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THE MASTER/PILOT RELATIONSHIP AND THE ROLE OF THE PILOT IN RISK MANAGEMENT AND SAFETY OF NAVIGATION

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ABSTRACT

The need for safety of navigation with a high level of risk management requires enhancing the ability of the bridge team (including the pilot) in following the principles of bridge watch-keeping and bridge team management, so the role of the pilot should be identified and his relationship with the master of the ship should be cleared and that what we will illustrate later.

KEYWORDS: Bridge Team Management (BTM), Master/Pilot Information Exchange, Passage Plan, Safety of Navigation, Pilotage and Risk Management

INTRODUCTION

Marine pilots play an important role in promoting maritime safety and protecting the marine environment. Berthing, un-berthing, anchoring or transiting canals or narrow channels are high-risk marine operations that require experience, specialized local knowledge and proper appraisal, planning, execution and monitoring. Although the captain of a ship (the master) is familiar with the vessel and crew, they are not necessarily familiar with each port where the vessel must go and requires the local expertise of a marine pilot to ensure that the ship, its crew, passengers and cargo arrive at the intended port in a safe and efficient manner.

Although pilots are more familiar with the local conditions, requirements and its facilities, the ship's team is more familiar with the ship and therefore both sides need to work together to ensure a safe passage. Despite the pilot’s duties and responsibilities, their presence on board does not exempt the master and other bridge team personnel from their duties and responsibilities for the ship’s safety. The pilot’s presence on the bridge is a time for increased awareness and vigilance and is not and should not be a time for the Master and bridge team to relax!

(Peermohamed, n.d.)

Effective pilotage is subject to perfect communication and information exchange between the master, the pilot and other bridge team personnel. In addition, there should be an obvious realization of the duties and responsibilities of all those engaged. The application of bridge team management techniques assist to guarantee that communication problems are settled, inquiries and reply exercises are promoted and situational awareness is enhanced.

(NE P&I, n.d.)

For ages pilots have been playing an important role in promoting maritime safety and protecting the marine environment.

A comprehensive berth-to-berth passage plan is imperative in order to ensure situational awareness is maintained at all times. The planning in Pilotage waters is one of the most crucial parts of the passage plan. Also, a proper discussion on the passage plan between the master, pilot and Officer Of the Watch “OOW” should be carried out prior entering and departing ports.

The master is in command of the vessel’s navigation at all times. Therefore, the master and the bridge team should be aware of the pilot’s intentions and closely monitor their actions and be in a position to support or query the same at any stage of the passage.

Reluctance to get involved in a situation has contributed to several severe marine accidents. Especially when the master is not on the bridge. It is therefore important that all members of the bridge team have the necessary authority and confidence to query the pilot’s actions if they are in doubt. The Master should encourage the juniors and lead by example.

If the pilot is to communicate with tugs and/or other shore personnel in a language that is foreign to the bridge team, the master must insist that the pilot relays/translates this communication to the master and “OOW”.

The master and the “OOW” are more familiar with the characteristics and maneuvering capabilities of the ship as compared to the pilot. The pilot should be made fully aware of the characteristics and maneuvering capabilities of the vessel before starting of the maneuver by presenting him with the Pilot Card.

Efficient pilotage is dependent on good communication and information exchange between the pilot, master and other bridge team personnel. Added to this, there must be a clear understanding of the roles and responsibilities of all those involved. The use of bridge resource management techniques helps to ensure that communication issues are resolved, question and response practices are encouraged and situational awareness is improved.

Master/Pilot Relationship

Pilots assist ships’ masters in safely navigating their vessels within pilotage areas by advising them of prevailing local conditions such as currents, state of tide, depth of water, existing traffic and traffic expected during the course of the passage, availability of tugs and their power and berthing arrangements

The master remains in charge of the vessel and must so, on guarantee that the pilot’s advice is accurately treated and that each action began by the pilot’s advice are strictly monitored. He should not hesitate to talk with the pilot about any issues of the pilotage or the pilot’s advice that might raise anxiety. If he determines that pilot’s activities could risk the safety of the vessel, he should not hesitate to release the pilot of his responsibilities and if essential make a request for a substitution.

(Peermohamed, n.d.)

Command on the bridge is not as clear as it might seem. By law, the master is in command; however, in pilotage waters the pilot normally directs and controls the vessel's movements and gives maneuvering commands.

Given the organization of the marine navigation and piloting system, the dominance of traditional bridge configurations, and legal precedents, it is likely that this peculiar relationship will continue indefinitely.

On the bridge of a ship the master/ pilot relationship might best be understood if we make a distinction between Power and Authority. Power can be defined as the ability to act without regard to the right to act, while Authority can be

described as the right to act without regard to the means or ability to complete the act. At sea the master has both the power and the authority over the ship and its crew, but on entering pilotage waters the authority to direct and control the movement of the ship shifts by operation of our laws to the pilot. What binds their relationship together is that the pilots authority can only be exercised in co-operation with the masters power to command the crew, and the master's power to have the ship moved can only be lawfully exercised in co-operation with the pilots authority to direct and control the movement of that ship.

The distinction is important because if the pilot were merely an advisor whose assessment could be accepted or rejected at will he could not fulfill his role as an independent judge of acceptable risks. He might be persuaded to go along contrary to his personal judgment under the belief that the master would have the final or ultimate responsibility for accepting the pilot's advice in the event of an accident.

Although it is understood that the master can displace a pilot for cause and never relinquishes responsibility for the safety of his ship, that does not mean he has unbridled discretion to substitute his judgment for that of the pilot or relieve the pilot at will. If the master acts to displace the pilot he is not free to proceed on his own, but must request another pilot or resolve the issues with the pilot onboard before proceeding. As a practical matter if a differing judgment on a situation arises the master will express his concern and the matter resolved before any imminent danger arises.

The present relationship between ship-owner/ master and pilot has evolved over centuries as one of the primary means of Port States protecting their interests in maritime safety. The law is settled and how it operates should be acknowledged and form the starting point for any discussion of improvements in pilotage procedures. Some in the industry do not have a full appreciation of the present role compulsory pilotage plays in managing risk through checks and balances in the master/ pilot relationship and want to begin restructuring and managing the relationship through new globally applied International regulations.

Bridge Team Management (BTM) and Flow of Information

The greatest famously practiced of the late innovations has been the "bridge team" concept. Perfectly according to this concept, the master, the pilot, watch officers, lookouts and helmsmen would be trained to perform like a team with additional collaborative framework. The bridge team and bridge resources management notions have the feature of inspiring more unrestricted talk and helpful querying of activities and orders, and they may furnish for better communication between all personal involved.

Briefly, the pilot is anticipated to give the service he is paid to give and limited careful attention was being taken into account to the necessity for merging and cooperation with the bridge team. So, in many circumstances, the required raised standard of safety was not accomplished. In addition to pilotage voyage planning, these must contain practices for pre-voyage briefing, monitoring of the pilot's actions and communication between pilot, master and other bridge team members.

Every one of the bridge team in pilotage waters has definite degree of access to information and tasks to handle that information. While there is some overlap, nobody has full access to all information. So sharing information and backup between bridge team members is as yet desired so as to safely navigate the wide range of risks and situations which influence the pilotage water's passage. The transit's safety relies on the bridge personal's capability, involving the pilot, to act as a team. Due to the fact that navigation and piloting are shared missions, communication is a fundamental element in

guaranteeing that everyone in the team has all the information required for allocated parts of the job.

Language barriers have been and will continue to be a challenge; these can be connected to communication among the pilot and the crew. Very frequently these barriers can be extremely decreased by comprehensive review of the transit before starting it. The pilot can as well be asked to communicate with outside parties in a common language, or to translate the communication with them for the bridge team. Many incidents are rooted in surprises and unanticipated situations which could have been averted if the bridge team personal and the pilot had a mutual perception on how the transit could be executed.

(NAP, 1994)

A very complicated communications problem appears if we are indeed arguing the pilot's rule and function in the form of procedures. The moment that a general perception is accomplished and there is agreed conception of the pilot's rule, a profitable discussion can be potential on resource management or bridge procedures, pilot passage planning, the master/pilot information exchange and other matters.

(Quick, n.d.)

Effective pilotage is mainly rely on the efficiency of the communication and information exchange among the pilot, the master and other bridge personnel and upon the interactive perception each has for the rules and duties of the others. Establishment of efficient coordination between the pilot, master and other ship's personnel, taking into consideration the ship instruments and systems ready for use by the pilot is necessary for the safe navigation of the vessel through pilotage waters. English language, or a reciprocally agreed shared language, or the International Maritime Organisation (IMO) standard marine communication phrases should be exercised, and all team members share a responsibility to spotlight any noticed errors or negligence's by other team members, for clarification.

(Murdoch, OBE, Dand & Glover, 2004)

The pilot should be incorporated into the bridge team and must not be treated as a substitution for any of the bridge team members. Many examples offer proof that plenty accidents that happen can be credit with incompetent bridge resource management, and it is in many cases that the master and other bridge team personnel stop to monitor the navigation of the vessel once the pilot is on board the vessel.

(Charles Taylor, 2012)

Role of the Pilot in Safety of Navigation

Pilotage's contribution to maritime safety was described primarily as the pilot's experience and local knowledge of the waters and that the pilot is aware of the specific navigational conditions that the captain of the ship in question can't be expected to be aware of. This, combined with the ability and experience to operate various types of vessels, was described as critical parameters to maintain maritime and environmental safety and accessibility for ships sailing in the inner waters. Other qualifications that the pilots are trained to navigate in narrow fairways in the vicinity of other vessels as well as to operate vessels at very low speed with the help of tugs. The International Maritime Pilots' Association (IMPA) described compulsory pilotage as the most effective and important form of safety of navigation (IMPA, 2010). The European Maritime Pilots' Association (EMPA) described pilotage as a port safety system for the protection of waterways, port facilities and the wider community (EMPA, 2010).

Navigation to the destination safely, without collisions or grounding and without violating maritime regulations was described as the overall objective of the pilots and masters. The pilot should also avoid dangerous situations and have both long term and short-term planning for the navigation of the ship. The planning should be based on ship motion in relation to its surroundings so that the ship is always well within the safety margin. The pilots must therefore know most of the fairway characteristics by heart and be able to plan the voyage based on landmarks.

A large number of tasks that a pilot performs during pilotage, and which are important for safety, were also identified. For example, a pilot takes into consideration ship-specific details such as location, course and speed, in relation to environmental factors such as fairway width and depth, currents, wind speed and wind direction, weather and visibility, ice conditions and surrounding traffic. These are not unique to pilotage, as they must be considered at all times. However, pilots work under time constraints. This means that the pilot must detect the slightest change and deviation as these may cause great consequences pilots base their decisions upon visual references and not so much on the instruments.

Pilotage is an integrated task that the pilot may perform more easily than the master, and that the captain usually hands over the navigation of the vessel to the pilot. It was also pointed out that the crew has more knowledge about the actual maneuvering capabilities of the ship. The pilot could however determine the ship's status, which enhances safety directly by adjusting pilotage after the vessel's conditions and indirectly as the pilot can identify and report damages.

This indicates that pilots contribute to maritime safety in several ways concluded in the pilot is integrated in the control of the vessel and not just an external adviser to the captain.

Role of the Pilot in Risk Management

Pilotage is a response to risk that, if effective, reduces the probability of an accident. As pilotage is already an expert service, only incremental improvements may be possible through improved training, such as preparation for using emerging navigation technology. Regardless of how good pilotage may be or where fault may lie, pilotage often takes center stage when an accident occurs; the effectiveness of ship handling and position-keeping are the first targets of efforts to determine why an accident occurred. Pilot, is a discrete, recognizable entity upon which to focus. Technical or mechanical problems such as steering gear failure also may be readily identifiable.

Well trained competent individuals can still have faulty situational awareness, imperfect judgment, insufficient experience with new situations, or be burdened with multiple tasks or problems in a crisis that overcome their ability to cope. This is not due to any shortage of laws and regulations. What we have a shortage of is an understanding of existing laws and a clear view of what practices or policies should be adopted to improve safety. This is particularly true in the current public dialogue dealing with pilotage that seeks to utilize or improve upon human relationships to minimize human error rather than relying solely on equipment or competency standards.

Compulsory pilotage is probably one of the first systems of laws that had as their purpose a public policy to manage or reduce physical exposure to risk in an industrial or commercial endeavour. It has existed as a regulation of shipping to protect commerce, the waterways in harbour approaches, and port facilities since ancient times.

What these local laws contain and how they are interpreted reflect the public policy decisions of the Port State on their views of pilotage as a risk management system. Although from the ship-owner / master viewpoint pilotage is a service that protects the ship from the hazards of the port, from the Ports States perspective pilotage exists to protect the ports from the hazards of the ship. Since the ship is entering the territorial waters of the Port State and accepts their sovereign

jurisdiction as a condition of entry, it is the Port State that establishes the relationships between the ship-owner / master and the pilot by their laws and policies. The first step to reduce the risk of navigation-related accidents when a pilot is on board is a common understanding by the bridge team of the risks involved. These include geographical hazards as well as cultural and management-related challenges.

Introducing company “pilot handling procedures” in the ship management system has proved to be effective. In addition to voyage planning, these should include routines for pre-voyage briefing, monitoring of the pilot’s activities and communication between pilot and officer of the watch (OOW)/ master.

There should be a sense of increased confidence when the pilot comes on board the ship. Not only does the pilot bring local expertise that reduces the risk of navigating in constrained waterways, he also should add to the bridge team. However, pilots are human and they also make mistakes. Whatever their human faults, the master and the watch keeper must always monitor the pilot’s actions and ensure that they are properly integrated into the bridge team.

When under pilotage, the ship is exposed to higher risks and a pilot’s local knowledge should reduce these risks to an acceptable level.

CONCLUSIONS

Despite improvements in technology and of training through various International Convention on Standards of Training Certification and Watchkeeping of Seafarers (STCW) conventions, International Safety Management (ISM), etc., marine accidents continue to occur due to a failure of the bridge team (including the pilot) in following principles of bridge watch-keeping and bridge team management. The key to a safe and efficient ship is a well-trained crew, teamwork and resource management. Training is a proactive approach to safety. It requires the identification, analysis and mitigation of hazards before they can affect the safe operation of the vessel. Most ship-owners are taking steps to enhance bridge procedures by ensuring their officers and crew receives on-going training in the operation of their vessels. Training, good communication and close co- operation between master/”OOW” and pilots is imperative for the safety of the crew, ship and the environment.

(Peermohamed, n.d.)

Due to the mutually dependent character of piloting and maritime navigation operations, these operations should be commonly known as a system. The perception of risk in navigation and piloting may be enhanced by evaluating system factors, their interactions, and their interactions with the environment in which they work. Planning, administration, research activities, and suggestions for developments should identify the mutual dependence of system factors and their interactions to be considered as well.

(NAP, 1994)

There must be recognition of enlarged trust when the pilot comes on board. Not just does the pilot get a domestic skill that decreases the risk of navigating in pilotage waters, he must add to the bridge team as well. Whatever his human errors, the master and other bridge team personnel should constantly monitor the pilot’s activities and guarantee that he is well merged with the bridge team.

(Charles Taylor, 2012)

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