PSS MP101
Plan an act of pilotage

Overview

This standard covers the competence required to plan an act of pilotage.

A pilot is required to take a pre-prepared Port Passage Plan on board each vessel for each act of pilotage. The plan must be based on current, relevant information gathered by the pilot from appropriate sources. On joining the vessel, the pilot must take account of additional information including the ship's Master's own passage plan and the circumstances and characteristics of the vessel itself. The pilot will need to correctly evaluate this information, adjust the Port Passage Plan where necessary and ensure that the plan is readily understood and agreed by all appropriate parties. As the act of pilotage progresses, the passage plan may need to be reviewed and adjusted by the pilot and the bridge team.

This standard includes the preparation required before embarkation and obtaining relevant data to plan the act of pilotage and produce a Port Passage Plan. It includes the preparation, development and production of an agreed plan, which the pilot and the bridge team will use to enable the safe conduct of the vessel to its destination. It also covers the evaluation of changing circumstances that might affect the plan and the role of the pilot, assisted by the bridge team, in assessing data and implementing appropriate changes to the plan.

There are 3 elements in this standard:

- Acquire relevant data to facilitate the act of pilotage
- Prepare a Port Passage Plan
- Monitor and modify the plan as necessary

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

Acquire relevant data to facilitate the act of pilotage

You must be able to:

P1 acquire relevant factual information regarding the vessel, including:
- P1.1 name and type
- P1.2 dimensions
- P1.3 draught
- P1.4 trim
- P1.5 speed
- P1.6 manoeuvring characteristics/aids
- P1.7 other special factors
- P1.8 estimated time of arrival/berthing constraints

P2 identify defects or details affecting the vessel's condition

P3 establish if the vessel has visited the port before and if so:
- P3.1 investigate records of any previous problems

P4 consult current sounding charts, tidal and hydrographic information including:
- P4.1 tidal predictions for the passage duration, including any contingency plans
- P4.2 variations in tide between predicted and actual
- P4.3 strength and direction of tidal stream
- P4.4 actual and predicted depths of water on passage and place of destination
- P4.5 swell height and under-keel clearance
- P4.6 dock and lock opening and closing times

P5 establish the vessel's intentions and requirements including:
- P5.1 where and when pilot is embarking
- P5.2 where the vessel is bound for or departing from
- P5.3 where pilotage is required from and to
- P5.4 towage requirements
- P5.5 pilot boarding system to be used and location for pilot boarding
- P5.6 radio or other telecommunication channel(s) to be used
- P5.7 any specific vessel berthing requirements due to design or construction
- P5.8 cargo handling/berth requirements
- P5.9 mooring boat and boatmen requirements

P6 consult the weather forecast for the pilotage area, including:
- P6.1 visibility
- P6.2 wind speed and direction
- P6.3 sea state and extreme weather factors

P7 clarify any other factors that may affect the passage or berth, including:
- P7.1 suitability and availability of assigned berth
- P7.2 recent changes at the berth

P7.3 river works
P7.4 air draught
P7.5 local navigation warnings
P7.6 other planned vessel movements
P7.7 availability of tugs
P7.8 breakdown, repair or maintenance of port equipment or facilities
P7.9 availability of the mooring gang
P7.10 abort positions
P7.11 possible or planned anchorages and their availability
P7.12 lock and bridge programme
P7.13 anchorages and their availability

P8 seek advice if relevant data is not available

Prepare the Port Passage Plan

You must be able to:

P9 consider relevant data concerning the intended passage in a logical sequence, including contingencies and alternatives

P10 determine safe minimum under-keel clearances at critical points during the passage and place of destination correctly, using available data including squat awareness and heeling

P11 select a safe and expeditious route:
P11.1 using all relevant data
P11.2 to ensure that the piloted vessel can be navigated and remain safely afloat, remaining clear of all known hazards

P12 evaluate courses and speeds for the passage and determine accurately the estimated time of arrival at selected points of the passage and the disembarkation point

P13 confirm the availability of:
P13.1 the berth and safe navigational access
P13.2 the vessel's intended berthing position, and which side alongside the berth
P13.3 availability and need for tugs and mooring services

P14 take into account appropriate variables in the Port Passage Plan, including:
P14.1 tidal predictions
P14.2 weather forecasts and effects
P14.3 ground swell
P14.4 tug availability
P14.5 possible changes to other vessel movements
P14.6 notice for availability of ship's engines and equipment and readiness for use
P14.7 factors that may cause an increase in draught
P14.8 limitations of the vessel
P14.9 limitations in the port such as restricted docking and locking

times

P15 plan projected manoeuvring options correctly, including:
- P15.1 major alter course positions
- P15.2 predicted tidal flows
- P15.3 wheel over positions
- P15.4 turning circle
- P15.5 rate of turn and speeds required
- P15.6 integration with anticipated movements of other vessels
- P15.7 proposed swinging and/or berthing manoeuvres

P16 determine transits and clearing bearings for critical points on the passage

P17 identify potential hazards, abort points and emergency anchorage positions or 'holding' areas, in the plan

P18 set out clearly any tug requirements, availability, disposition and rendezvous positions

P19 discuss the plan with appropriate stakeholders which may include:
- P19.1 Vessel Traffic Services
- P19.2 tugs
- P19.3 berthing/mooring teams

P20 ensure radio and/or other telecommunication working channels have been designated for tugs, mooring party and berthing master and provide information on which channels should be monitored

Monitor and modify the Port Passage Plan

You must be able to:

P21 monitor data that helped to form the plan on an ongoing basis to ascertain if any amendments are necessary

P22 recognise and act upon changed circumstances including:
- P22.1 changes in proposed times
- P22.2 changes in local conditions, including weather/visibility
- P22.3 changes in Estimated Time of Arrival or Estimated Time of Departure
- P22.4 actual as opposed to predicted tidal conditions
- P22.5 actual as opposed to predicted weather conditions
- P22.6 failure of on-board equipment or machinery
- P22.7 reassignment of berth
- P22.8 non-availability of tug or mooring party
- P22.9 changes to vessel's notified draught
- P22.10 emergencies

P23 confirm other vessel movements by appropriate means, such as the monitoring of port telecommunication traffic

P24 communicate amendments or departures from the plan to relevant parties

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Knowledge and understanding

You need to know and understand:

- K1 the statutory definition of ‘an act of pilotage’
- K2 the role of the Competent Harbour Authority
- K3 compulsory and non-compulsory pilotage and limits of the pilotage area
- K4 the priorities and roles of Master and Pilot
- K5 the liabilities and responsibilities of a marine pilot
- K6 national and international regulations, codes of practice and industry good practice relating to maritime pilotage
- K7 theory, operational principles and limitations of:
  - K7.1 anchors, anchoring and use while manoeuvring
  - K7.2 buoyage systems
  - K7.3 cargo types and cargo safety
  - K7.4 chartwork, corrections and Electronic Chart Display and Information Systems (ECDIS)
  - K7.5 coastal navigation
  - K7.6 effects of weather and tide on vessels
  - K7.7 embarkation and disembarkation techniques
  - K7.8 gyro and magnetic compasses
  - K7.9 hydrodynamics; ship handling and manoeuvring theory
  - K7.10 hydrography
  - K7.11 meteorology
  - K7.12 nautical terminology
  - K7.13 navigational equipment
  - K7.14 pollution control
  - K7.15 steering, rudder types and manoeuvring systems
  - K7.16 tugs and towage
- K8 local, port or area specific
  - K8.1 anchorage names, locations, depths of water and limitations
  - K8.2 bridges and overhead obstructions
  - K8.3 Bye-laws, Directions and Notices to Mariners
  - K8.4 channels, fairways and buoyage
  - K8.5 characteristics of berths and locks
  - K8.6 coastal topographical features
  - K8.7 conspicuous radar targets
  - K8.8 depths of water and the locations of shoals, wrecks, other obstructions and dangers
  - K8.9 lights and navigational marks
  - K8.10 lines of responsibility
  - K8.11 magnetic variation
  - K8.12 mooring and berthing arrangements

K8.13 other hydrographic data
K8.14 overtaking and passing procedures
K8.15 pilot boat characteristics and safety equipment
K8.16 port facilities, such as water, craneage and methods of discharge
K8.17 procedures regarding dangerous goods and hazardous cargoes
K8.18 sources of meteorological and tidal information
K8.19 tidal streams and currents
K8.20 tug names, types characteristics and operating procedures
K8.21 vessel traffic services (Vessel Traffic Services and Local Port Services) arrangements and reporting points
K8.22 weather conditions and forecasting, including wind and its effect in different locations

K9 how to assess levels personal stress and fatigue and the potential impact of stress and fatigue on individual capability

K10 the potential impact of:
K10.1 pilotage operations on other port users
K10.2 other port users on pilotage operations

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