**Industry Expertise:
Loss Prevention**

Remote pilotage – perspective and risks to consider

The Standard Club's loss prevention (LP) department is a multi-disciplinary team which was established in 1989 and has continually evolved in order to meet the needs of members in an ever changing maritime industry. The team includes master mariners, naval architects, ship production engineers and specialist surveyors.

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The shipping industry has always been characterised by uncertain and volatile markets, stricter regulations and rapid evolution of technology.

However, these conditions are fluctuating more aggressively in the face of the COVID-19 pandemic. We are seeing unprecedented impacts on the movement of cargoes, domestically and internationally, as the world adjusts to the new 'normal' of port delays, restrictions on ship movements and, in some cases, the reduced availability of support personnel to assist the vessels' movements.

About remote pilotage

Remote piloting allows qualified pilots, situated on land or on a pilot boat, to guide the vessel remotely. Experienced Vessel Traffic Service (VTS) personnel, seated at their screens in the control centre ashore, may also provide instructions to the master. During remote pilotage, the pilots do not have direct access to data from the ship's navigational equipment. They need to rely on information from their own tracking device or information being relayed by the vessel's bridge team over the VHF or other means of communication.

Given the potential shortage of key port staff during this pandemic, Standard Club has received several inquiries in recent weeks from members seeking guidance relating to remote pilotage. The club's Loss Prevention team has consulted several senior pilots to assess the situation and examine the risks that masters, and bridge teams may encounter when remote pilotage is required.

We understand that some ports are enforcing remote pilotage on ships that arrive from countries where there is a high risk of COVID-19 infection or where crew members from high-risk countries have joined the ship recently. We are also aware that the practice has been used for many years, particularly in north-western European ports, when adverse weather conditions outside of specific ports prevent the efficient movement of shipping over a sustained period. Indeed, technology, both ashore and afloat, has evolved and improved greatly in recent years, and communication systems, radar systems, ECDIS and Global Navigation Satellite System/GPS can now provide real-time information reliably and accurately. However, some concerns must not be overlooked.

Concerns

Experienced pilots have advised us that despite improvements to these technologies and navigation systems, they still malfunction and occasionally in a manner that is not detected by the bridge team in time to prevent a casualty.

There are also concerns relating to inconsistent performance standards of the bridge teams, and language barriers causing communication challenges among cosmopolitan crew and shore personnel. More critical are concerns that the VTS personnel ashore often lack experience and the necessary 'feel' for the ship. When these fears are expressed by experienced pilots, they are often dismissed by the VTS operators and the providers of sophisticated and technically advanced hardware as traditionalists' biases. This assumption is wrong and, in the club's view, elevates the risk of serious errors.

Our advice remains that such remote pilotage should be performed only when it is a mandatory requirement according to port regulations. It should not be undertaken in any other circumstances unless there is an emergency or a compelling need for the safety of the ship or crew members.

The pilotage should be limited to taking the ship from the port's usual pilot boarding position to the customary anchorage where vessels wait for their berths. We would not recommend remote pilotage for berthing or unberthing or connecting tugs during the transit.

Our caution arises from our practical shipboard experience, from P&I claims records and from consulting with pilots who advise that remote pilotage will always lead to less efficient control of the ship. This is principally due to a lag in communication between the ship and the remote pilot who is monitoring and guiding the master.

Additionally, masters should always be aware of the risk that the VTS advisor ashore may not be a qualified and experienced pilot. That individual may have satisfied the competency requirements to be a VTS operator but may lack the detailed knowledge of the ship and its handling characteristics. This presents an elevated risk which the master must always be alert to.

Mitigating the risk factors

When it comes to remote pilotage, the passage should be planned with the utmost care. Below is a list of some of the principal risk factors that should be considered carefully before such an operation is undertaken. We have used an inward passage from pilot station to the anchorage as an example:

- The pilotage area. How complex is it, for example, is it an open sea anchorage, a river passage, etc?

- The technology on board the ship and its limitations, including the operators' knowledge and experience in using the equipment (DGPS, ECDIS, Doppler Log, Comms, etc)

- The experience and training of the master (manned model course, ship-handling skills)

- The experience of the port, pilot and/or VTS operator. In planning the passage, the master on board a member's vessel should plan for the situation whereby the person ashore has limited experience in guiding his type of ship during the passage.

- The use of a pilot boat or pilot ashore. Will the pilot remain on the pilot boat for the duration of the passage and guide the master inwards while issuing course/speed instructions over the radio? Or will the pilot be ashore and only have electronic means of monitoring the vessel's passage?

- The master's familiarity of the port/area. Is this the first time that the master has called at the port? If so, greater caution is required and the member should act prudently, perhaps by avoiding the remote pilotage altogether.

- Expected traffic density (in and out).

- Time of day. Such a pilotage should, in the club's view, only be undertaken in daylight.

- Expected weather. Adverse weather will increase the risks, especially if there is a risk of reduced visibility during the passage. If so, the pilotage should be deferred until the weather improves. The master and the bridge team should, however, be experienced at navigating using radar and navigational systems only.

- Duration of the remote pilotage. It is vital that the bridge team is well rested before commencing the inward passage.

- Communication arrangements to personnel ashore and to the pilot. The success or failure of the remote pilotage rests often on the quality of communication between ship and shore. Crisp, clear instructions are essential and must be checked and verified on every change of course and/or speed. There should be no distractions, unnecessary conversations or unnecessary personnel present on the bridge during this operation.

- Size of the vessel. A large vessel relative to the width/depth of the approach channel will present an elevated risk of grounding due to unexpected dynamic forces acting on the hull.

- What notice period is given for the use of remote pilotage? Ideally, the master should have sufficient time to consider, and plan for, all of the risk factors that accompany a remote pilotage operation. The club believes that at least a day's notice would be appropriate to allow sufficient time to complete a risk assessment of the planned movement. The master should never be instructed to proceed inwards under remote pilotage conditions upon arrival at the pilot station.

- The passage plan is effectively the practical application of the risk assessment process. It should identify all the attendant hazards and state the mitigating factors to reduce the associated risks. These factors will include the minimum under keel clearance required, detailed port approaches information including reporting points, 'choke' locations in the channel, highlighted tidal/current information and any navigation warnings concerning navigation buoys and their light and sound characteristics.
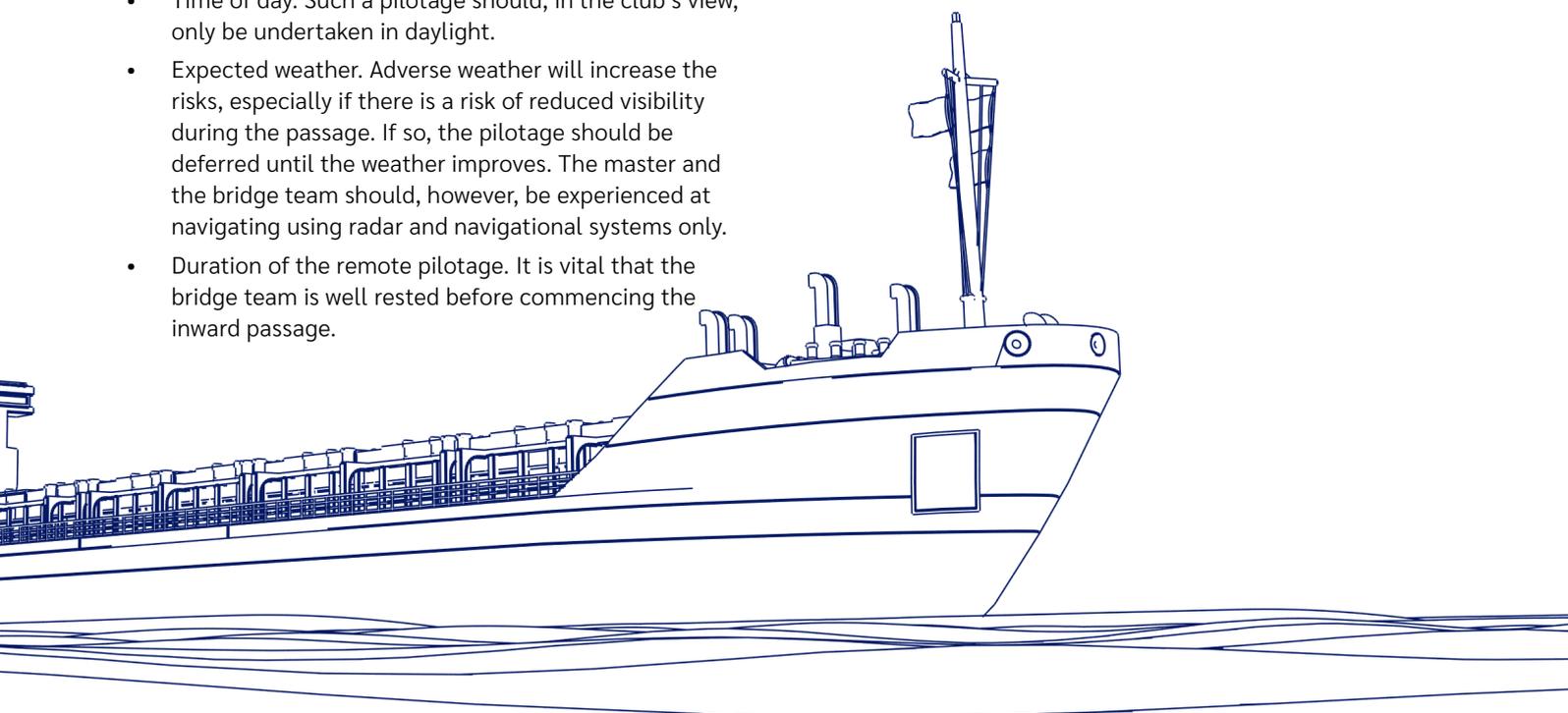
Conclusion

This pandemic presents a major challenge to the global shipping industry. Marine insurers, especially Standard Club, are aware that social distancing is necessary for the protection of both the pilots and crew during port calls. We are also aware of the need to keep ships operational and cargoes moving, so remote pilotage could be considered appropriate when there are elevated risks of cross-infection. As experienced mariners, we acknowledge the challenges associated with the use of remote pilotage on rare occasions. We would recommend that the operation is only conducted when it is enforced by port regulations or in extreme emergency situations and, even then, we would limit the passage to the period between the pilot station and the customary anchorage for the port. We would not recommend remote pilotage when the ship is berthing or unberthing. These operations require the presence and advice of an experienced pilot who has extensive local knowledge and who is usually assisted by port tugs. Finally, Standard Club's extensive network of correspondents globally is a resource that members should not hesitate to use if there are particular concerns or practices in specific ports that members wish to clarify.
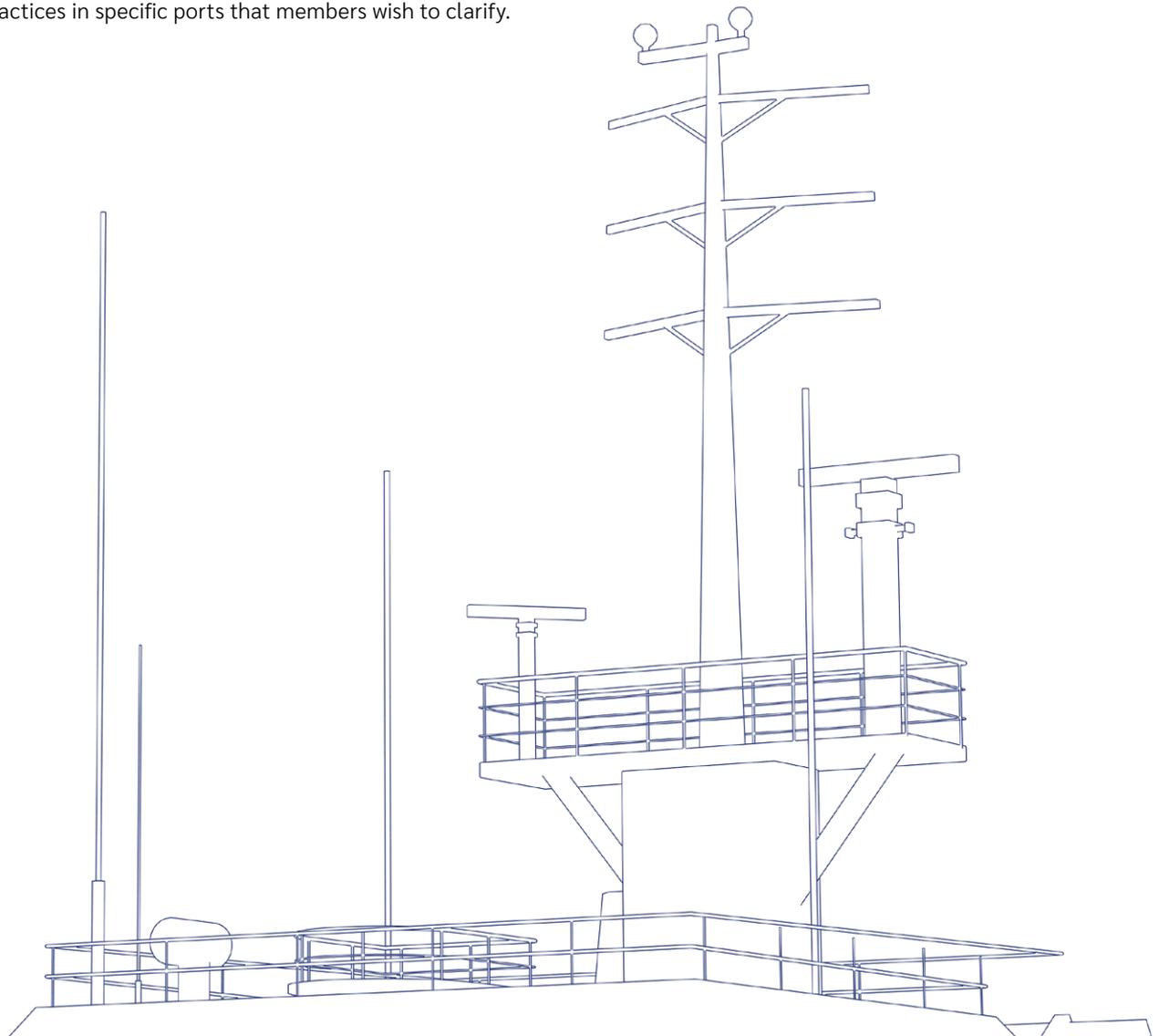
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