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.
Performance criteria

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
PSS MP101
Plan an act of pilotage

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
PSS MP101
Plan an act of pilotage

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
Plan an act of pilotage

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

- discuss the plan with appropriate stakeholders which may include:
  - Vessel Traffic Services
  - tugs
  - berthing/mooring teams

- 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
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
Plan an act of pilotage

| 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         |
PSS MP101
Plan an act of pilotage

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Overview

This standard covers the competence required to embark and disembark during an act of pilotage.

Pilot transfer can take place when the vessel is underway, at anchor, moored, or alongside a berth. Transfer may be made by pilot boat, helicopter, directly from the shore, or from another authorised vessel. The safety of the pilot and other personnel is paramount, requiring effective communication and cooperation between all parties.

All pilot transfers should be performed in line with current regulations, codes of practice and safety management systems.

There are 3 elements in this standard:

- Prepare for transfer by pilot boat
- Transfer a pilot underway
- Transfer a pilot when not underway

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.
PSS MP102
Embarking and disembarking

Performance criteria

You must be able to:

P1 consult with the pilot boat coxswain on weather, wind and sea conditions in the chosen pilot transfer area

P2 choose a pilot transfer area:
   P2.1 with sufficient sea room and clear of navigational hazards or other traffic, in which the vessel may carry out manoeuvres required to provide a suitable speed, heading and lee for the pilot boat
   P2.2 that takes account of weather, swell patterns and tidal conditions and any natural shelter that may be available
   P2.3 that allows sufficient time for the Pilot and vessel’s Master to discuss, agree and implement the Port Passage Plan and make any necessary checks, observations and assessments

P3 wear and use appropriate personal protective equipment and clothing

P4 identify the positions and stowage of the safety equipment on joining a pilot boat in harbour or at sea

P5 establish and maintain VHF communication on the appropriate channel(s) prior to and during pilot transfer.

P6 request that the Master remain in contact with the pilot boat by VHF during pilot disembarkation, until the transfer is completed and the pilot boat is clear

P7 give the vessel timely advice on:
   P7.1 the VHF communications channel to be used
   P7.2 the intended rendezvous position and time
   P7.3 movements of other vessels in the area
   P7.4 the vessel’s required course and speed during pilot transfer
   P7.5 the side on which the pilot transfer equipment should be rigged
   P7.6 the required height above sea level of the bottom rung of the pilot ladder
   P7.7 any requirement for manropes or heaving lines
   P7.8 the number of persons transferring

P8 agree with the pilot boat, prior to disembarkation, the:
   P8.1 rendezvous position
   P8.2 course and speed required
   P8.3 side on which the pilot transfer equipment will be rigged
   P8.4 number of persons transferring

P9 remain inside the cabin during the approach to the vessel until the pilot boat is at reduced speed and in the lee of the vessel

P10 confirm the intended boarding position

P11 amend the boarding position as necessary to avoid any hazard
P12 monitor the relevant VHF channel, where appropriate, to ensure familiarity with vessel movements in the area
P13 check the adequacy of lighting on board the vessel at the pilot transfer point during night transfers
P14 obtain an assurance from the Master before leaving the bridge that the means of disembarkation is properly rigged and safe for use
P15 make a safety assessment of the means of disembarkation to establish that its condition complies with appropriate international and local regulations
Transfer a pilot underway

You must be able to:

P16 monitor changing weather and sea state conditions to ensure that the choice of pilot transfer area remains the best available
P17 abort the transfer if conditions are considered to be unsafe and no suitable alternatives are available
P18 establish that an officer is stationed at the ladder or point of access to the ship’s deck, in direct communication with the bridge, during pilot transfer
P19 check that
  P19.1 pilot boat personnel are using safety harnesses whilst on deck during pilot transfer
  P19.2 ‘man-overboard’ recovery equipment is available and ready for use in the pilot boat
P20 establish that the ladder or point of access to the ship’s deck is secure
P21 assess when transfer may be unsafe
P22 inform VTS/Port Control that the conduct of navigation has been handed over to the Master, and the pilot is about to disembark, before disembarking from a vessel underway
P23 advise the post disembarkation route of the vessel to vessel traffic services
P24 give clear directions to the Master or other competent officer regarding existing traffic movements in the vicinity, and advise the safe route for departure from the disembarkation point, prior to leaving the bridge on departure
P25 discuss and agree the necessary procedures between the helicopter pilot, the vessel’s pilot and the vessel’s master in advance when pilot transfer is by helicopter
P26 ensure suitable and sufficient awareness of safety and operational procedures before commencing helicopter operations
Transfer a pilot when not underway

You must be able to:

P27 take appropriate action to ensure there is an adequate lee whilst a vessel is not underway

P28 establish that an officer, with direct communication to the bridge, is present at the ladder or point of access to the ship’s deck during pilot transfer when not underway

P29 consider the safety and regulatory implications when boarding from a pilot boat or another authorised vessel to a vessel moored alongside

P30 establish that there is a safe means of access between vessel and terminal

P31 ensure that the area is suitably lit before undertaking a night time embarkation or disembarkation
PSS MP102
Embarking and disembarking

Knowledge and understanding

You need to know and understand:

K1 The priorities and roles of Master and Pilot
K2 The principles and techniques of safe embarkation and disembarkation
K3 compulsory and non-compulsory pilotage and limits of the pilotage area
K4 How to use and wear personal protective equipment
K5 Theory, operational principles and limitations of:
   K5.1 coastal topographical features
   K5.2 effects of weather and tide on vessels
   K5.3 means of communication
   K5.4 meteorology
   K5.5 national and international regulations, codes of practice and industry good practice relating to maritime pilotage
   K5.6 nautical terminology
   K5.7 search and rescue and survival at sea
   K5.8 ship propulsion plant, engineering and safety systems
K6 Local, port or area specific:
   K6.1 Bye-laws, Directions and Notices to Mariners
   K6.2 compulsory pilotage areas are for different vessel sizes
   K6.3 depths of water and the locations of shoals, wrecks, other obstructions and dangers
   K6.4 other hydrographic data
   K6.5 pilot boat characteristics and how to use the relevant on-board safety equipment
   K6.6 tidal streams and currents
K7 The potential impact of:
   K7.1 pilotage operations on other port users
   K7.2 other port users on pilotage operations
PSS MP102
Embarking and disembarking

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Relevant occupations  Marine Pilots

Suite  Marine Pilots

Key words  Marine pilots; embark; disembark; pilotage; Pilot transfer; vessel; underway; not underway
Overview

This standard covers the competence required to assess standards on the piloted vessel.

The pilot is required to make an assessment of standards on board the vessel, both before embarkation and once on board. If inadequacies or poor standards are observed, the pilot will make a judgement on the level of risk involved and revise the Port Passage Plan as necessary, up to and including aborting the pilotage passage.

There are 3 elements in this standard:

- Evaluate the conduct of the vessel prior to boarding
- Evaluate the crew and assess the vessel's condition
- Evaluate and respond to deficiencies

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.
Performance criteria

Evaluate the conduct of the vessel prior to boarding

You must be able to:

P1 critically observe the vessel’s manoeuvres on approaching the correct boarding area and ascertain that a lee has been provided
P2 identify any shortcomings in communications, including language issues and radio procedures
P3 establish if the vessel’s navigation and signal lights, flags and shapes are displayed correctly
P4 evaluate the vessel’s comprehension and responsiveness to requests from the pilot boat and Port Control and provide an opportunity for the Master to explain any significant irregularities
P5 assess the vessel’s level of compliance with navigational requirements in the port approaches
P6 determine the accuracy of the vessel’s estimated time of arrival (ETA), estimated time of departure (ETD) and readiness to depart
P7 establish the reasons for any discrepancy in ETA, ETD and vessel readiness
P8 make a judgement on the safety and condition of the pilot transfer arrangements
P9 establish that the ladder or point of access to the ship’s deck is secure
P10 evaluate the arrangements for safe access to a berthed vessel and report any concerns as soon as practicable
PSS MP103
Assess standards on the piloted vessel

Evaluate the crew and assess the vessel's condition

You must be able to:

P11 evaluate the general appearance of the vessel and any signs of previous hull damage
P12 check the vessel's draught marks to ensure that they can be easily seen and read, and that they agree with the declared draughts.
P13 evaluate the vessel's trim and state of propeller and/or thruster immersion
P14 clarify the reason for any observed vessel list
P15 assess the vessel's overall condition and cleanliness
P16 check to ensure that the route from the point of entry to the bridge is clear and safe
P17 seek assurance from the Master as to the reliability of the calculated or electronically indicated draught in the event that it is not possible to see the vessel's draft marks
P18 evaluate the quality, operational efficiency and status of all navigational, communications and other electronic equipment, including checks for compass error
P19 ensure the availability of relevant up-to-date charts
P20 assess the level of visibility from the bridge
P21 obtain confirmation from the Master that the engines, thrusters and steering gear are all functioning within their full manoeuvring range
P22 evaluate the level of co-operation from the officer and other crew members at the pilot boarding location
P23 make allowance for any observed deficiencies in the crew members’ fitness for duty
P24 assess the number of crew required to effectively and satisfactorily handle the passage of the vessel and report any apparent deficiency
P25 report any internal communication/language problems between crew in other parts of the vessel and the bridge team
P26 take action, where practicable, to overcome crew communication problems that might affect the pilotage operations
PSS MP103
Assess standards on the piloted vessel

Evaluate and respond to deficiencies

You must be able to:

P27 evaluate the extent of any deficiencies and:
  P27.1 bring them to the attention of the Master
  P27.2 seek their rectification
  P27.3 review and adapt the Port Passage Plan accordingly
  P27.4 report to the Harbour Master any which may prejudice the safe
        navigation of the vessel
  P27.5 seek permission, before continuing the passage, where
        deficiencies are outside the relevant operating parameters

P28 acquire sufficient information from relevant sources to decide whether or
  not to commence, continue with caution or to abort the pilotage act until
  deficiencies are rectified

P29 recognise when the Harbour Master must be consulted

P30 evaluate where and when the use of a tug or additional tugs, should be considered
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 anchors, anchoring and use while manoeuvring
   K3.2 blind pilotage techniques and theory
   K3.3 buoyage systems
   K3.4 chartwork, corrections and Electronic Chart Display and Information Systems (ECDIS)
   K3.5 coastal navigation
   K3.6 day and night signals
   K3.7 echo sounders and logs
   K3.8 effects of weather and tide on vessels
   K3.9 electronic aids
   K3.10 fog and restricted visibility signals
   K3.11 hydrodynamics
   K3.12 hydrography
   K3.13 International regulations for the Prevention of Collision at sea
   K3.14 lights and navigational marks
   K3.15 means of communication
   K3.16 meteorology
   K3.17 nautical terminology
   K3.18 navigational equipment
   K3.19 propulsion plant, engineering and safety systems
   K3.20 ship handling and manoeuvring
   K3.21 ship stability
   K3.22 standard marine vocabulary
   K3.23 steering, rudder types and manoeuvring systems
   K3.24 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 buoyage
   K4.5 characteristics of berths and locks
   K4.6 coastal topographical features
   K4.7 conspicuous radar targets
   K4.8 depths of water
   K4.9 dredging and surveying operations including the frequency of operations and craft involved
PSS MP103
Assess standards on the piloted vessel

K4.10 fog and visibility signals
K4.11 lights and navigational marks
K4.12 locations of shoals, wrecks, other obstructions and dangers
K4.13 overtaking and passing procedures
K4.14 overtaking and passing procedures
K4.15 sources of meteorological and tidal information
K4.16 tidal streams and currents and other hydrographic data
K4.17 vessel traffic services (Vessel Traffic Services and Local Port Services) arrangements and reporting points
K4.18 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
PSS MP103
Assess standards on the piloted vessel

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This standard covers the competence required to work effectively with the bridge team.

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

By law, the pilot has the conduct of the navigation of the vessel within a compulsory pilotage area, with the Master taking an overview and monitoring the vessel’s progress. The Master remains in command of the vessel at all times and may remove the conduct of the navigation from the pilot if he judges the pilot to be incompetent or that the vessel’s safety is being compromised.

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 the pilot may be aware of.

There are 3 elements in this standard:

- Exchange relevant information
- Assess the bridge team’s capabilities
- Work effectively with the bridge team

**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.
PSS MP104
Work effectively with the bridge team

Performance criteria

Exchange relevant information

You must be able to:

P1 verify the vessel’s current position with the Master
P2 establish the movements of other vessels in the immediate vicinity
P3 make an early Master-Pilot exchange of information including identifying:
   P3.1 and agreeing the Port Passage Plan
   P3.2 critical stages of the passage
   P3.3 contingency plans
   P3.4 expected traffic
   P3.5 the nature of the intended berth
   P3.6 the lock(s) that need to be transited
   P3.7 port operations in progress
   P3.8 recent relevant local Notices to Mariniers
   P3.9 any known deficiencies
P4 appraise the Master of the level and type of support required
P5 identify the vessel’s berthing requirements or mooring plans as early as practicable
P6 obtain handling and manoeuvring information relating to the vessel as soon as practicable, including the provision of the Pilot Card
P7 advise the Master of any navigational changes in the port and its approaches
P8 ascertain that the vessel’s charts are appropriate and current
P9 discuss the exchanged Port Passage Plan with the Master, amending the vessel’s own passage plan as necessary
P10 explain the Port Passage Plan that has been agreed between the Master and Pilot, to the bridge team
P11 keep the bridge team informed and advised of your intentions during the passage
Assess the bridge team’s capabilities

You must be able to:

P12 ascertain the expected role and level of participation of the Master in the bridge team during the passage

P13 evaluate the professionalism of the welcome received by the pilot upon arrival on the bridge

P14 ascertain and clarify:
   P14.1 the number of persons comprising the bridge team and their respective duties
   P14.2 the person who is to be the primary interface with the Pilot

P15 evaluate the bridge team’s:
   P15.1 efficiency
   P15.2 division of responsibilities
   P15.3 level of co-operation
   P15.4 standard of communications between team members
   P15.5 understanding of English
   P15.6 familiarity and expertise in the use of bridge equipment
   P15.7 level of preparedness for the anticipated pilotage transit
   P15.8 degree of understanding of the requirements of the Port Passage Plan
   P15.9 willingness to respond promptly to the pilot’s orders
   P15.10 general level of interest

P16 report as soon as practicable to the Master and, if appropriate, to the Harbour Master if a bridge team member repeatedly fails to comprehend instructions or has difficulty in performing their normal duties

P17 evaluate the:
   P17.1 effectiveness and accuracy of navigational routines, including the plotting of the vessel’s track and position on an up-to-date, corrected chart, and the recording of passage information such as timings and engine movements
   P17.2 handling of the vessel throughout the passage
   P17.3 Officer of the Watch responsiveness to Master or pilot instructions
   P17.4 helmsman’s competence and comprehension of orders, paying particular attention to the repeating back of helm orders
   P17.5 promptness of the helmsman’s response to orders by monitoring the rudder indicator and vessel’s heading

P18 adjust the Port Passage Plan and/or seek further advice from the Harbour Master as appropriate

P19 request additional lookouts as necessary having due regard to the prevailing weather conditions

P20 perform ongoing checks to ensure that the vessel’s track and progress is effectively and frequently monitored
PSS MP104
Work effectively with the bridge team

P21 evaluate the quality of communications with the vessel’s mooring parties and the level of understanding by those in charge
PSS MP104
Work effectively with the bridge team

Work effectively with the bridge team

You must be able to:

P22 make a recorded handover of the navigation of the vessel between the Master and the pilot, and where appropriate report this to vessel traffic services

P23 record and report any subsequent changes in the navigational conduct of the vessel

P24 provide information sufficiently early such that the:
   P24.1 bridge team can properly brief those crew members responsible for various deck functions
   P24.2 crew can be at stations to carry out any required on board operations

P25 maintain a courteous, confident and professional approach throughout the passage

P26 request an explanation of how the bridge team intends to support the pilot for all stages of the passage including berthing and unberthing

P27 respond as soon as practicable to questions raised by members of the bridge team

P28 factor in an appreciation of the potential lack of familiarity with the port and its approaches in bridge team communications

P29 locate and test own understanding of the bridge equipment controls

P30 ascertain immediately whether or not the Master has assumed the conduct of the navigation in the event that the Master countermands the pilot’s conning of the vessel

P31 record and notify the relevant authority in the event that the Master assumes the conduct of the navigation

P32 request that the bridge team acknowledge all instructions

P33 agree and understand the role of the Master at each stage of the act of pilotage
PSS MP104
Work effectively with the bridge team

Knowledge and understanding

You need to know and understand:

K1 the priorities and roles of Master and Pilot
K2 bridge procedures
K3 bridge resource management
K4 IMO operational guidance for officers in charge of a navigational watch
K5 current operational principles and limitations of:
  K5.1 buoyage systems
  K5.2 chartwork, corrections and Electronic Chart Display and Information Systems (ECDIS)
  K5.3 coastal navigation
  K5.4 effects of weather and tide on vessels
  K5.5 gyro and magnetic compasses
  K5.6 hydrodynamics
  K5.7 hydrography
  K5.8 meteorology
  K5.9 navigational equipment
  K5.10 ship handling and manoeuvring
  K5.11 ship stability
  K5.12 steering, rudder types and manoeuvring systems
  K5.13 tidal theory
K6 local, port or area specific:
  K6.1 anchorage names, locations, depths of water and limitations
  K6.2 berths and locks and their limitations
  K6.3 bridges and overhead obstructions
  K6.4 Bye-laws, Directions and Notices to Mariners
  K6.5 channels, fairways and buoyage
  K6.6 coastal topographical features
  K6.7 conspicuous radar targets
  K6.8 depths of water and locations of shoals, wrecks, other obstructions and dangers
PSS MP104
Work effectively with the bridge team

K6.9 fog and visibility signals
K6.10 International Codes of Practice relating to marine pilotage operations
K6.11 lights and navigational marks
K6.12 magnetic variation
K6.13 names, locations, depths of water and limitations of moorings
K6.14 nautical terminology
K6.15 other hydrographic data
K6.16 overtaking and passing procedures
K6.17 pilot boat characteristics and safety equipment
K6.18 policies and procedures in the area of operations
K6.19 port emergency and counter pollution plans
K6.20 port facilities, such as water, craneage and methods of discharge
K6.21 procedures regarding dangerous goods and hazardous cargoes
K6.22 tidal streams and currents
K6.23 tug names, types, characteristics and procedures
K6.24 vessel traffic services (Vessel Traffic Services and Local Port Services) arrangements and reporting points
K6.25 weather conditions and forecasting, including wind and its effect in different locations

K7 the effects of stress and fatigue on capability

K8 the potential impact of:
K8.1 pilotage operations on other port users
K8.2 other port users on pilotage operations
PSS MP104
Work effectively with the bridge team

<table>
<thead>
<tr>
<th>Developed by</th>
<th>Port Skills and Safety</th>
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<tbody>
<tr>
<td>Version number</td>
<td>2</td>
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<tr>
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<td>Marine pilots; work effectively; bridge team; safe passage; co-operation</td>
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Overview

This standard concerns liaison between the pilot and the port, including tugs, vessel traffic services, mooring party, Harbour Master, operatives, and other vessels. It does not concern relationships within the bridge team.

Good communications need to be established, usually by VHF radio, but occasionally by other means. At all times it is important to take into consideration the requirements of the port.

There are 3 elements in this standard:

- Telecommunication
- Communicate by other means
- Work effectively with other port functions

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.
PSS MP105 Liaise and communicate within the port

Performance criteria

You must be able to:

P1 maintain a fully charged portable telecommunication device and spare battery
P2 test telecommunication devices before operational use
P3 preset telecommunications devices to the correct channels, including the tug working channel
P4 maintain a listening watch on the correct channels
P5 provide clear and concise instructions and information:
   P5.1 using correct procedures in standard marine vocabulary
   P5.2 avoiding jargon, colloquialisms, ‘chat’ and unnecessary transmissions
P6 acknowledge incoming information using repeats where necessary to reduce misunderstandings or misinterpretations
P7 keep telecommunications to a necessary minimum
P8 identify limitations to telecommunications, including the location of blind areas
P9 communicate positions accurately
P10 use charted names rather than local names where available
P11 make required position or status reports while in transit through the port
P12 obtain clearance to proceed from Vessel Traffic Services or Local Port Services before commencing the pilotage
Communicate by other means

You must be able to:

P13 use written communication when a record is required
P14 produce detailed technical reports such as incident reports and near miss reports
P15 acknowledge communications sent by fax and other electronic means
P16 determine when it is appropriate and safe to use a mobile phone as a means of communication
P17 maintain a list of important telephone numbers and contacts including an emergency contact list
P18 use sound signals as appropriate
PSS MP105
Liaise and communicate within the port

Work effectively with other port functions

You must be able to:

P19  ascertain the roles of all relevant persons involved in the specific pilotage operation
P20  establish communications with the port team as soon as practicable after arrival on board
P21  agree requirements and intentions clearly and in sufficient detail that relevant persons involved with the operation understand their duties
P22  recognise the roles that others have in ensuring that a vessel is able to navigate and manoeuvre safely and efficiently in the port and its approaches
P23  recognise that other team members may be involved in operations with other port users
P24  adhere to port traffic movement plans and priorities
P25  resolve failures in communications between team members in line with agreed procedures
PSS MP105
Liaise and communicate within the port

Knowledge and understanding

You need to know and understand:

K1 bridge procedures
K2 marine resource management for pilots
K3 means of communication and standard marine vocabulary
K4 the operating principles and limitations of navigational equipment
K5 the range and type of operations undertaken in the port
K6 theory, operational principles and limitations of:
   K6.1 cargo types and principles of cargo safety
   K6.2 day and night signals
   K6.3 emergency signals
   K6.4 fog and restricted visibility signals
   K6.5 Global Maritime Distress Safety Systems (GMDSS)
   K6.6 International Regulations for the Prevention of Collision at Sea
   K6.7 nautical terminology
   K6.8 vessel traffic services (Vessel Traffic Services and Local Port Services) systems and reporting points
K7 local, port or area specific:
   K7.1 anchorage names and locations
   K7.2 Bye-laws, Directions and Notices to Mariners
   K7.3 characteristics of berths and locks
   K7.4 dredging and survey operations including frequency of operations and craft involved
   K7.5 duties and responsibilities of others
   K7.6 emergency and counter pollution plans
   K7.7 lines of responsibility
   K7.8 mooring and berthing arrangements
   K7.9 overtaking and passing procedures
   K7.10 pilotage operations on other port users
   K7.11 port facilities, such as water, craneage and methods of discharge
   K7.12 range and type of operations undertaken in the port
   K7.13 tug names, types, characteristics, limitations and procedures
   K7.14 weather conditions and forecasting, including wind and its effect in different locations
K8 the potential impact of:
   K8.1 pilotage operations on other port users
   K8.2 other port users on pilotage operations
PSS MP105
Liaise and communicate within the port

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Relevant occupations Marine Pilots

Suite Marine Pilots

Key words Marine pilots; liaison; pilot; port; tugs; vessel traffic services; mooring party; Harbour Master; operatives; communication
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.
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
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 buoyage
  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
PSS MP106
Transit the pilotage district

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
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Overview

This standard covers the competence required for manoeuvring vessels in harbours and their approaches.

Whilst a vessel is manoeuvring, external factors may move the vessel in a direction other than that which is intended. The early detection of this movement, and the actions required to compensate for it, are essential and fundamental. The ability to manoeuvre a vessel successfully depends largely on the pilot’s spatial awareness. This is improved over time through practical experience and repetition.

There are 4 elements in this standard:

- Handle different types and sizes of vessels
- Manoeuvre in different locations and conditions
- Work with tugs
- Arrive at and depart from berths, buoys, moorings, locks and anchorages

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.
Performance criteria  | Handle different types and sizes of vessel

You must be able to:

P1  take into account the factors necessary to keep vessel movement under control at all times and within appropriate safety margins

P2  ascertain the manoeuvring characteristics of the vessel promptly, including:
   P2.1 speed at different engine settings and effect on rate of turn
   P2.2 characteristics of controllable pitch propulsion
   P2.3 stopping distances
   P2.4 turning circles, centres of pressure and pivot points
   P2.5 transverse thrust characteristics of propellers
   P2.6 effect of heel and list on draught
   P2.7 trim
   P2.8 steering qualities, including minimum steerable way
   P2.9 rudder types and usage

P3  take into consideration other external factors, which may affect the manoeuvring characteristics of the vessel, including:
   P3.1 wind, leeway and drift
   P3.2 bank effect and shallow water effect
   P3.3 interaction and squat
   P3.4 tidal forces and currents
   P3.5 differing water densities
   P3.6 under keel clearance

P4  take into account different manoeuvring control systems and their effects on vessel handling, including:
   P4.1 single or multiple propellers
   P4.2 propeller bias (right- or left-handed)
   P4.3 fixed and controllable pitch propellers
   P4.4 type of propulsion fitted
   P4.5 rudders, including active rudders
   P4.6 thrusters, including types and effect on efficiency
   P4.7 engine power and responsiveness
   P4.8 percentage of full power available with engines operating astern
   P4.9 number of consecutive air starts available, where applicable
   P4.10 propeller nozzles, fixed and steering

P5  take into account the different handling and manoeuvring characteristics of different classes of vessel, including:
   P5.1 an awareness of vessel momentum with respect to time allowed for speed reduction in varying environmental conditions
Manoeuvre in different locations and conditions

You must be able to:

P6  take into account the following when manoeuvring vessels:
P6.1  different requirements for manoeuvring vessels in particular tidal, non tidal, canal and river conditions
P6.2  effect of currents and tidal streams causing set and drift on vessel manoeuvring, especially in restricted waters
P6.3  effects of shallow water on manoeuvring capabilities of vessels, especially when turning
P6.4  additional problems associated with vessel size
P6.5  effects of squat and interaction
P6.6  blockage factors when using locks and dry docks, especially when minimal clearances and tidal constraints apply
P6.7  effect of windage, especially at low speeds
P6.8  effects of flare, overhangs or obstructions upon clearance through locks and dock passages and when berthing/unberthing

P7  detect set and drift by all available means, at all stages of the passage

P8  closely monitor the wash of a vessel, especially in areas with small under keel clearances.

P9  recognise when tug assistance is required

P10  make use of anchors, especially for low speed control, swinging and emergency stopping

P11  employ the use of ropes and moorings to assist in swinging or other manoeuvres

P12  comply with tidal and weather parameters for arriving and departing at specific berths

P13  take into account factors affecting safe manoeuvring in narrow channels, including:
P13.1  pressure zones
P13.2  bank configuration
P13.3  bends in rivers
P13.4  passing or overtaking in channels
P13.5  slow speed control
P13.6  turning circles
P13.7  thrusters - whether moving the vessel ahead or astern
P13.8  manoeuvring close to other vessels or structures

P14  undertake manoeuvres at a safe speed with due consideration to the effects of the manoeuvre on others
Work with tugs

You must be able to:

P15 maintain up to date knowledge of port specific tug(s), their operating potential and limitations
P16 agree tug disposition and towing procedures with the tug Master
P17 agree communications with tugs, including emergency and sound signals, before operations commence
P18 use standard orders when communicating with tugs
P19 take account of the advantages, disadvantages, capabilities, limitations and manoeuvring characteristics of different types of tugs including:
   P19.1 interaction
   P19.2 making fast and letting go procedures
   P19.3 girting
   P19.4 bollard pull
   P19.5 dynamic towing forces
   P19.6 types of towing gear
   P19.7 use of tug’s weight
   P19.8 push/pull towage
   P19.9 use in adverse weather conditions
   P19.10 speed limitations
   P19.11 messenger lines of adequate strength and length
   P19.12 direct and indirect towing methods
   P19.13 safety of tugs whilst towing
   P19.14 disengagement (emergency) procedure
   P19.15 escort towage
P20 assess the risks and difficulties of using tugs when they cannot be seen from the bridge
P21 ascertain the suitability of the vessel’s fairleads and bitts including safe working loads
P22 take into account the following when making the tow connection:
   P22.1 vessel course and speed
   P22.2 capabilities of the tug involved
   P22.3 sea and wind conditions
   P22.4 visibility
   P22.5 intended manoeuvre
P23 advise tugs promptly when making significant changes in engine movements or heading
P24 give manoeuvring orders to tugs clearly and unambiguously
P25 check that manoeuvring orders to tugs have been received and carried out
P26 ensure that ship’s crew handle tug lines correctly and safely
P27 take into account limitations of towing in restricted and forecast restricted visibility
PSS MP107
Manoeuvre vessels in harbours and their approaches

P28  take into account tug Master's own responsibilities and knowledge
PSS MP107
Manoeuvre vessels in harbours and their approaches

**Arrive at and depart from berths, buoys, moorings, locks and anchorages**

**You must be able to:**

P29 confirm the presence of persons and equipment necessary for safe operations, including:

P29.1 tugs
P29.2 Berthing Master
P29.3 mooring boat
P29.4 boatmen/linehandlers

P30 establish means of communication between all parties before operations commence

P31 confirm the intentions of all parties before operations commence

P32 take into account:

P32.1 arrangements and limitations for berths, buoys, moorings and anchorages
P32.2 effects of tides, currents and wind on the manoeuvre

P33 confirm that engines, bow thrusters and steering gear have been fully tested and that safety checks have been completed before commencing a manoeuvre

P34 agree anchoring procedures in advance

P35 confirm that anchors are cleared

P36 confirm that the intended anchorage is suitable

P37 confirm that tugs or mooring boats are clear before letting go anchors

P38 check the following before using thrusters and engines:

P38.1 all line handling craft, mooring lines and tugs are clear of potential contact points
P38.2 there are no obstructions to prevent safe operations

P39 make allowance for mooring boat safety clearance times, especially if the wind is onto a berth or jetty

P40 inform the Berthing Master and boatmen/linehandlers in advance:

P40.1 any unusual requirements
P40.2 any known facts relating to the vessel’s ropes or wires which may affect line handling

P41 confirm that the crew are on standby in good time

P42 use springs, lines, fenders and other associated equipment appropriately

P43 agree the mooring plan with the Master prior to arrival

P44 communicate the mooring plan to boatmen/linehandlers and crew, including the required order and method of running lines

P45 ascertain the location of mooring bollards and/or hooks before use

P46 agree the procedure for singling up with the Master prior to departure

P47 communicate the procedure for singling up to the boatmen/linehandlers
PSS MP107
Manoeuvre vessels in harbours and their approaches

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 anchors, anchoring and use while manoeuvring
  K3.2 blind pilotage techniques and theory
  K3.3 chartwork, corrections and Electronic Chart Display and Information Systems (ECDIS)
  K3.4 effects of weather and tide on vessels
  K3.5 gyro and magnetic compasses
  K3.6 hydrodynamics
  K3.7 hydrography
  K3.8 magnetic variation
  K3.9 means of communication
  K3.10 meteorology
  K3.11 mooring criteria
  K3.12 nautical terminology
  K3.13 propulsion plant, engineering and safety systems
  K3.14 ship handling and manoeuvring
  K3.15 ship stability
  K3.16 ship strength and construction
  K3.17 standard marine vocabulary
  K3.18 steering, rudder types and manoeuvring systems
  K3.19 tides
  K3.20 tugs and towage

K4 local, port or area specific
  K4.1 anchorage names, locations, depths 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, locations of shoals, wrecks, other obstructions and dangers and
  K4.9 dredging and surveying operations including the frequency of operations and craft involved
  K4.10 dry-docking criteria and procedures
  K4.11 fog and visibility signals
  K4.12 lights and navigational marks
K4.13 mooring and berthing arrangements
K4.14 other hydrographic data
K4.15 overtaking and passing procedures
K4.16 sources of meteorological and tidal information
K4.17 tidal streams and currents
K4.18 tug names, types, characteristics and operating procedures
K4.19 vessel traffic services (Vessel Traffic Services and Local Port Services) arrangements and reporting points
K4.20 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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Overview

This standard covers the competence required to react and respond to problems and emergency situations.

A pilot must possess the ability to respond accurately and quickly to any problem, especially if it is a potential or actual emergency situation. This will require an ability to stay calm and make effective rapid decisions and convey them effectively to members of the Bridge Team and to the port.

This standard does not attempt to list the many different problems or emergencies that could arise; some indeed may be very minor. Instead it addresses the importance of safety of life, vessel(s) and the environment. However, it should always be borne in mind that a minor malfunction has the potential of developing into a major one.

There are 2 elements in this standard:

- Manage ship-board malfunctions and problems
- Deal with emergencies

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.
Performance criteria  Manage ship-board malfunctions and problems

You must be able to:

P1 prioritise the safety of life and minimise the risk to the vessel, other vessels in the vicinity, the environment and the local infrastructure in the event of an on-board malfunction

P2 review and revise the Port Passage Plan or abort the operation in the event of a problem

P3 make vessel traffic services (VTS/LPS) aware of malfunctions or problems promptly

P4 develop a planned response for any major malfunction or problem that may occur during the passage, including:
  P4.1 availability of temporary anchorages
  P4.2 suitable abort points
  P4.3 use of suitable grounding areas
  P4.4 leaving the buoyed channel at suitable locations
  P4.5 summoning outside assistance
  P4.6 use of emergency or escort towage
  P4.7 communications and visual signals

P5 consult vessel traffic services (VTS/LPS) to ensure that any intended actions in the planned response are acceptable

P6 use information from previous incidents to inform the planned response

P7 enact the port safety plan and the vessel safety plan

P8 simulate emergency situations safely, to test the effectiveness of contingency plans

P9 analyse activities being undertaken and identify potential problems
PSS MP108
Respond to problems and emergency situations

Deal with emergencies

You must be able to:

P10 use all available means for fixing the vessel's position
P11 act in accordance with port procedures and the vessel emergency plan
P12 report pollution promptly to the Harbour Master
P13 implement man overboard and search and rescue procedures
P14 advise vessel traffic services (VTS/LPS) or other appropriate authority promptly in the event of an on board vessel emergency, providing as much relevant information as practicable
P15 summon tug assistance at an early stage, after consultation with the Master
P16 check the availability of safe anchorages and consider areas not normally used
P17 effect safe beaching, grounding and anchoring
P18 deploy escort tugs under a variety of conditions
P19 comply with the Port Marine Emergency Plan
P20 consider the effect of an external emergency on the piloted vessel
P21 evaluate the capability of the piloted vessel to provide emergency assistance before offering assistance
P22 provide clear, concise, factual and accurate written reports promptly after an incident
P23 evaluate responses to emergency situations following incidents and provide feedback to other stakeholders
P24 analyse and report potential incidents
**PSS MP108**

**Respond to problems and emergency situations**

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**Knowledge and understanding**

You need to know and understand:

- **K1** loadline regulations and watertight integrity
- **K2** cargo types and precautions
- **K3** port marine legislation and guidance
- **K4** port responsibilities and liabilities
- **K5** individual responsibilities and liabilities
- **K6** the potential impact of pollution on the environment
- **K7** theory, operational principles and limitations of:
  - **K7.1** distress, emergency signals and Global Maritime Distress Safety Systems (GMDSS)
  - **K7.2** nautical terminology
  - **K7.3** priorities and role of the Master and pilot
  - **K7.4** sea survival
  - **K7.5** search and rescue
  - **K7.6** ship stability
  - **K7.7** ship strength and construction
  - **K7.8** steering, rudder types and manoeuvring systems
  - **K7.9** tugs and towage
- **K8** local, port or area specific
  - **K8.1** anchorage names, locations, depths of water and limitations
  - **K8.2** Bye-laws, Directions and local Notices to Mariners
  - **K8.3** channels, fairways and bouyage
  - **K8.4** characteristics of berths and locks
  - **K8.5** depths of water, locations of shoals, wrecks, other obstructions and dangers
  - **K8.6** emergency and counter pollution plans
  - **K8.7** lines of responsibility
  - **K8.8** other hydrographic data
- **K9** the effects of stress and fatigue on capability
- **K10** the potential impact of:
  - **K10.1** pilotage operations on other port users
  - **K10.2** other port users on pilotage operations
PSS MP108
Respond to problems and emergency situations

<table>
<thead>
<tr>
<th>Developed by</th>
<th>Port Skills and Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version number</td>
<td>2</td>
</tr>
<tr>
<td>Date approved</td>
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<td>Indicative review date</td>
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<tr>
<td>Validity</td>
<td>Current</td>
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<tr>
<td>Status</td>
<td>Original</td>
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<tr>
<td>Originating organisation</td>
<td>Skills for Justice</td>
</tr>
<tr>
<td>Original URN</td>
<td>MPNOS108</td>
</tr>
<tr>
<td>Relevant occupations</td>
<td>Marine Pilots</td>
</tr>
<tr>
<td>Suite</td>
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</tr>
<tr>
<td>Key words</td>
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</tr>
</tbody>
</table>
Overview

This standard covers the competence required to manage personal and professional conduct and development.

This standard considers the importance of maintaining professionalism and of updating skills in order to continually improve performance.

There are 2 elements:
- Maintain professional standards
- Improve personal performance

Target Group

This standard applies to individuals who have a duty to perform acts of pilotage to facilitate the safe and efficient use of the harbour.

Typically this will be the authorised Marine Pilot
PSS MP109
Manage personal and professional conduct and development

Performance criteria | Maintain professional standards

You must be able to:

P1 determine if you are capable of conducting an act of pilotage safely and professionally
P2 notify the appropriate person(s) in the event that you believe that your capacity to conduct a safe and professional act of pilotage may be impaired
P3 conduct dealings with others professionally and constructively
P4 respond professionally to questions from the Master or members of the Bridge Team
P5 ensure personal safety
P6 contribute to the risk assessment process
P7 report incidents in accordance with procedure
P8 analyse activities being undertaken and identify potential problems
P9 contribute effectively to team working
P10 maintain high standard of personal and professional organisation
You must be able to:

- P11 assess personal skills and development needs
- P12 undertake development activities consistent with development needs
- P13 regularly update yourself in respect of new regulations, port infrastructure, equipment and professional knowledge
- P14 maintain an awareness of local, national and international statutory and advisory publications
- P15 examine port hydrographic information routinely
- P16 keep personal copies of published nautical charts up to date
- P17 become acquainted with the characteristics of new harbour vessels or tugs commencing operations within the port
- P18 manage your time effectively
- P19 obtain feedback on personal performance to enhance future performance
Knowledge and understanding

You need to know and understand:

K1 port/organisation Safety Management Systems; Health and Safety arrangements, policies and procedures
K2 your role, responsibility and objectives in contributing to the achievement of organisational objectives and targets
K3 why maintaining and developing your knowledge, skills and competence is important:
  K3.1 for you in your role
  K3.2 to you as an individual
  K3.3 in your organisation
K4 the value of having learning and development interests
K5 your own learning and development needs and how these will change over time
K6 the purpose of appraisals/supervision and how these contribute to an individual’s development
K7 why it is helpful to get other people’s views on your knowledge, skills and competence
K8 the methods you can use to review how well you do your work
K9 why it is important to think about how your role and the organisation that you work in will change over time
K10 the methods available to you to find out changes to national and international maritime legislation and guidance
K11 where you can go for support in learning needs self-assessment, planning your learning and to help you to learn
K12 why you need to take responsibility for your own learning and development
K13 how you can evaluate your learning, apply it and share it, where appropriate, at work
K14 the reasons for keeping records of learning and development
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