge team appear to step back, and to a degree, switch off from closely monitoring the actions of, and orders given by the pilot. A further probable issue, albeit more difficult to quantify, are cultural differences and an unwillingness on the part of junior officers to question the pilot's actions and / or orders, even when it may be apparent that the navigation of the vessel is not being conducted according to the pre-agreed pilotage passage plan. In some cases, it is apparent that the bridge team, including the pilot, have completely lost their situational awareness to the detriment of the safety of navigation of the vessel. We have examined numerous cases where the bridge team only step in to either question the actions and / or orders of / from the pilot, or issue steering and / or propulsion orders, far too late,

or not at all, and actions taken to reduce the speed and / or alter the course of the vessel, where made, are either too late or insufficiently robust to avert the subsequent incident.

### Navigational Best Practice under Pilotage

The Master / pilot information exchange and bridge team briefing are crucial in ensuring that all parties on the bridge have an appreciation of the agreed pilotage passage plan. This is to ensure that when monitoring the navigation of the vessel whilst under pilotage, they are all in a position to question the actions and / or orders of a pilot when some aspect of the navigation or manoeuvring of the vessel does not appear to be in accordance with what was previously agreed, or best practice.

Deck officers need to remember that the pilot is present on the bridge to offer advice in relation to the navigation of the vessel, although it is accepted that the pilot will ordinarily issue steering and propulsion orders, and, in this regard, it should be clear, at all times, who has control of the steering and propulsion. When under pilotage all orders given by the pilot should be checked to ensure that (a) they are in accordance with the pre-agreed pilotage passage plan, (b) they are reasonable in the circumstances, and (c) that they have been carried out correctly. If there is any doubt as to the actions and / or orders of the pilot (including those that may be given in a language other than previously agreed, to tugs for example), these should be questioned, and if necessary actions as may be necessary for the safety of the vessel taken without delay. If the Master is not on the bridge, and the officer of the watch is any doubt as to the actions and / or orders of the pilot, these should be questioned, if the officer is still in doubt he / she should immediately call the Master to the bridge and take any such actions as may be necessary to place the vessel in a position of safety before the Master arrives.

When approaching a berth, it should be ensured that sufficient tugs in accordance with port / terminal requirements are made fast in good time. The angle of approach to a berth should also be monitored, such that prior to coming alongside the vessel is made parallel to the berth. Considerable damage to shore container gantries has been caused by vessels coming alongside at a large angle to the berth, with the flare of the bow hanging a significant distance over the top of the berth such that it makes contact with container gantries situated many metres back from the berth frontage. In these situations, further damage is usually caused to the face of the berth and associated fendering by the stem, and to the support structure underneath the berth by the bulbous bow.

The speed of approach towards the berth should be closely monitored, both in a fore and aft direction, and athwartships both at the bow and stern, and all way taken off in good time prior to manoeuvring alongside. It should be considering that the kinetic energy imparted by a vessel in a fixed structure increases exponentially with the vessel's speed, and that an average design velocity for a vessel coming alongside a berth is only 0.3 knots, for reference, normal walking speed is approximately ten times faster. In several cases significant damage has been caused due to excessive athwartships speed when vessels have been moving bodily sideways toward a berth, with rotation of the hull around the pivot point due to tug action / the use of thrusters exacerbated the speed at one end of the vessel, causing high point loadings when contact has been made between the hull in way of the shoulder or quarter and the berth.

When action is taken to place the vessel in a position of safety, following a deterioration in the navigational situation, the following factors need to be considered:

- The position of the vessel's pivot point should be considered when moving ahead and astern at slow speed, and how external forces, including tugs and tidal streams will affect the hull and turn the vessel, depending on the location of the pivot point.
- It should be remembered that at slow speeds rudder action will be ineffective, and the ship will mostly have to rely on attendant tugs to manoeuvre.
- At higher speeds thrusters will be ineffective. And their effectiveness will also be a function of draught / immersion.
- In case the speed has to be reduced there is always a time lag between the telegraph order being given, the action of the main engine and the actual reaction of the vessel's hull.
- For the ships with the fixed pitch propellers, reversing of the engine will take additional time.

- If running at a speed above manoeuvring full ahead, there may be a delay before the engine is available for use in manoeuvring.
- The number of main engine starts is not infinite, rather it is limited by the amount of compressed air available.

It can be seen from the foregoing that bridge team and bridge resource management are very important facets in ensuring that operations involving a pilot are conducted satisfactorily. Training in bridge team and bridge resource management have been part of the training regime for deck officers at many companies for some time. The importance of such training should not be underestimated, and it is recommended that deck officers undertake these training courses periodically. This is to ensure that their skills are maintained in relation to navigational procedures, effective communication, the use of all navigational and bridge equipment, an understanding of bridge resource management and interacting as an effective bridge team whilst considering cultural issues.

### Voyage Data Recorders

The Club continues to encounter situations where VDR data has not been backed-up following an incident. Although it is appreciated that following a serious navigational event the bridge team may be more focussed on remedial actions necessary to mitigate the effects of such an incident and to place the vessel in a position of safety, it should be ensured that emergency response checklists and best practices instil the need and reflect on the importance of saving the data on the VDR for future analysis following a serious navigational occurrence.

Members requiring further guidance should contact the [Loss Prevention department](#).

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