



BRM CAMPAIGN PILOTAGE

DEC 2017

The marine industry continues to experience an increasing number of incidents whilst vessels are navigating under pilotage. Typically these incidents include collision, contact with fixed objects and grounding. The purpose of this campaign is to encourage vessels to increase focus on this area of vessel operations in order to prevent occurrence of such incidents.

Following failures of communication between the pilot and the bridge team management have significantly contributed to such incidents:

- Ineffective master-pilot exchange: Though vessel information is provided to the Pilot by means of pilot card, pilotage plans are not fully reviewed and agreed by the master and/or not communicated to or understood by the bridge team.
- Failure to intervene: The bridge team failed to raise concerns or challenge the decision of the pilot.
- Failure of bridge team to anticipate developing dangers to navigation.
- Insufficient manning of the bridge resulting in reduced focus on pilot's activities.
- Failure to discuss and plan the mooring arrangement during the master-pilot exchange.
- Communication Failure:
 1. Pilot communicating with tugs and shore mooring teams in a local language not understood by the vessel's bridge team.
 2. Communication failure between the pilot and the bridge team caused through premature issuing of instructions by the pilot before the master/pilot exchange has taken place.

BRM – PILOT ON BOARD - GENERAL GUIDANCE

- Pilot is temporary member of bridge team
- THE PILOT HAS THE CONDUCT OF THE SHIP. An "Action, a Personal Service" being performed
- THE MASTER HAS THE COMMAND OF THE SHIP. A "Power of Authority"
- Despite the duties and obligations of a pilot, his presence on board does not relieve the officer of the watch from his duties and obligations for the safety of the ship.
- The master has right to advise and intervene when necessary.
- In some ports, pilot may request vessel to proceed beyond pilot boarding ground till channel entrance. Master should always request pilot to board vessel at pilot boarding area and vessel not to proceed beyond this area.
- Bridge manning levels as per company requirements shall be complied with. Master and one OOW shall always be on bridge while embarking / disembarking pilot in compliance with the SMS
- OOW on watch shall not leave the bridge to embark / disembark pilot as it could disrupt the continuity of watch keeping duties and may result in loss of situational awareness. Also it may be difficult for master to manage traffic, VHF calls, engine and rudder movements alone during this period.
- One officer will be on deck and one officer on bridge while embarking / disembarking pilot
- Master must advise the pilot about the vessels peculiarities of maneuvering & handling
- When under pilotage, discuss speed and squat with pilot and agree on a maximum safe speed for the transit. Please note Pilot is engaged only in the capacity of an

	BRM CAMPAIGN PILOTAGE	DEC 2017
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adviser. If the master believes that a slower speed should be used than that recommended by the pilot, then the master's view shall prevail

- A thorough master-pilot exchange should include : Providing passage plan and vessel's information to the pilot as required by the pilot card , Pilot's plan of maneuvering the vessel at different stages , Details of mooring/unmooring plan and tug arrangements
- The safe progress of the ship as planned should be monitored closely at all times.
- Verbal orders from the pilot also need to be checked to confirm that they have been carried out correctly
- The bridge team should not hesitate to seek clarification from pilots regarding any aspect of their plans or communication
- While reducing speed to make fast tugs, ensure vessel has sufficient sea room and does not run into danger due to effects of wind or current.
- Cohesive interaction between the pilot and the bridge team management, supported by clearly understood plans and communication protocol is key to the safe and effective navigation of the vessels.

REFERENCES:

- Nautical manual section 15
- Bridge procedures guide
- Form 1.5.2A - Pilot card / MASTER/PILOT INFORMATION EXCHANGE
- SHEQ FORM - NAVB8 – Pilotage

BRM CASE STUDY: PILOTAGE

The captain and the pilot of the Vessel X have been sentenced to four months in prison for their involvement in a collision.

Vessel X departed the port of Inningham, England. While the vessel was outbound, strong winds and a pronounced tidal stream set her to the north, towards the inbound lane.

The Vessel Y was headed inbound making 14 knots, and the VTS watch stander alerted her of the Vessel X situation and the growing risk of collision.

Aboard the Vessel X, the pilot made a gradual series of course corrections to offset the wind and current and bring her back to the south. The heading changes were not sufficient, and the vessels collided. The Vessel X suffered damage below the waterline and a long gash along her port bow, and the Vessel Y required about \$3 million in repairs to her bow and forecastle.

The UK Marine Accident Investigation Branch (MAIB) concluded that the incident was due to the pilot's loss of situational awareness and the bridge team's failure to intervene, all exacerbated by an unusual bridge layout. The MAIB determined that the Vessel X pilot failed to apprehend the **developing risk of collision** because he had experienced "relative motion illusion" – that is, he was mistaken about the ship's direction of travel.



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The Vessel X bridge windows are laid out in a semi-circle, not in a straight line as found on conventional vessels. Only the middle window looks ahead, and all other windows frame a view that is off of the center line axis. The MAIB determined that this layout – combined with the absence of any bow or jackstaff visible from the bridge – can be disorienting for watch standers, even when they are aware of the problem.

VDR audio recordings from the Vessel X confirmed that prior to the collision, pilot believed that he was traveling in the direction that he was looking – but he was looking off the centerline axis. Capt was on the bridge but did not intervene until it was too late to prevent a collision. Court testimony indicated that both men were well-regarded members of the maritime community, and both had more than 30 years' experience at sea.

Judge acknowledged that the ship's design had played a part in the accident

Suggested keywords for discussion

- Berth to Berth passage plan – including point of no return
- Level of alertness when pilot is on board
- Seeking clarification if in doubt
- Necessity for Bridge Team Management
- Master – Pilot exchange of information
- Critical thinking – What if? when and what
- When do you question or intervene?
- Roles & Responsibilities when pilot on board
- Communication and language challenges
- Monitoring of pilotage – Situational awareness
- Effect of tide /wind on manoeuvring characteristics

Action required by navigating officers:

Master to discuss attached case study with all navigating officers and provide response to the below.

1. What are the various contributing factors that led to this incident?



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2. What are the various issues that may arise to the Bridge team during Pilotage ?

3. What actions the Bridge Team will be taking to prevent Occurrence of similar incident on board your vessels?