HARBOUR TUG ASSISTANCE: UNDERSTANDING & PREVENTING GIRTING

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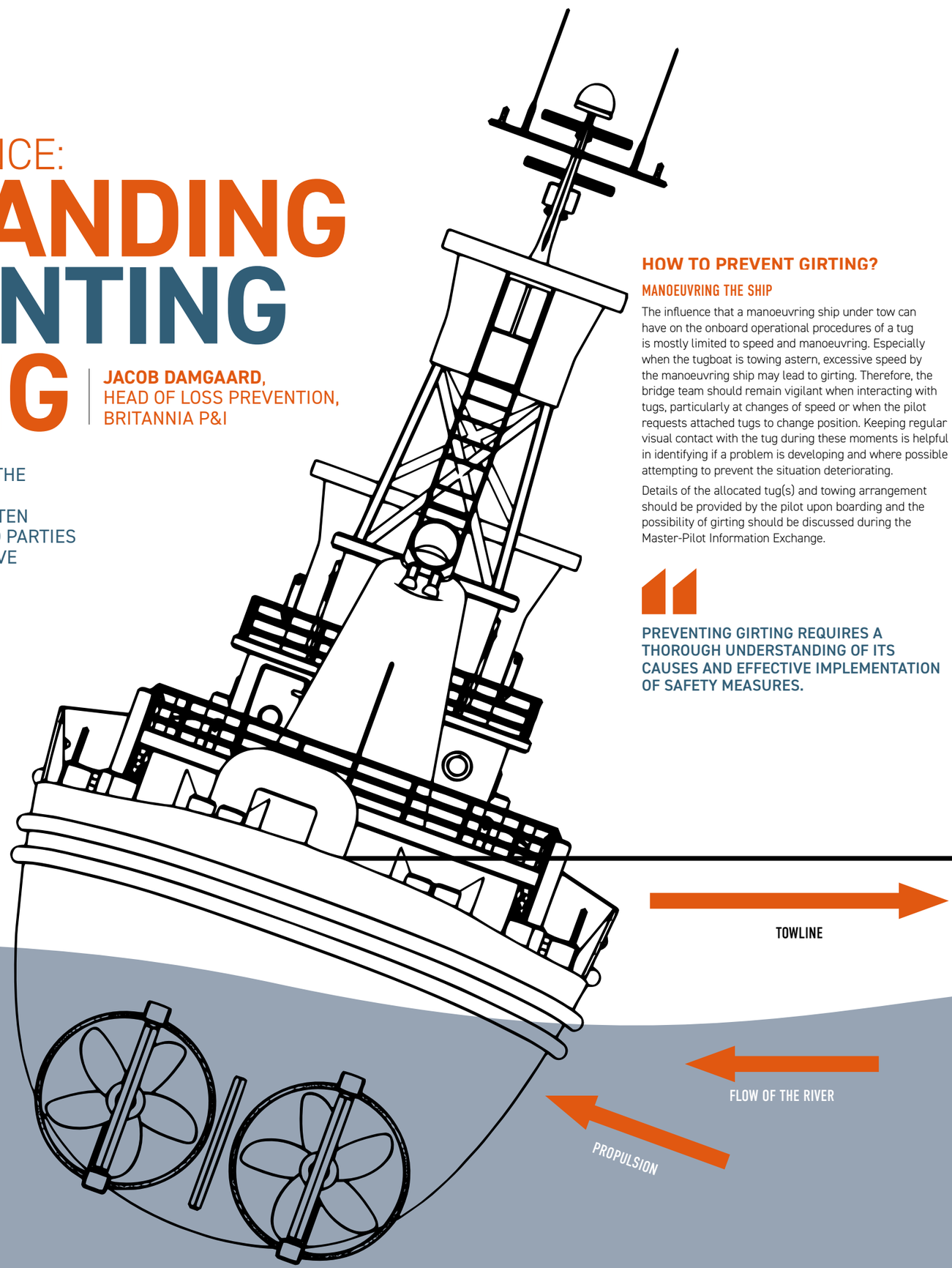
HARBOUR TUG ASSISTANCE PLAYS A CRITICAL ROLE IN THE SMOOTH AND SAFE ARRIVAL AND DEPARTURE OF LARGE OCEANGOING SHIPS. WHILE THESE OPERATIONS ARE OFTEN SEEN AS ROUTINE, IT IS IMPORTANT THAT ALL INVOLVED PARTIES ARE FAMILIAR WITH THE RISK OF GIRTING AS IT MAY HAVE CATASTROPHIC CONSEQUENCES FOR A TUG.

WHAT IS GIRTING?

Girting refers to the situation whereby a tug is towed broadside by a towline and is unable to manoeuvre out of this position. Deck-edge immersion then occurs, quickly followed by flooding and capsizing, unless the towline is released in good time. This can happen very quickly and does not allow the tug crew enough time to abandon the tug before it capsizes.

Girting is particularly hazardous to conventional single screw tugs. Tractor and azimuth stern drive (ASD) tugs are less likely to girt because the tug master can produce significant thrust in all directions to maintain the tow alignment. Towing from a point near amidships on a conventional tug is inherently unstable and can result in situations where the load on the towline can heel the tug over to a large and dangerous angle.



GIRTING

Girting happens when a vessel is pulled braodside by a towline force and is unable to manoeuvre out of this position.

Source: Transportation Safety Board of Canada

HOW TO PREVENT GIRTING?

MANOEUVRING THE SHIP

The influence that a manoeuvring ship under tow can have on the onboard operational procedures of a tug is mostly limited to speed and manoeuvring. Especially when the tugboat is towing astern, excessive speed by the manoeuvring ship may lead to girting. Therefore, the bridge team should remain vigilant when interacting with tugs, particularly at changes of speed or when the pilot requests attached tugs to change position. Keeping regular visual contact with the tug during these moments is helpful in identifying if a problem is developing and where possible attempting to prevent the situation deteriorating.

Details of the allocated tug(s) and towing arrangement should be provided by the pilot upon boarding and the possibility of girting should be discussed during the Master-Pilot Information Exchange.

PREVENTING GIRTING REQUIRES A THOROUGH UNDERSTANDING OF ITS CAUSES AND EFFECTIVE IMPLEMENTATION OF SAFETY MEASURES.

TUGBOAT(S)

Training - The tugboat crew must be properly trained in the causes and possibility of girting. Avoiding excessive loads and ensuring proper weight distribution can minimise the risk of overturning. Ensuring proper weight distribution can minimise the overturning moment of the towing gear and avoid excessive loads. Tug crews should develop and practice their emergency response procedure for the possibility of girting and subsequent capsize.

Quick release – It is crucial to have a reliable quick-release mechanism in place. This mechanism should be easily activated from both the local area and the wheelhouse to ensure a swift response in case of emergencies. Regular and competent maintenance of the equipment is vital to ensure its proper functioning.

Watertight integrity – During towing operations, it is important to keep all openings closed to prevent water ingress and maintain stability, including watertight doors. A checklist that includes a verification of closed arrangements should be utilised. In the event of tension in the towline causing the tug to tilt and the deck edge to be submerged, having watertight integrity on the weather deck will provide a crucial delay in down flooding. This delay allows for the activation of the quick release mechanism, manoeuvring the tug to reduce tension in the towline, and enabling personnel to safely escape from the engine room and accommodation area to the deck. To ensure the effectiveness of these safety measures, regular inspection and testing of watertight and weathertight doors, hatches, vents, windows, ports, side scuttles, seals, securing devices, and automatic closing devices on ventilators should be included in the tugboat's planned maintenance system.

Use of gog/gob wire – Using a gog/gob wire can provide additional stability and control, further enhancing the safety of tugboat operations. This arrangement should be adjusted correctly in accordance with industry standards, and often the gog wire should not exceed half the distance between the bulwarks or crash rails. In cases where a central securing point is not available, gog wires may be connected to padeyes on both sides of the main deck aft. This can help limit the transverse movement of the towline, ensuring safer towing operations.

SUMMARY

Preventing girting requires a thorough understanding of its causes and effective implementation of safety measures. Key strategies include proper training for tug operators and employing advanced towing techniques as required. Regular maintenance and inspection of towing equipment also plays a crucial roles in mitigating the risk of girting. Furthermore, it is important that the bridge team of a manoeuvring ship is familiar with girting to avoid the use of excessive speed or manoeuvring that may lead to girting.