PSS MP106
Transit the pilotage district

Overview

This standard covers the competence required to transit the pilotage district.

In order to ensure a safe passage, it is essential that there should be close co-operation between the Pilot and the bridge team. This will involve an early exchange of information. It is vitally important that the Master/Pilot relationship is clearly established.

An integral aspect, which helps to ensure a successful passage, involves an ongoing assessment of the capabilities of the bridge team. The conduct of the Master, the language in use and the team's general willingness and competence all contribute to this

The Pilot will need to work with the bridge team using marine resource management principles and taking into account any deficiencies which may have been observed.

There are 3 elements in this standard:

- Determine the vessel's position
- Monitor the vessel's progress
- Navigate vessels

Target Group

This standard applies to authorised marine pilots who have a duty to perform acts of pilotage to facilitate the safe and efficient use of the port and its approaches.

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Performance criteria

Determine the vessel's position

You must be able to:

P1 use all available means for fixing the vessel's position
P2 achieve accurate position fixing by cross-referencing one method with other viable secondary methods at frequent intervals, thereby avoiding reliance on a single system
P3 take account of the limitations and potential errors in various position fixing methods, especially in the use of buoyage and other floating aids to fix position
P4 use traditional position fixing methods, including bearings and transits, together with electronic navigation equipment
P5 confirm that the bridge team's fixing methodology is acceptable
P6 agree recorded positions with the Master or assigned bridge team member
P7 encourage cross-referencing of the vessel's position by the bridge team
P8 confirm that positional data is applied to the chart
P9 make appropriate use of Vessel Traffic Service and Local Port Service information concerning vessel progress and position
P10 establish if there are errors present in the vessel's gyro and magnetic compasses
P11 take gyro and magnetic compass errors into account during acts of pilotage
P12 test the performance and accuracy of vessel radars, ECDIS and compasses
P13 check under keel clearance at appropriate intervals, especially at critical stages of the passage
P14 resolve any discrepancy between the pilot and the bridge team in the vessel's calculated position promptly

Monitor the vessel's progress

You must be able to:

P15 evaluate vessel operation and handling capabilities
P16 monitor position and the effects of leeway, set and drift
P17 adjust course and speed to maintain the desired track
P18 advise the master of variations in the desired track
P19 monitor the echo sounder to ensure under-keel clearance is as anticipated
P20 establish the location of the transducer and if the reading is depth under keel or from the water line
P21 monitor weather, traffic, and the status of equipment and systems

P22 ensure arrival at key points of the passage, in accordance with the plan
P23 check and cross-reference by all available means the course and speed of the vessel over the ground and through the water
P24 recognise the limitations of log or GPS speeds
P25 identify emerging or new hazards and take action to overcome them
P26 apply promptly the principles of blind pilotage when poor visibility is anticipated
P27 continuously review the likelihood of adverse events occurring including:
- P27.1 failure to arrive in good time at a tidal gate
- P27.2 tidal conditions outside acceptable parameters

P28 commit to a tidal gate passage only where a fully viable alternative strategy is present in the Port Passage Plan

Navigate vessels

You must be able to:

P29 use all available means to ascertain the risk of collision, including
- P29.1 visual lookout
- P29.2 compass bearings
- P29.3 radar plotting

P30 select and monitor appropriate radar range and display characteristics throughout the passage
P31 use all available means to navigate the vessel including ECDIS
P32 utilise blind pilotage techniques, including parallel indexing, whilst navigating in restricted visibility
P33 practice blind piloting as a matter of routine in clear weather
P34 use manoeuvring control systems with due regard to the principles of good seamanship
P35 maintain liaison with the port and port users to minimise close quarter situations with other vessels, particularly in poor visibility
P36 adhere to:
- P36.1 vessel traffic services (VTS/LPS) priorities for vessel movement in poor visibility
- P36.2 international and local regulations

P37 allow appropriate safety margins at all times
P38 monitor closely the movement and position of other vessels in the vicinity
P39 ensure that a competent helmsman is in attendance at the steering position when the autopilot is engaged
P40 recognise the limitations and risks of using the autopilot in adverse weather or conditions of poor visibility
P41 check the accuracy of the gyro heading before leaving the berth and following any heading alteration
P42 check that anchors are cleared away for immediate use
P43 check that the crew are available in an emergency
P44 give due consideration to past and present adverse weather conditions

which may affect:

P44.1 the operational efficiency of electronic navigational aids

P44.2 crew safety

P44.3 crew effectiveness

P45 confirm with the Master that appropriate lights and day signals are displayed to reflect the vessel's own circumstances, including:

P45.1 deep draught

P45.2 high speed

P45.3 restricted manoeuvrability

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Knowledge and understanding

You need to know and understand:

- K1 bridge procedures
- K2 marine resource management for pilots
- K3 theory, operational principles and limitations of:
  - K3.1 blind pilotage techniques and theory
  - K3.2 buoyage systems
  - K3.3 chartwork, corrections and Electronic Chart Display and Information Systems (ECDIS)
  - K3.4 coastal navigation
  - K3.5 day and night signals
  - K3.6 echo sounders and logs
  - K3.7 electronic aids
  - K3.8 fog and restricted visibility signals
  - K3.9 gyro and magnetic compasses
  - K3.10 hydrodynamics
  - K3.11 hydrography
  - K3.12 International regulations for the Prevention of Collision at sea
  - K3.13 lights and navigational marks
  - K3.14 magnetic variation
  - K3.15 marine structures
  - K3.16 meteorology
  - K3.17 nautical terminology
  - K3.18 navigational equipment
  - K3.19 ship handling and manoeuvring
  - K3.20 ship stability
  - K3.21 steering, rudder types and manoeuvring systems
  - K3.22 tides and tidal calculation
- K4 local, port or area specific
  - K4.1 anchorages (names, locations, depth of water and limitations)
  - K4.2 bridges and overhead obstructions
  - K4.3 Bye-laws, Directions and local Notices to Mariners
  - K4.4 channels, fairways and bouyage
  - K4.5 characteristics of berths and locks
  - K4.6 coastal topographical features
  - K4.7 conspicuous radar targets
  - K4.8 depths of water
  - K4.9 lights and navigational marks
  - K4.10 locations of shoals, wrecks, other obstructions and dangers
  - K4.11 overtaking and passing procedures
  - K4.12 sources of meteorological and tidal information

K4.13 tidal streams and currents and other hydrographic data
K4.14 vessel traffic services (Vessel Traffic Services and Local Port Services) arrangements and reporting points
K4.15 weather conditions and forecasting, including wind and its effect in different locations
K5 the effects of stress and fatigue on capability
K6 the potential impact of:
K6.1 pilotage operations on other port users
K6.2 other port users on pilotage operations

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