

Damage to fixed objects when manoeuvring in confined waters

Gard has recently seen a noticeable increase in cases involving significant contact damage to fixed objects by vessels manoeuvring in confined waters, mostly within port. Fixed objects include berths, docks, locks and shore side equipment such as cranes. The contact damage has resulted in some very large claims for the repair and/or loss of use of such objects.¹ These incidents also risk harming people and the environment (e.g. pollution from breached oil tanks), and the ship itself is often left with expensive repairs and loss of trading time.



Outlined below are five of the most common factors, in Gard's experience in cases involving contact damage to fixed objects in confined waters.

1. Prevailing and forecast conditions not properly assessed

The cumulative effect of wind, sea, current and tidal conditions on the ship may not have been fully appreciated. As a result of the above factors the vessel can experience difficulties in manoeuvring in a controlled fashion and within safe parameters. Insufficient allowance has been made for the forces acting on the ship. These can easily turn out to be greater than expected and beyond the capabilities of the ship and, due to the unforeseen effects of the prevailing and/or forecast conditions, insufficient tugs would have been employed to handle the vessel. There are instances where manoeuvrings in confined waters should be deferred until conditions have improved. This also includes cases of reduced visibility.

2. Unfamiliarity with the ship's manoeuvrability

A pilot will know the local waters best, however, the master is more familiar with his vessel's manoeuvrability. Due to the rotation of crew, familiarity with the ship's own manoeuvring systems can be lacking, and, as technology and computerisation is becoming ever more prevalent, training may be needed to ensure that crew members are familiar with the vessel's systems.² It is important to include information as to the vessel's manoeuvrability in the master/pilot information exchange before the commencement of the pilotage.³ The effect of changes in the vessel's draft, trim and windage characteristics must also be taken into consideration when discussing the vessel's manoeuvrability.

¹ See also "Bumps and scrapes can be costly!" from Gard News 183.

² Some shipowners have sought to standardise equipment across vessels in their fleet and to always assign senior officers to the same class of vessel.

³ See also "Master/pilot exchange of information" from Gard News 154.

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3. No agreed manoeuvring plan

Just how the vessel will manoeuvre when in close proximity to fixed objects is often not planned and/or agreed in advance within the bridge team and/or with the pilot.⁴ This not only concerns the location that the vessel is proceeding to/from, but also other fixed objects which the vessel will pass within critical close proximity. Often, insufficient time is invested in advance to consider how the vessel can be expected to behave, given its manoeuvring characteristics and the prevailing conditions. The closest points of approach are often not calculated as are critical bearings, transits and ranges to assist in determining the limits of the safe manoeuvring parameters.

4. Poorly executed manoeuvre

Even the best ship handlers occasionally get it wrong, although it is perhaps surprising how very wrong in some cases. Excessive speed is a common factor as is pilot error and the bridge team can be reluctant to intervene when the pilot is clearly making mistakes.⁵ Communication with tugs, terminals and mooring crews leading to misunderstandings has also been a contributory factor. Even where a manoeuvring plan is agreed, prevailing circumstances can require the plan to be changed and there may be little time to react to new situations. In particular, changes in wind conditions and the movements of other vessels often create problems. In a number of cases it appears that aborting the manoeuvre to try again has not been considered or has been left too late.

5. Loss of manoeuvring capability

The loss of engines, propulsion, steerage, or thrusters is, perhaps surprisingly, a less common factor than those mentioned above. There are instances where such a loss has occurred immediately before/after manoeuvring systems have been, or are due to be, repaired or overhauled. Unfortunately, during these periods of increased risk, additional precautions appear not to have been taken. Pre-sailing and pre-arrival checks on manoeuvring systems are important, especially after a long ocean passage or stationary period. Less obvious factors involve squat and/or interaction. Although a loss of manoeuvring capability will inevitably make contact avoidance more difficult, exercises and drills can be used to test back-up systems, including use of the ship's anchors. Having something in reserve is important, but being able to put that reserve to effective use is equally important.

Recommendation

It is better to abort the manoeuvre and make a second attempt than to fail on the first. During drills, exercises and tests of equipment prior to arrival, the Master should ensure that the crew is able to respond at any time to an emergency situation related to manoeuvring. Tasks should be properly defined and assigned to qualified personnel, and the Master should ensure that the company procedures are fully understood by everybody involved. Effective and clear communication is important. The Master should closely monitor the manoeuvres and should not hesitate to comment, give advice, or even abort an approach if he is uncomfortable with the situation.

⁴ See Guidance to Masters 2.13.4 Navigation in confined waters – Bridge Resource Management.

⁵ See also Loss Prevention Circular no. 04-00: Pilot on the bridge - Role, authority and responsibility.

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