PAF10/8/3

Guidelines to the International Standard for maritime Pilot Organizations

Part B

AMENDMENT PAGE

Revision	Date	Details	Initials Authors	Initials Checked by	Initials Approved by
0	29.01.97	final report of ISPO feasibility study	MMD	CAJ	TEW
0	16.07.98	discussion draft document for ISPO project team	JCvH/ MMD/ HWT/ PdB/ HD	MMD/ TEW	HWT
1	13.10.98	update, fine tune ISPO. Issued for Comment IMPA congress Shanghai, People Republic of China	JCvH/ MMD/ HWT/ PdB/ HD	MMD/ CAJ	HWT
2	11.05.99	update, fine tune ISPO. Issued for Comment ISPO Task force	JCvH/ RWS/ PdB/ HD/ HWT	RWS/ CAJ	HWT
3	05.04.00	update, fine tune ISPO Issued for Comment IMPA congress Honolulu Hawaii	JCvH/ RWS/ ThvdH/ HWT	CAJ/ AdD	HWT
4	01.09.06	Update, fine tune ISPO issued for the first meeting of the international users group (IUG)	HvD	JFH/ AdD/ CH	EvD
5	07.12.10	Approval of the revision by the IUG working group during the meeting of associates.	H. vd Lugt B. Dockx M.J.vd Hoek	G. Devis M. Veenstra	IUG

FOREWORD

These guidelines contain recommended guidance to assist maritime pilot organizations in applying or enforcing their measures to give the ISPO full and complete effect in a uniform manner.

Although the measures suggested are not mandatory and the examples given are only intended to illustrate how certain ISPO requirements may be complied with, they must be taken into account.

Observance of the recommendations contained in these guidelines will assist the maritime pilot organization in achieving its goal and maintaining the highest practicable safety and quality standards with due regard to safety of human life and avoidance of damage to the environment and property.

Assistance is provided in these guidelines with respect to certain articles of the ISPO. The numbering of the chapters and paragraphs of these guidelines therefore correspond to the ISPO Part A. The numbering of the sub-paragraphs is unique about these guidelines. Furthermore, if no additional guidance is available or necessary only the title of the paragraph will be mentioned.

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1 INTRODUCTION

1.1 General

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1.2 Scope

1.2.1 The objectives of the ISPO guidelines may be summarized, in order of priority as follows:
- To provide recommendations for certification so that smaller well run maritime pilot organizations can comply
- To give examples to assist larger maritime pilot organizations to meet the ISPO and to use modern methods for the improvement of efficiency of the maritime pilot organization

1.2.2 Interpretation of each individual element within these guidelines should be done by each individual maritime pilot organization. However, interpretation of each individual element cannot be treated separately to determine conformity with the ISPO. The ISPO must be taken as a whole.

1.2.3 Information related to the compliance with the ISPO should be open for scrutiny during verification. The following specific arrangements may be required to provide the evidence needed for compliance verification:
- Documented systems, procedures and instructions
- Documented evidence of periodical verification of the daily routine operations

1.3 Application

1.3.1 These guidelines apply to all maritime pilot organizations that are directly or indirectly involved in providing pilotage services and the support to these services to ships.

1.3.2 In areas where the competent authority is not the maritime pilot organization, it is the maritime pilot organization's responsibility to ensure that the maritime pilot organization complies with the ISPO.

1.4 Certification

1.4.1 Surveillance audits must be carried out on a periodical basis with a minimum of one surveillance audit per year. In the 5-yearly cycle of the validity of the certificate all sites, branch offices and all activities included in the scope of the certification need to have been visited.

1.4.2 When a classification society performs an ISPO third party audit, three gradations of non-conformity with regard to the ISPO may exist:
- Gradation 1: Major Non-Conformity
  The absence of elements of the ISPO or lack of effective and systematic implementation of a requirement of the ISPO, evidenced by either a single incident or a combination of a number of similar incidents.
- Gradation 2: Non-Conformity
  An isolated incident or an observed situation where objective evidence indicates the non-fulfilment of a specified requirement of the ISPO.
- Gradation 3: Observation
  A statement of fact made during an ISPO audit and substantiated by objective evidence.

1.4.3 Under the following circumstances the ISPO certificate of compliance is withdrawn:

- If a major non-conformity is raised at a periodical verification audit and has not been satisfactorily solved when reviewed at an additional verification audit (and this) within the agreed maximum time limit of three months
- If the contract between the maritime pilot organization and the classification society is cancelled (no take over)

If the certification is withdrawn, the classification society must inform the IUG of the action taken. This must be done in writing to the IUG administrator.

When the certificate is withdrawn, the individual maritime pilot organization can no longer claim to be ISPO-certificated and to be in the possession of an ISPO certificate of compliance. The classification society will request the individual maritime pilot organization to return the ISPO certificate of compliance and the maritime pilot organization will lose the IUG membership.

1.5 ISPO Configuration

1.5.1 In addition to Part A and Part B, the ISPO also includes:

- Part C

Part C is the management and control manual. This document contains the procedures to determine if an individual maritime pilot organization applies for verification and certification of its safety and quality management system and whether it is in accordance with the ISPO and the role of the recognized and authorized classification society.

It provides guidance to the classification societies for auditing and certification and the ISPO International Users Group for the maintenance of the actual standard.

1.5.2 Part C is confidential and should only be used by classification societies and the IUG.

2 DEFINITIONS

The definitions contained in Chapter 2, Part A of the ISPO apply to the standard and its guidelines. In addition, the following supplementary definitions apply to these guidelines only:

- *Pilotage Passage* means the transit of a vessel through a navigational area, during which the master of the ship is assisted with the safe navigation of his ship by a maritime pilot.
- *Competent Authority* means the administration (national, regional or local) that by law or tradition is responsible for the organization of pilotage services.
- *Supporting Maritime Pilot* means an additional maritime pilot on board the vessel under pilotage, whose responsibility is to provide support to the maritime pilot during a pilotage passage.
- *Maritime Pilotage Instructor* means a qualified maritime pilot authorized by the maritime pilot organization to act as a lecturer or instructor.
- *Minimum Entry Level* means the minimum education, certification and experience of the applicant for maritime pilot.
- *Portable Pilot Unit (PPU)* means a compact and portable AIS transponder system combined with electronic chart technology carried on board and used by a maritime pilot, to support the pilotage passage.
- *VTS Authority* means the authority responsible for the management, operation and co-ordination of vessel traffic services, the interaction with participating vessels and the safe and effective provision of the service.
- *Vessel Traffic Services (VTS)* means a service implemented by a competent authority designated to improve the safety and efficiency of vessel traffic and to protect the environment.
- *Pilot Service Suspended* means a situation where the pilot cannot (dis-) embark a vessel at the normal boarding position due to meteorological or extraordinary circumstances. Shore Based pilotage (SBP) is a means to assist the vessel in proceeding to/from an alternative boarding position.
- *Shore Based Pilotage (SBP)* means an act of pilotage carried out in a designated area by a maritime pilot licensed for that area, from a position other than on board the vessel concerned to conduct the safe navigation of that vessel.
- *Hazardous Occurrence* is an unsafe situation.
- *Incident* is an event that gives rise to an accident or had the potential to lead to an accident.
- *Accident* is an undesired event giving rise to death, ill health, injury, damage or other loss.

3 FUNCTIONAL REQUIREMENTS ISPO MANAGEMENT SYSTEM

3.1.1 To comply with the minimum requirements of the ISPO, the maritime pilot organization should have one or more policy statements. Each policy statement should be clear and concise, and describe the aim of the safety and quality management system, outline the objectives in order to achieve the aim and encourage continuous improvement of the safety and quality management system.

3.1.2 These policy statements should reflect the commitment of the maritime pilot organization's management and be open to review at regular intervals to ensure that they remain effective.

3.1.3 Interfaces between the maritime pilot organization's safety and quality management system and any existing port and or fairway policies and procedures should be part of the policy statements of the maritime pilot organization.

4 DOCUMENTATION REQUIREMENTS ISPO MANAGEMENT SYSTEM

4.1 General

4.1.1 Where the term 'documented procedure' appears within the ISPO, this means that the procedure is established, documented, implemented and maintained.

4.1.2 The extent of the safety and quality management system documentation can differ from one pilot organization to another due to:
- The size of organization
- The formal relation to administration and port authority
- The complexity of the processes and their interaction
- Local circumstances

4.1.3 The documentation can be in any form or type of medium, such as:
- On paper
- Websites
- Computer data
- Instructions on CD/ CD-ROM/ DVD
- Etc

4.1.4 The documentation can contain but is not restricted to:
- The organizational structure of the pilot organization
- Statements about the demands and objectives of the safety and quality policy
- Demands in relation to:
  - Recruitment and selection of (new) pilots and personnel
  - Education, training and competence of pilots and personnel
  - Behavior of pilots
- Procedures in relation to:
  - Relevant operational processes (including work instructions, specifications and forms) of the pilot organization
  - Document management
  - Internal audits and improvement
  - Preventive- and corrective actions
  - In- and external communication
- An overview of interaction between relevant processes

4.1.5 The control of all documentation and data relevant to the safety and quality management system is a vital element in the effectiveness of the safety and quality management system and should be organized so that:
- Information and data relevant to all persons concerned with the safety and quality management system is made available
- Information and data can be retrieved
- Data may be revised as a result of a non-conformity

4.1.6 Documents and data should be examined for adequacy and approved prior to publication.

4.1.7 A document control procedure should be established which allows users to identify the revision status of all documentation and data and to preclude the use of superseded and obsolete documentation.

4.2 Safety and Quality Manual Requirements

Maritime pilot organizations should maintain a documented safety and quality manual which addresses each of the matters in the ISPO governing the scope of the pilot organization's operation.

4.3 Control of Documents

4.3.1 Documentation should be designed and procedures established to allow changes and amendments to be made in a controlled manner.

4.3.2 Changes should be readily identifiable and notified to all persons concerned with the safety and quality management system, as applicable.

4.3.3 All persons concerned with the safety and quality management system affected by amendments should, as far as reasonable or practicable, be involved in defining and implementing changes.

4.3.4 The documentation should be organized in a manner that allows all persons concerned with the safety and quality management system to readily refer to its relevant publications.

4.3.5 The maritime pilot organization should appoint a person or persons to be responsible for the control, amendment, approval, and distribution of safety and quality management system documentation.

4.3.6 The methods of distributing documents and the place prescribed or person designated to keep should clearly be defined.

4.3.7 Procedures should describe the notification necessary to confirm that obsolete documents have been removed and destroyed. Only the person responsible for the control of documentation should retain copies of obsolete documents.

4.4 Control of Records

4.4.1 Records should remain legible, readily identifiable and retrievable.

5 MANAGEMENT RESPONSIBILITY

5.1 General

5.1.1 The maritime pilot organization that complies with this standard should define and document the responsibilities and authority of all personnel. The reason for documenting the responsibility and authority of personnel is to ensure that those involved in the management of safety, environmental protection and service quality know what is expected of them to make the system function effectively.

5.1.2 Personnel concerned with the maritime pilot organization's safety and quality management system should be given clearly worded, unambiguous definitions of their responsibilities and authority, to assist in motivating them to understand the vital importance of their performance in the success of the maritime pilot organization's safety and quality management system.

5.1.3 The maritime pilot organization is recommended to establish a procedure for corrective measures, agreed between the maritime pilot organization and its personnel, in order to protect both.

5.1.4 The maritime pilot organization's safety and quality management system should also clearly define and document the designated person's responsibility with regard to:
- Verifying the safety, environmental protection and quality policy statements of the maritime pilot organization
- Verifying that specified requirements are observed
- Reviewing the safety and quality management system and reporting its deficiencies to the management of the maritime pilot organization

5.1.5 The maritime pilot organization should have a comprehensive knowledge of the legal and regulatory requirements that apply to its activities and services. Such requirements are mandatory and legal and ethical operation is only possible by compliance with these requirements.

5.2 Role of the maritime pilot

5.2.1 The maritime pilot's performance should at all times respect the policy statement of the maritime pilot organization, the integrity of safety and quality management system and the necessity of feedback to achieve improvement. As an example, reference is made to the 'Code of Best Practice for European Maritime Pilots' of EMPA.

5.3 Designated Person

5.3.1 For the maritime pilot organization's safety and quality management system to be adequately maintained, the following should be taken into account by the designated person:
- Effectiveness and degree of implementation to be verified
- The deficiencies that must be reported to the responsible level of management
- Methods used for correcting the deficiencies identified

5.3.2 The task of implementing and maintaining the maritime pilot organization's safety and quality management system is a management responsibility. The verification and monitoring activities should be carried out by a person who is independent of the responsibility for implementation.

5.3.3 The designated person's assessments must be properly considered by the management but any action recommended by the designated person cannot be dismissed or delayed without justification.

6 RECRUITMENT, TRAINING & QUALIFICATION

6.1 General

6.1.1 The maritime pilot organization shall establish procedures to ensure that new personnel and personnel transferred to new assignments related to the maritime pilot organization's safety and quality management system are given proper familiarization with their duties. Instructions that are essential, prior to commencing their duties should be identified, documented and given in good time.

6.1.2 The results of audits and analyses of non-conformities, incidents, accidents and hazardous occurrences should be considered to enhance training of personnel.

6.1.3 The maritime pilot organization should consider ways of reviewing individual training needs and of checking the validity of recorded qualifications in accordance with international, national, local and any special maritime pilot organization's requirements.

6.1.4 The maritime pilot organization should consider the establishment of procedures for the conduct of refresher courses for personnel engaged in critical safety and emergency operations.

6.1.5 The recruiting procedure for maritime pilots should define the minimum requirements for applicants in accordance with the maritime pilot organization's safety and quality management system, and the relevant local and national requirements where applicable. This recruiting procedure should take into consideration – but should not be restricted to – the following:

- Certification
- Medical fitness
- Capacity to command
- Minimum level of education for entry
- Assessment of experience and seniority
- Assessment of shiphandling ability

6.2 Medical Fitness of Maritime Pilots

6.2.1 The medical standards developed by the maritime pilot organization should take into account the views of recognized medical practitioners experienced in medicine as applied in the maritime environment.

6.2.2 The medical standards used may differentiate between maritime pilot applicants and maritime pilots already providing pilotage services.

6.2.3 The medical standards should, so far as possible, define objective criteria with regard to fitness for service.

6.2.4 The medical standards should also identify particular medical conditions of concern, such as colour blindness.

6.2.5 Examinations of maritime pilots under the Medical Standards should be conducted by a medical practitioner recognized by the maritime pilot organization.

6.2.6 Persons requiring the use of spectacles or contact lenses to perform duties should carry a spare pair of spectacles.

6.2.7 The maritime pilot organization is free to require higher and additional standards than those given in the next table.

Distance vision			Near/immediate vision	Colour vision	Visual fields	Night blindness	Diploma (double vision)
	One eye	Other eye	Both eyes together Aided or unaided				
Aided	0,5	0,5	Vision required for ships' navigation (e.g. chart and nautical publication reference, use of bridge instrumentation and equipment, and identification of aids to navigation)		Normal visual fields	Vision required to perform all necessary functions in darkness without compromise	No significant condition evident
Unaided	0,1	0,1					

6.3 Training, Qualification and Certification of Maritime Pilots - General

6.3.1 The maritime pilot organization should establish minimum training requirements and qualifications for maritime pilots prior for undertaking the work as a maritime pilot.

6.3.2 The maritime pilot organization should establish a training scheme to enable any maritime pilot who does not comply with the established standard of competence, to reach the necessary standard.

6.3.3 The maritime pilot organization should keep written record for all maritime pilots under its management, stating the name, place of birth, certificate or license number, date of birth and date of issue of certificate/ license or registration in a common register.

6.3.4 The maritime pilot organization should establish the maximum period of time per designated area in which a maritime pilot is permitted to be absent from providing pilotage services. This absence may be due to:

- Training courses
- Service elsewhere
- Investigation
- Medical/ physical condition

6.3.5 If a maritime pilot exceeds the maximum period of absence, the maritime pilot organization should provide him with an assessment and a refreshment programme as deemed necessary.

6.3.6 In order to ensure the continued proficiency of maritime pilots, the maritime pilot organization should satisfy itself at regular intervals not exceeding five years, that all maritime pilots under its management continue to maintain their level of competence.

6.3.7 The pilot organization should establish and maintain programmes for maritime pilots, in compliance with relevant rules and regulations that support the updating of the knowledge and skills. The programme should include but not be restricted to:

- Theoretical knowledge: which may include approved laboratory equipment training, classroom training and/or computer based training
- Practical skills: which may include approved in-service training and/or simulator training
- New developments affecting pilotage services
- Lessons learned from reported non-conformities, accidents and hazardous occurrences
- Safety equipment and personal survival techniques

6.3.8 For developing continued proficiency programmes the maritime pilot organization is encouraged to consider new developments which may include:
- Aids to navigation
- Navigational equipment/Bridge automation concepts
- Vessel handling
- Port specific operational requirements
- Human factor issues
- Communication equipment and skills
- New best practice in the maritime industry

6.3.9 The maritime pilot training programme should be based on practical on-board instruction and training provided on full-scale ships under the guidance of a maritime pilotage instructor.

6.3.10 Aids to maritime pilot training programmes include but are not restricted to: training vessels, approved laboratory equipment training, class room training, computer based training, simulator training and manned models.

6.3.11 The maritime pilot training programme should include but not be restricted to the following:
- Personal survival techniques
- Personal safety:
  - Embarking and disembarking equipment
  - Man overboard
  - Rescue equipment
  - Emergency actions during transfers via pilot boat or helicopter
  - First aid
- Social responsibility:
  - Interpersonal skills
  - Communication
  - Effects of fatigue on performance
  - Physiological surrounding of human performance and lifestyle associated with shift work
  - Bridge Resource Management (BRM)

6.3.12 The maritime pilot training programme should take into consideration relevant IMO model courses. Examples of these courses are:
- Radar Navigation (Operational Level)
- Radar Navigation (Management Level)
- Elementary First Aid
- Medical First Aid
- Proficiency in Personal Survival Techniques
- Proficiency in Personal Safety and Social Responsibility

6.3.13 These courses may be used to enhance, update or supplement existing training materials in order to improve the quality and effectiveness of the maritime pilot training programme.

6.3.14 The maritime pilot training programme should include instruction on “maritime pilot specific positioning systems” used during the provision of pilotage services, for example Portable Pilot Unit (PPU).This training should include all relevant safety aspects such as:
- Theoretical aspects of all major characteristics of data
- Practical capabilities and skills
- System operational principals
- System limitations
- Errors in displayed data, errors of interpretation and risk of over-reliance
- Real-time navigational environment, detection and misrepresentation of data
- System failures and effects
- Methods of correction for obtaining accurate position fix
- System accuracy (passive and active equivalent range errors and RMS)

6.3.15 The maritime pilot training programme should be designed with due regard to the Maritime Pilot Experience Table and the Maritime Pilot Competence Chart.

Below an example of a Pilot Experience Table. It may be used by a specific pilot organization, for a specific port, area, or country. The extent of the table is defined by the pilot organization.

	Ship dimensions	L	XL	XXL
Designated area	Area I	P	P + A	P + B
	Area II	P	P + C	P + D
	Area III	P	P + E	P + F

Table 6.1

"P" in the Maritime Pilot Experience Table refers to the minimum level of competence defined by the pilot organization for an on-board maritime pilotage.

A, B, C, D, E and F in the Maritime Pilot Experience Table refer to the experience and seniority considered necessary to carry out maritime pilotage on a specific ship in a designated area. The level of (additional) experience and seniority starts at A and progresses towards F.

Horizontally in this example, three different ship dimensions are represented, according to the successive complexity of ship handling. The indications L, XL and XXL can represent either the length over all or (L×B×T) or volume or draft etc., according to local good practice, tradition and/or custom.

Vertically, in this example, three designated areas are represented, of which each area requires specific skills and competence. The specific skills and competence required for each area could be based on the extent of experience of maritime pilotage in this area considered necessary, to be able to deal with the specific geographical particulars of that area.

6.3.16 The maritime pilot training programme should be delivered by a maritime pilotage instructor. For this purpose the use of didactical techniques is recommended.

6.3.17 The maritime pilot organization should establish and maintain a training programme for shore based maritime pilots.

6.3.18 The standard of competence for shore based maritime pilots should include:
- Compliance with the maritime pilot competence table
- Holding a valid appropriate maritime pilot certificate
- Compliance with the IALA VTS Operator Competence Chart as required by the maritime pilot organization

6.3.19 On the next pages an example is shown of a possible Maritime Pilot Competence Chart.

Possible Maritime Pilot Competence Chart

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Behaviour Demonstrate identified personal attributes specifically related to the duties of the Maritime Pilot	*Time management* Demonstrate skills required to perform and prioritise multiple and varying tasks during Pilotage Passage *Reliability* • Demonstrate punctuality • Demonstrate thoroughness • Demonstrate decisiveness *Stress Management* Demonstrate the ability to anticipate in order to avoid unexpected circumstances. Demonstrate initiative, decision-making skills and critical thinking skills in dealing with unexpected circumstances and emergency situations.	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training • Approved human resource management training	The conduct of the Maritime Pilot is in compliance with acceptable principles and procedures established by the Pilot Organization concerned.
Language Use the Standard Marine Navigational Vocabulary as replaced by the IMO Standard Marine Communication Phrases and use English and any other language authorised by the government in written and oral form	Adequate knowledge of the English language and the language authorised by the Government to enable the Maritime Pilot to use charts, publications and regulations; to understand meteorological, waterway, port management and safety information and to communicate with the vessel's bridge team, shore facilities and agencies. Including the ability to use and understand the Standard Marine Navigational Vocabulary as replaced by the IMO Standard Marine Communication Phrases.	Examination and assessment of evidence obtained from practical instruction. Standard language assessment as used by the Government.	English language publications, regulations and messages relevant to the Maritime Pilotage Passage are correctly interpreted or drafted. Communications by any means are clear and understood: • Written reports • Oral communications • Reading skills

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Communication Communication skills	*General Communication skills* *Knowledge of:* • Aspects of interpersonal communication • Problems that can block or hinder the communication process • The difference between verbal and non-verbal aspects of communication • (Multi-)cultural aspects that can hinder the acquisition of a common understanding of messages communicated	Examination and assessment of evidence obtained from one or more of the following: • Approved simulator training, where appropriate • Approved laboratory equipment training such as human resource management training	Demonstrate the ability to avoid the introduction of communication problems and to overcome such problems when they are experienced.
Nautical knowledge Application of Nautical Knowledge	*Collision Regulations* A thorough knowledge of the content, application and intent of the (COLREGS), and any other local or national rules relevant to the pilotage area. *Aids to Navigation* Knowledge of various buoyage systems and electronic aids to navigation systems in the area. *Shipboard Knowledge* Thorough knowledge of: • Ship terminology • Different types of ships and cargo • Ship stability • Propulsion systems • External force. *Port Operations* Knowledge of and ability to co-ordinate information relating to: • Harbour operations (including contingency plans) • Security • Tugs and towing • Other allied services	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training	Demonstrate the ability to interpret the application of the COLREGS. Demonstrate the ability to interpret the effect of aids to navigation on the traffic flow in the area. Demonstrate the ability to assimilate all available information relevant to ship design, meteorological and hydrographic conditions that may influence the Maritime Pilotage Passage. Demonstrate the ability to assimilate all available information relevant to port operations and allied services that may influence the Maritime Pilotage Passage.

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Position fixing Determine position and the accuracy of resultant position fixing by any means.	*Position determination in all conditions:* • By celestial observation • By terrestrial observations, including the ability to use appropriate charts, notices to mariners and other publications to assess the accuracy of the resulting position fix • Using modern electronic navigational aids, with general knowledge of their operating principles, failures, effects, limitations, sources of error, detection of misrepresentation of information and methods of correction to obtain accurate position fixing	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training Using the applicable aids to navigation, where available.	The primary method chosen for fixing the ship's position or checking the movement of the vessel is the most appropriate to the prevailing circumstances and conditions. The fix obtained by celestial and/or terrestrial observations is within accepted accuracy levels. The accuracy of the resulting fix is properly assessed. The fix obtained by the use of electronic navigational aids is within the accuracy standards of the systems in use. The possible errors affecting the accuracy of the resulting position are stated.
Errors Determine and allow for compass errors	Knowledge of the principles of magnetic and gyrocompasses. Ability to determine and allow for errors of the magnetic and gyrocompasses especially with respect to local deviations and acceleration errors.	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training Using celestial observations, terrestrial bearings for checking the compasses.	The method of checks of compasses errors.

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Aids to Navigation Maintain safe navigation through the use of modern navigation systems to assist command decision-making	General knowledge of system errors, failures and effects, and the operational aspects of modern navigational systems Evaluation of navigational information derived from all sources, in order to make and implement command decisions for collision avoidance and for directing the safe navigation of the ship during passage. The inter-relationship and optimum use of all navigational data available for conducting navigation.	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training	Information obtained from modern navigation systems is correctly interpreted and analysed, taking into account the limitations of the equipment and the prevailing circumstances and conditions. Actions taken to avoid a close encounter or collision with another object are in accordance with the COLREGS and any national or local regulation.
Operation of other equipment relevant to the Maritime Pilotage Passage as required by local regulations	Thorough knowledge of the operating principles, failures, effects and limitations, sources of error, detection of misrepresentation of information and methods of correction to obtain accurate position fixing.	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training	Information obtained from navigational equipment is correctly interpreted and analysed, taking into account the limitations of the equipment and the prevailing circumstances and conditions.
Hydro / Meteo Forecast weather and hydrographic conditions	Ability to understand and interpret a synoptic chart and to forecast area weather, taking into account information received by weather fax and local weather forecast. Knowledge of the characteristics of various weather systems in the area. Knowledge of current systems. Ability to calculate local tidal conditions. Use of appropriate navigational publications on tides and currents. Ability for ice recognition where applicable	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved laboratory equipment training	The likely weather conditions predicted for a determined period are based on all available information. Actions taken to maintain safety of navigation during the Maritime Pilotage Passage minimise any risk to safety of the ship, human life, property and the environment. Reasons for intended action are supported by observations of the actual weather conditions.

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Passage planning Establish passage arrangements and procedures	Thorough knowledge of content, application and intent of the International Regulations for Preventing Collisions at Sea (COLREGS) and any other local or national rules relevant to the area. Thorough knowledge of the content, application and principles to be observed of the Pilotage Operations. Effective Bridge teamwork procedures.	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where Appropriate	Passage arrangements and procedures are established and maintained in compliance with international, national and local regulations and guidelines so as to ensure the safety of navigation and human life, and avoidance of damage to the environment and property.
Pilotage Passage planning and conducting navigation.	Pilotage Passage planning and conduct of navigation for all conditions by acceptable methods of plotting tracks, taking into account e.g.: • Restricted waters • Meteorological and hydrographic conditions • Traffic separation schemes and traffic patterns • Anticipating ice conditions in polar waters Thorough knowledge of local procedures, regulations and safety requirements. Reporting in accordance with local reporting requirements.	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training Using chart catalogues, charts, nautical publications and ship particulars	The equipment, charts and nautical publications required for the voyage are appropriate to the safe conduct of the voyage. The reasons for the planned route are supported by facts and statistical data obtained from relevant sources and publications. Positions, courses, distances and time calculations are correct within accepted accuracy standards for navigational equipment. All potential navigational hazards and risks are accurately identified.
Navigation systems Operation of Equipment	*Basic Equipment:* • Telecommunications (GMDSS a.o.) • Navigation (ARPA, ECDIS a.o.) • Vessel handling ((automatic) steering systems a.o.) • Maritime Pilot specific positioning systems • Other equipment relevant to the Maritime Pilotage Passage as required by local regulations.	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training	Demonstrate the ability to correctly interpret and analyse information obtained from the navigational aids, taking into account the limitations of the equipment and the prevailing circumstances and conditions.

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Communication systems VHF technology	Transmitting and receiving information using VHF equipment • Radio operator practices and procedures • VHF systems and their use (incl. AIS) • Operation of VHF equipment • Communication procedures, including Search and Rescue (SAR)	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training	(Automatic) transmission and reception of communications comply with international and local regulations and procedures are carried out efficiently and effectively.
Assist in Search And Rescue Operations	Knowledge of local Search and Rescue (SAR) procedures in Pilotage Passage areas.	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training	The assist in Search and Rescue Operations is in accordance with international, national and local guidelines and standards. Radio communications are established and correct communication procedures are followed during the assist in Search and Rescue Operations.
Control systems Basic knowledge of propulsion and control systems	Operating principles of marine propulsion systems Ship's auxiliary machinery General knowledge of marine engineering terms	Examination and assessment of evidence obtained from one or more of the following: • Approved laboratory equipment training • Practical instruction	Ability to recognise that propulsion and control systems are being operated in accordance with technical safe practice.

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Manoeuvring Manoeuvre and handle a ship in all conditions and circumstances Manoeuvre and handle a ship in all conditions and circumstances	Thorough theoretical and practical knowledge in manoeuvring and handling a ship in all conditions and circumstances, including: • Ability to assess the manoeuvring and propulsion characteristics of all types of ships, where applicable, with special reference to manoeuvring trial data, loading conditions and speeds; directional stability, pivot point, rudder and propeller type • Manoeuvres when approaching Maritime Pilot stations and embarking or disembarking Maritime Pilots, with due regard to vessel traffic, weather, tide and manoeuvring characteristic • Handling all types of ships, where applicable, in rivers, estuaries, harbours and restricted waters, with regard to the effects of current, wind and shallow water on helm response, drift angle and path width. Manoeuvring in restricted and shallow waters with regard to the reduction of under keel clearance due to squat, rolling, pitching, heave and sway • Manoeuvring in polar waters or sub zero conditions including escorted operations • Interaction between passing ships (canal effect) and between own ship and nearby banks and obstructions (banking) • Berthing, unberthing and dry-docking under various conditions with and without tugs	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training • Manned models	All decisions concerning berthing and anchoring are based on a proper assessment of the ship's manoeuvring and engine characteristics and the ship's manoeuvring and engine response and the forces to be expected while berthed alongside or lying at anchor. While under way, a full assessment is made of possible effects of shallow and restricted waters, ice, banks, tidal conditions, passing ships and own ship's wave system.

	• Ship and tug interaction, tug arrangements and requirements • Manoeuvring of ships with special requirements, such as: special units, unit under tow, hampered vessel or vessel constrained by her dimensions • Choice of anchorage; anchoring with one or two anchors in limited anchorages and factors involved in determining the length of anchor cable to be used • The relation between the ship's speed and ship's wave system, especially in restricted and/or shallow waters • Manoeuvring of ships during periods of restricted visibility • Manoeuvring in emergency circumstances		
Berthing and Unberthing	Thorough theoretical and practical knowledge in manoeuvring and handling a ship while berthing and unberthing under normal conditions and circumstances, including: • Relationship between vessel speed and (added) mass and water depth • Number of tugs with regard to bollard pull and arrangement • Mooring plan including lines and anchors, where appropriate, with regard to wind and tidal currents • Berth, dry-dock and/or lock characteristics	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved simulator training, where appropriate • Approved laboratory equipment training	All decisions concerning berthing and unberthing are based on proper assessment of ship's manoeuvring and propulsion characteristics, including forces to be expected while berthing and unberthing.

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Legal aspects Monitor compliance with legislative requirements	Knowledge of international maritime law embodied in international agreements and conventions, national and local rules and regulations, where applicable. Knowledge, understanding and proficiency should include but not be restricted to the following subjects: • The relevant requirements of the International Convention on Load Lines • The relevant requirements of the International Convention for the Safety of Life at Sea (SOLAS) • The relevant requirements of the Standards of Training, Certification and Watchkeeping Convention 1995 (STCW) • The relevant requirements of Maritime Declarations of Health, the International Health Regulations and the local and national health regulations • The relevant requirements for reporting pollution of the marine environment by ships • The regional/local legal aspects	Examination and assessment of evidence obtained from one or more of the following: • Approved in-service experience • Approved laboratory equipment training	Potential non-compliance is promptly identified.
Emergency response Respond to navigational emergencies during passage	Prioritise and respond to emergency situations. Knowledge of the contingency plans relating to distress communications, pollution and special circumstances. Local regulations regarding dangerous goods and hazardous cargoes Actions to be taken in case of: • Breach in hull integrity • Man overboard • Blocking of the fairway, bridges and locks	Examination and assessment of evidence obtained from one or more of the following: • Approved simulator training, where appropriate • Approved laboratory equipment training • Practical instruction	The type and scale of any problem is promptly identified. Decisions and actions minimise the effects of any malfunction caused by a navigational emergency during passage. Communications are effective and comply with established procedures.

	• On-board emergencies • On-board equipment failure – e.g. emergency steering • Allied services arrangement failure		

7 PILOT OPERATIONS

7.1 The Maritime Pilot

7.1.1 A maritime pilot should be fit for duty, which includes not being under the influence of alcohol, drugs or any other substance that may impair ability.

7.1.2 A maritime pilot is responsible for his/her own professional development derived from the training and experience provided and as required by the maritime pilot organization.

7.1.3 A maritime pilot should contribute to a good working environment with the master and bridge team members while providing maritime pilotage.

7.1.4 A maritime pilot should be aware of the possible differences in culture and languages on board vessels.

7.1.5 A maritime pilot should contribute to a good working environment with other port services involved in the pilotage passage.

7.1.6 A maritime pilot is responsible for his behavior while providing maritime pilotage.

7.1.7 A maritime pilot should be fully aware of all factors that may affect the pilotage passage. The information may be obtained from the following sources:
- The maritime pilot organization's safety and quality management system
- Navigational warnings and notices to mariners with respect to the designated area
- Shipboard systems and equipment, e.g. ARPA
- Shore based systems and port operations
- Meteorological and hydrological information
- VTS
- Maritime pilot specific positioning systems
- Any other information system in use, such as Automated Information System (AIS)

7.1.8 A maritime pilot should be reasonably up to date with analyses from the "reporting system" made available to him (non-conformities, accidents, and hazardous occurrence) in support of his professional development and performance. This includes but is not restricted to:
- Corrective actions
- Lessons learned through the maritime pilot organization

7.1.9 A maritime pilot should co-operate with the maritime pilot organization's safety and quality management system with respect to:
- Training and proficiency programmes
- Specialized courses

7.2 Communications

7.2.1 The maritime pilot organization should establish procedures for the following communications between:
- The maritime pilot organization and the vessel or vessel representative, e.g. arrival and departure confirmation
- The maritime pilot and the bridge team
- Parties involved with hand-over(s) during pilotage passage
- The maritime pilot and the Supporting maritime pilot
- The maritime pilot or the maritime pilot organization and the port/fairway related services
- The maritime pilot or the maritime pilot organization and other allied services
- The shore based pilot and the VTS authority
- The shore based pilot and the bridge team

7.2.2 Information exchange between the maritime pilot organization and the maritime pilot should be conducted in such a way that sufficient time for the preparation and planning of the pilotage passage is established before embarking of the maritime pilot. This information exchange should be limited to the information which is strictly necessary to assist in the planning and execution of the pilotage passage. The information exchange can vary from ship to ship, trade to trade, port to port, fairway to fairway, designated area to designated area and should only be used by the maritime pilot for the preparation and planning of the pilotage passage.

7.2.3 After the embarking procedure detailed information exchange should take place between the master and or bridge team and the maritime pilot.

7.2.4 The maritime pilot organization should appoint a person to act as liaison between the maritime pilot organization and other port/fairway services and/or to provide advice regarding special maritime pilot related services and pilotage issues to port authorities and shipping line representatives. When appropriate, this advice should also be communicated by this person to the maritime pilot involved in the pilotage passage concerned. The appointment of this person should be subject to confirmation by the maritime pilot organization's management.

7.2.5 The maritime pilot organization should define and document the responsibility and authority of the abovementioned person.

7.2.6 The abovementioned person should be qualified and experienced in local maritime pilotage service aspects and any local port and fairway regulations.

7.3 Passage Planning

7.3.1 The procedures for the preparation and planning of the pilotage passage should include, but not be restricted to the following items:

- Pre-arrival or pre-departure checklist
- Embarking and disembarking procedures
- Maritime pilot card
- Communication procedures
- Use of ship's crew and shipboard systems
- Navigational aspects of port and or fairway
- Hydrographic and meteorological aspects
- Boatmen support and consigned mooring plan arrangements and requirements
- Berthing or unberthing procedures
- Tugboat support and consigned towing line arrangements
- Navigational warnings and notices to mariners with respect to the designated area
- Berths, quays, dry-docks and or lock characteristics
- Calibration and updates of navigational information and data of the maritime pilot specific positioning system, if in use
- Rules and regulations by national administrations and local best practice

7.3.2 The maritime pilot organization should ensure that the passage planning is in compliance with all applicable guidelines, standards and procedures recommended by IMPA, as so as to reduce the risk of miscommunication and misunderstanding between:

- The maritime pilot and the bridge team
- The maritime pilot and supporting maritime pilot
- The piloted vessel and shore services (e.g. VTS)
- The piloted vessel and other maritime traffic in the designated area

7.3.3 The planning of the pilotage passage should be discussed between the master and the maritime pilot after the embarking procedure. Any amendments to the pilotage passage plan should be agreed on by the maritime pilot and the bridge team.

7.3.4 The planning of the pilotage passage should be agreed between the master and the maritime pilot before the maritime pilot starts assisting the master and/or bridge team in the navigation of the vessel and the execution of the pilotage passage commences.

7.3.5 During the execution of the pilotage passage it is appropriate to review and update the pilotage passage plan and inform the master and/or the bridge team accordingly.

7.3.6 Depending on national and local regulations and local best practice the master may delegate the conduct of the navigation to the maritime pilot who directs the navigation of the ship in close cooperation with the master and or the bridge team.

7.3.7 It is important at all times that during the execution of the pilotage passage the responsibilities of the maritime pilot, the master and the bridge team are agreed and clearly understood. The presence of the maritime pilot does not relieve the master and or the bridge team of their duties and obligations regarding the safety of the ship.

7.3.8 The maritime pilot organization should instruct the maritime pilot that any hand-over procedure between maritime pilots during the pilotage passage takes place on the bridge of the vessel and that this procedure is clearly defined and unambiguous.

7.3.9 The maritime pilot organization should establish procedures between the maritime pilot and any supporting maritime pilot as to define responsibility, authority, tasks and communications aspects. It must always be clear to the master which pilot is the maritime pilot and which is the supporting maritime pilot.

7.3.10 The maritime pilot organization should instruct the maritime pilot that all procedures derived from the passage planning are communicated effectively to the bridge team members, allied services, and port/fairway authority.

7.4 Vessel Traffic Service (VTS)

7.4.1 The maritime pilot organization should establish and maintain communication procedures with the local vessel traffic services, where such services are established. This may include:

- Traffic flow and traffic pattern information
- Restricted visibility
- Emergency preparedness
- Resource planning
- Allied services alterations, e.g. tugs, boatmen, lock masters, etc.
- Water management
- Weather forecast
- Suspended maritime pilotage
- Incident/ accident reporting
- Disturbance in communications of the information systems

7.4.2 The maritime pilot organization should instruct all maritime pilots under its management to follow the communication procedures as agreed between the maritime pilot organization and the local VTS authority.

7.4.3 All maritime pilots performing duties at the local VTS station should be instructed by the maritime pilot organization to perform in compliance with the IALA VTS operator or supervisor competence charts, as required by the maritime pilot organization.

7.5 Embarking and Disembarking

7.5.1 The maritime pilot organization should establish and maintain embarking and disembarking procedures for all transport services used in support of the pilotage services.

7.5.2 These procedures should include but not be restricted to:
- Technical and safety operational data particular to the transport service provider
- Communication requirements between the transport service provider and the vessel to be piloted

7.5.3 Any maritime pilot transfer arrangement, together with any suspension arrangements or attachments fitted and intended for the use of the embarking and/or disembarking of the maritime pilot, should be in compliance with local, national and international requirements.

7.5.4 The embarking and disembarking procedures for pilot vessels should include but not be restricted to:
- Pilot vessel technical operational restrictions, such as:
  - Maximum wave and swell height
  - Visibility data
  - Manoeuvring data
  - Weather restrictions
- Pilot vessel safety operational restrictions

The maritime pilot organization should establish clear instructions regarding maritime pilot transfer arrangements. These instructions should be communicated to the vessel and the vessel representative as part of the communication procedures outlined in paragraph 7.2. These instructions should include but not be restricted to the following information:
- Pilot ladder position, side of vessel and specially required securing arrangements, if necessary
- Pilot ladder construction
- Ropes and heaving lines
- Accommodation ladder position and side of the vessel
- Mechanical pilot hoist position and side of the vessel
- Other equipment if necessary, in addition to IMO/SOLAS requirements

7.5.5 The embarking and disembarking procedures for helicopter transfers should include but not be restricted to:
- Helicopter technical operational requirements, such as:
  - Operating conditions
  - Weather restrictions
  - Manoeuvring data
  - Performance requirement
- Helicopter safety operational requirements:
  - Safety briefings prior to commencing operations
  - Survival training - aircrew and maritime pilots
  - Emergency equipment - fire fighting and personal survival
  - Required attire
- Shipboard operating requirements:
  - Operating area - landing, winching and/or other areas
  - Shipboard crew
- Operating instructions for maritime pilots, including:
  - Embarking and disembarking
  - Winching = lowering and hoisting
- Communication between the vessel and the helicopter

- Communication between the helicopter and the maritime pilot, including:
  - Initial before approach (prior airborne)
  - In flight
  - After landing - rotors running turnaround
  - After landing - shutting down
  - Winching operations

The procedures for communication between the vessel and the helicopter aircrew should clearly define the responsibility and authority of the aircrew in relation to the vessel crew.

The master of the vessel is responsible for the overall safety of the ship. The safety of the helicopter and the aircrew remains at all times the responsibility of the helicopter pilot. In order to carry out their respective responsibilities the helicopter pilot and the master must agree on the proposed operation.

Clearance for any helicopter operations and permission for the helicopter to land on board are given entirely at the discretion of the master of the vessel. If the master of the vessel is in any doubt whether the helicopter operations may jeopardize ship safety, he/she may stop the operation at any time.

8 LOGISTIC OPERATIONS

8.1 General

8.1.1 The maritime pilot organization should verify that all transport services, whether they are integral parts of the organization or purchased services, comply with the requirements established under the maritime pilot organization's safety and quality management system.

8.1.2 Where a maritime pilot organization chooses to outsource logistical services, the organization should ensure control over such processes. The type and extent of control to be applied to these outsourced processes should be defined within the safety and quality management system.

8.1.3 The maritime pilot organization should establish and maintain scheduling information for maritime pilots as part of the logistics system, which should include but not be restricted to:

- Maritime pilots information:
  - The validity of the maritime pilot's certificate or license (e.g.: designated area(s), size of vessels, type of ships)
  - The maritime pilot's required competence availability
  - The working and resting hours and maximum continuous period of duties for all maritime pilots fit for duty, recognizing delays and emergencies
- Vessel information:
  - Vessel particulars
  - ETA/ETD
  - Cargo information, e.g. dangerous goods (HAZMAT)
  - Restrictions and special conditions
- External information:
  - Communications with Masters, port authorities and agencies with respect to vessel movements, berth locations, anchor and waiting positions
  - ETA/ETD of the vessel

8.2 Pilot Scheduling

8.2.1 The established monitoring system for working hours of maritime pilots should comply with national and local requirements. This monitoring system may consider a Fatigue Alertness and Endurance Management Plan (FAEMP). Special emphasis should be given to the issues surrounding fatigue, impaired alertness and operationally induced performance decrements.

8.2.2 A FAEMP may include but is not restricted to the following aspects:

- A period of performed maritime pilotage duties should be preceded by a rest period.
- The maritime pilot organization should ensure that maritime pilots receive adequate opportunity to achieve sufficient quality and quantity of restorative sleep.
- The maximum continuous period of maritime pilotage duties in any 24 consecutive hours.
- Acceptable performance criteria for safe and efficient scheduling and planning of resources in pilotage services.
- An appropriate level of preparedness for all reasonable and foreseeable emergencies in pilotage services.
- Any anticipated maritime pilotage passage or successive passages may not exceed the defined maximum continuous period for maritime pilotage duties. An exception should be made in the case of delays beyond the control of the maritime pilot or the maritime pilot organization, or for any emergency occurring during pilotage passage.
- Maritime pilot resting time before the next assignment of the maritime pilot.
- A maritime pilots log of working hours including working and stand-by hours.

8.2.3 Maritime pilot organizations are encouraged to initiate study and revision of present manning and work scheduling practices to evaluate their appropriateness to the physical, legal and economic environment. These studies should particularly define high risk operations during pilotage services, the current state of health of the maritime pilot, subjective sleep quality and fatigue levels.

8.3 Transport Operations

8.3.1 The maritime pilot organization should ensure that the procedures for the assessment and acceptance of transport services comply with all applicable local, national and international rules and regulations as well as the maritime pilot organization's safety and quality management system.

8.3.2 The pilot vessel operation requirements should include but not be restricted to the following operating procedures, plans and instructions:

- Shipboard operations:
  - Special shipboard operations, e.g. where hazards may occur
  - Critical shipboard operations; e.g. where an error may immediately cause a hazard
  - Safety related operations, e.g. vessel in dangerous position
- Vessel maintenance:
  - Repairs
  - Inspections and surveys
  - Preventive measures
- Shipboard equipment operation:
  - Critical equipment and systems
  - Communication equipment
  - Safety equipment
  - Embarking and disembarking equipment

8.3.3 All pilot vessel operations should be carried out in compliance with the relevant national and international requirements.

8.3.4 The master of the pilot vessel should be provided with clear guidance on his/her responsibility and authority regarding matters affecting the safety of the persons on board, the environment and the vessel.

8.3.5 The maritime pilot organization should provide clear procedures and instructions defining the communications between the master of the pilot vessel and the maritime pilot.

8.3.6 The helicopter operation requirements should include but not be restricted to the following operating procedures, plans and instructions:

- Helicopter operations:
  - Special operations, e.g. where hazards may occur
  - Critical operations; e.g. an error which may immediately cause a hazard
  - Safety related operations, e.g. vessel in dangerous position
- Helicopter maintenance
- Helicopter equipment operation:
  - Critical equipment and systems
  - Communication equipment
  - Safety equipment
  - Embarking and disembarking equipment

8.3.7 All helicopter operations should be carried out in compliance with the relevant national and international requirements.

8.3.8 The helicopter pilot should be provided with clear guidance on his/her responsibility and authority regarding matters affecting the safety of the persons on board, the environment and the vessel.

8.3.9 The maritime pilot organization should provide clear procedures and instructions defining the communications between the helicopter pilot and the maritime pilot.

9 EMERGENCY PREPAREDNESS

9.1 Pilot Operations

9.1.1 The maritime pilot organization should establish and maintain emergency preparedness procedures applicable for all pilotage passages regarding hazards and accidents. These should include but not be restricted to:

- Communication procedures with local port/fairway authorities
- Procedures to assist emergency response teams from local port/fairway authorities

9.1.2 The maritime pilot organization's contingency plans may include:

- The composition and duties of all personnel acting within the maritime pilot organization's contingency plans
- Procedures for mobilization of appropriate emergency response, which may include the establishment of an emergency response team
- Procedures for establishing and maintaining contacts between the maritime pilot on board the vessel and the port/fairway authorities
- Procedures for requesting assistance from allied services in the event of hazard occurrences, accidents and emergencies
- Procedures for notifying and communicating with next of kin of maritime pilots
- Procedures for issuing information and answering queries from the media and the public
- List of contact names and telecommunication details of all relevant parties who need to be notified and consulted by the maritime pilot organization

9.1.3 In designing these procedures the maritime pilot organization should ensure that all contingency plans are consistent and appropriately integrated with any port/fairway contingency planning already in place.

9.2 Transport Operations

9.2.1 The safety and quality management system should provide measures, ensuring the maritime pilot organization's response to hazards, accidents and emergency situations involving all transport services.

9.2.2 The transport services contingency requirements should include but not be restricted to the following procedures, plans and instructions:

- On-board contingency plans:
  - Allocation of duties and responsibilities of all personnel on board (pilot vessel or helicopter)
  - Procedures to be followed in response to different types of Hazardous Occurrences
  - Communication methods, i.e. reporting, request for third party assistance
- Shore based contingency plans:
  - Composition and duties of the persons acting by the plan
  - Emergency response procedures
  - Procedures to be followed in response to different types of Hazardous Occurrences
  - Communication methods including list of contacts, dealings with the media and notifications to next of kin

9.2.3 The maritime pilot organization's emergency procedures should be consistent with the transport services procedures.

10 CUSTOMER RELATED PROCESSES

10.1 General

10.1.1 This chapter contains guidelines to streamline the customer related processes. The customer related processes can be divided into:
- Determination of the customer requirements and expectations
- Complaints procedure
- Performance indicators
- New services or changing existing services
- Control of monitoring and measuring
- Customer communication

10.1.2 The maritime pilot organization should determine the requirements and expectations of the interested parties. These interested parties may include:
- Customers and end users
- People within the organization
- Investors and/or owners
- Suppliers
- Society, in terms of community and civilians who are affected by their organization or service

Once the maritime pilot organization has determined who their interested parties are, the maritime pilot organization should be able to (to meet the requirements and expectations):
- React to interested parties' requirements and expectations
- Convert determined requirements and expectations into internal demands
- Communicate these internal demands through the whole organization
- Concentrate on process enhancement in order to provide added value to the identified interested party

10.1.3 To be able for the maritime pilot organization to meet the requirements and expectations, the management of the maritime pilot organization should be able to:
- Understand the requirements and the expectations of customers and potential customers
- Determine the main characteristics of the service for their customers and end users
- Determine other competitors in their playing field and their performance
- Determine opportunities and weaknesses for their organizations

10.1.4 Examples of the requirements and expectations of customers and end users are:
- Meet the requirements of the service
- Reliability of the service
- Availability
- Delivery
- Price/costs
- Service safety
- Service liability
- Effect of the service on the environment

10.1.5 The maritime pilot organization should determine the requirements and expectations of the employees for recognition, job satisfaction and personal development. The aim of such attention should improve the involvement and motivation of the employees to the maximum.

10.1.6 The maritime pilot organization should define financial and other results which meet the identified requirements and expectations of owners and investors.

10.1.7 The management of the maritime pilot organization should consider the possible advantages when cooperating with suppliers of the maritime pilot organization to add value to both parties. A cooperation should be based on a shared strategy where knowledge, profit and loss are shared. When cooperating with these suppliers the organization should:

- Identify main suppliers and other organizations as potential partners
- Come to a mutual and clear understanding of requirements and expectations of customers and end users
- Come to a mutual and clear understanding of requirements and expectations of the partners
- Define goals for maintaining the cooperation

10.1.8 When considering the relationship with the society, the maritime pilot organization should:

- Show its responsibility to health and safety
- Take the consequences for the environment into account including the preservation of natural resources
- Determine the applicable legal requirements and other requirements to which the maritime pilot organization subscribes and relate to its environmental aspects
- Determine the present and potential influence of the services, processes and activities on the society and especially the local community

10.2 New Services or Changing Existing Services

10.2.1 The maritime pilot organization should define the process for input of the design and development of new or changing existing services in order to enhance the customer satisfaction. The external requirements and expectations, together with the internal requirements and expectations, should be suitable for the easy translation into requirements for the design and development processes.

The external input may include:

- Requirements and expectations of the customer or market
- Requirements and expectations of other interested parties
- Contributions of suppliers
- Input of end users
- Change of applicable legislation
- International standards
- Industrial methods of work

The internal input may include:

- Policy and goals
- Requirements and expectations of employees within the organization, including the employees who receive the output of the processes
- Technological developments
- Feedback from previous experiences

Such input should be defined in such a way so that its efficiency can be verified and validated. The output should contain information which makes it possible to verify and validate the planned requirements and expectations.

10.2.2 Examples of the output for the design and development of new and existing services are:

- Data showing the relationship between the input and output of processes
- Service specifications, including acceptance criteria
- Service specifications

10.3 Control of Monitoring and Measuring

10.3.1 Data is important to take fact based decisions. The management of the maritime pilot organization should define the suitable and effective measuring, collecting and validation of data to judge the performance of the maritime pilot organization and the satisfaction of the interested parties. This should contain the judgement of suitability, the purpose of the measurements and the aimed use of data to define the added value for the organization.

Examples for measuring the performance of processes are:
- Measuring and evaluation of provided services
- Ability of processes
- Achievement of project targets
- Satisfaction of customers and interested parties

10.3.2 The management of the maritime pilot organization should use customer satisfaction as an indispensable instrument. The process of asking, measuring and guarding feedback on customer satisfaction should provide continuous information. This process should take into consideration fulfilment of demands, requirements and expectations of customers and should include price and services delivery.

10.3.3 The maritime pilot organization should define the sources of information of customer satisfaction and should work together with the customers to anticipate future requirements. The maritime pilot organization should plan processes and determine effectiveness and suitability listening to the “voice of the customer”. For the planning of these processes methods should be defined and implemented to gather data. These should include sources of information, frequency for the gathering and judgement of the data analysis.

Examples of sources of information may include:
- Customer complaints
- Direct communication with the customer
- Question lists and research
- Outsourced data gathering and analysis
- Target groups
- Reports of consumer organizations
- Reports in various media
- Branch and industry studies

10.4 Customer Communication

10.4.1 For the maritime pilot organization it is vital to maintain good communication with their customers and other interested parties. Not only is it important for day to day operations, it is also important for further improvement of the organization. This communication should be of such a kind that customers and interested parties will cooperate now and in the future.

10.4.2 Good and timely communication to customers and interested parties is essential for all involved and could prevent unnecessary spending of financial and environmental resources.

11 RISK, INCIDENT AND ACCIDENT MANAGEMENT

11.1 General

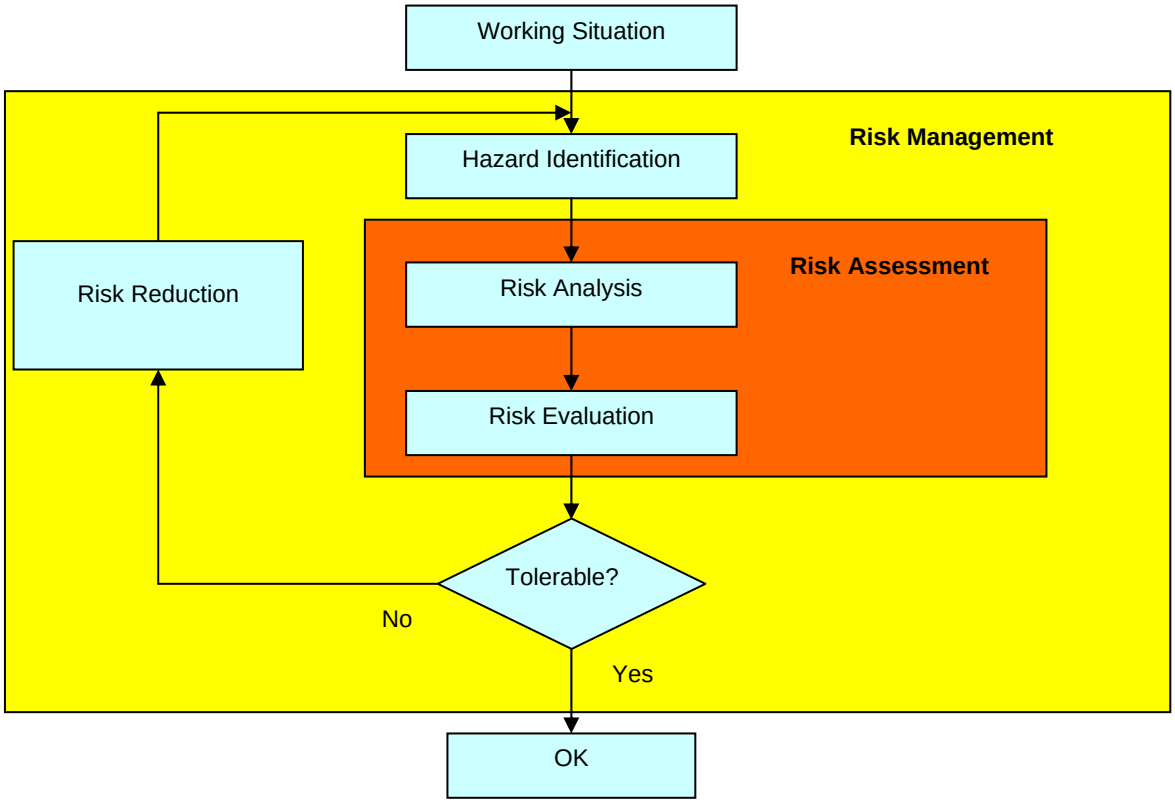
11.1.1 The safety and quality management system should be designed to allow for updating, amendment and improvement derived from the analysis of incidents, accidents, hazardous occurrences, observations and non-conformities as well as changed circumstances within the maritime pilot organization.

11.2 Risk Management

11.2.1 The result of successful risk management should be that:

- The scope of the risk management to be performed is determined
- Appropriate risk management strategies are defined and implemented
- Risks to the services and work conditions are identified in the organizations´ risk management strategy and as they develop during the conduct of tasks
- Risks are analyzed and the priority in which to apply resources to monitor these risks are determined
- Risk monitoring techniques are selected to determine the change in the risks status and the progress of the monitoring activities
- Appropriate action is taken to correct or avoid the impact of risks

11.2.2 Risks can be determined by taking the following steps:



11.3 Reports and Analyses of Incidents, Accidents and Hazardous Occurrences

11.3.1 Incidents, accidents and hazardous occurrences should always be reported. Reports should include a description of the actual facts and where obvious descriptions of probable consequences with respect to harm to human life, damage to the environment or property.

11.3.2 As soon as these reports are received, they should be reviewed and if needed, evaluated by the appropriate management level to determine corrective action (in the short and the longer term) if necessary.

11.3.3 A risk based decision tool is therefore needed to distinguish between relevant and irrelevant incidents in order to enable focus on the real important events and to allow definition of the appropriate measures. The extent of the required accident / incident investigation should be based on a basic risk potential evaluation.

11.3.4 To determine this, the designated person (DP) can make use of an accident investigation matrix. The systematic in this matrix is based on the categories in the risk matrix in paragraph 11.4, using the potential of the severity table and an estimate of the frequency. In order to determine the (reasonably possible) severity, priority should be given to personal injury.

11.3.5 The matrix distinguishes four investigation levels:
- Level 1: No further investigation required
- Level 2: Investigation by the DP
- Level 3: Investigation Team, assembled by the DP

11.3.6 The analyses of these reports may result in one or more of the following:
- Corrective action being taken
- Emphasis on existing procedures
- Distribution of lessons learned throughout the maritime pilot organization
- Amendment to existing safety and quality management system
- The development and improvement of training programmes for maritime pilots
- Retraining of maritime pilot or other personnel
- Recommendations to the system of continued proficiency of maritime pilots

11.3.7 If possible, feedback by the maritime pilot organization should be provided to those persons who have raised any of the aforementioned reports. Feedback should assist in encouraging further effective reporting. Feedback should include an acknowledgement of receipt of the report, its status and any follow up actions taken or recommended.

11.4 Risk Assessment Matrix

Consequence					Probability		
					A	B	C
Severity	People	Hardware	Pollution	Reputation	Never heard of in company	Incident has occurred in the company	Happens several times per year in the company
0	No injury	No damage	No environmental effect	No Damage			
1	First aid treatment	Damage < € 50.000,-	Slight environmental effect (< 10l)	Slight damage Customer complaint			
2	Lost time incident	Damage > € 50.000,- < €100.000,-	Minor environmental effect (< 100l)	Minor damage Local press			
3	Hospitalised	Damage > € 100.000,- < € 250.000,-	Local environmental effect (> 1m³)	National Press			
4	Fatality	Damage > € 250.000,-	Massive environmental effect	Severe damage International Press			

12 MEASUREMENT, ANALYSES AND IMPROVEMENT

12.1 General

12.1.1 The maritime pilot organization should establish and maintain a reporting system that should cover the following:
- Non-conformities
- Internal and external audits
- Hazardous occurrences, incidents and accidents
- Complaints

12.1.2 Any deviation from the procedures and instructions (a non-conformity) should be documented in accordance with procedures established in the safety and quality management system. The safety and quality management system should be designed to allow for updating, amendment and improvement derived from the analysis of incidents, accidents, hazardous occurrences and non-conformities as well as changed circumstances within the maritime pilot organization.

12.1.3 The maritime pilot organization may consider that the designated person, required by the ISPO, is the most suitable person to carry out many of the functional requirements mentioned in Chapter 3.

12.2 Internal Audits

12.2.1 The maritime pilot organization should ensure that the system for the execution of internal safety and quality assessments is designed in accordance with accepted audit principles. As a minimum the following principles should be understood:
- The internal audit is a measure of performance of the safety and quality management system in meeting its stated objectives
- On completion of the audit, the conclusions drawn are to be fed back to the safety and quality management system
- Each internal audit must be carried out by personnel who, at the time of the audit, are independent of the area, department or activity being audited
- Each internal audit must be carried out by qualified and competent personnel

12.2.2 The objectives of each internal audit should be outlined. The audits should assess the effectiveness, suitability, workability, maintainability, reliability and consistency of the safety and quality management system in achieving acceptable safety and quality standards with due respect to safety of human life and avoidance of damage to the environment and property and service quality.

12.2.3 The maritime pilot organization should also clearly define the scope of their internal audit procedure.

12.2.4 The responsibilities allocated to personnel of the maritime pilot organization for the development and implementation of the internal audits should be documented. Where practicable, these personnel and their positions should be identified and specific responsibilities and authority allocated. The following should be addressed:
- Provision of the resources for internal audits
- Overall responsibility of the internal audits
- Preparation of the internal audits schedule
- Appointment of the internal auditors
- Assessment of the competence of the auditors
- Methods by which audit items are effectively settled

12.2.5 The maritime pilot organization should be aware of the requirement to ensure that personnel who are actively involved in internal auditing are competent to do so and as a result, the maritime pilot organization should set appropriate competency standards for internal safety and quality management system auditors.

12.2.6 The following should be considered as being relevant when setting competency standards:
- Practical experience with pilotage services
- Practical knowledge of the support to pilotage services
- Knowledge of the ISPO
- Knowledge of the safety and quality management system
- Auditing experience and training

12.2.7 The maritime pilot organization may consider it preferable to use more than one auditor, and if so, one of the auditors should be appointed as the lead auditor.

12.2.8 The maritime pilot organization should consider it preferable to vary the personnel involved in carrying out internal audits. In doing so, the maritime pilot organization should recognize it is not advisable for the same auditor to select the same elements of the safety and quality management system on subsequent audits.

12.2.9 In the preparation of each audit the auditor should:
- Determine the purpose of the audit, e.g. whether the audit is a scheduled audit, unscheduled, follow up, etc.
- Determine the scope of the audit, e.g. the specific elements, activities, areas or processes of the safety and quality management system to be audited
- Determine the documentation and human resources required
- Identify the safety and quality management system element of the department
- Identify the relevant statutory or internal safety and quality management system requirements
- Inform the personnel at the location of the internal audit
- Prepare an audit plan in consultation with the auditee

12.2.10 The maritime pilot organization may wish to use an appropriate form on which the internal auditor can record the details during the preparation phase.

12.2.11 In the planning of each internal audit the auditor should:
- Reach agreement with the auditee on a timetable for the internal audit and the areas, activities or personnel to be audited, without disruption of normal operations
- Reach agreement on the opening and closing meetings, as on the specific safety and quality management system elements to be audited
- Reach agreement on arrangements for pre- and post-audit meetings, if any
- Reach agreement on arrangements for conducting the internal audit, as procedures or personnel required

12.2.12 The maritime pilot organization may wish to use an appropriate form on which the auditor can record details of the audit plan.

12.2.13 The maritime pilot organization should ensure that reporting lines relating to the internal auditing are clearly defined and, where applicable, incorporate all levels within the safety management maritime pilot organization structure. The following aspects should be considered:
- On completion of an internal audit, it should be the first priority of the auditor(s) to report to the management of the specific elements, activities, areas or processes audited
- On completion of the internal audit, auditors should prepare a documented report containing all major audit findings
- Auditors should ensure that the audit reports are distributed to relevant personnel in the safety and quality management system

12.2.14 The non-conformity reporting procedure, including incidents, accidents and hazardous occurrences, is an important requirement in the internal audit process when verifying compliance with the safety and quality management system. The maritime pilot organization should be aware of this critical importance of non-conformities when developing its audit procedures.

12.2.15 Relevant personnel within the maritime pilot organization are required to confirm a non-conformity exists. This will normally be the responsibility of the auditor and the designated person.

12.2.16 The identification of a non-conformity should have an immediate effect on the operation of the safety and quality management system. All non-conformity reports should contain information on the following features:

- Identification of the specific requirement of the ISPO which is not met
- The nature of the non-conformity
- Identification of the actual evidence to confirm that a non-conformity exists
- Agreed corrective action(s) and timescale for completion

Failure to meet any of the above conditions should render the NCR invalid.

12.2.17 All internal audit reports and findings remain the property of the maritime pilot organization.

12.2.18 The maritime pilot organization should ensure that corrective actions are put forward following the identification and reporting of a non-conformity and that this non-conformity is treated effectively and is settled.

12.2.19 Corrective actions provide structured means within the safety and quality management system to ensure that:

- Measures are taken to reduce exposure to risk as far as is reasonably practicable
- Proper responses are put in motion to remedy the non-conformance

12.3 Analysis

12.3.1 The organization should determine, collect and analyse appropriate data to demonstrate the suitability and effectiveness of the safety and quality management system and to evaluate where continuous improvement of the effectiveness of the safety and quality management system can be made. This should include data generated as a result of monitoring and measurement and from other relevant sources.

12.4 Continuous Improvement

12.4.1 The organization should consider the implementation of a method or procedure to keep the safety and quality management system up to date after appropriate changes in the common working practice or new developments inside or outside the organization.

12.5 Management Review

12.5.1 The organization’s management should review the organization's safety and quality management system at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. This review should include assessing opportunities for improvement and the need for changes to the safety and quality management system, including the quality policy and quality objectives.

12.5.2 The maritime pilot organization should continuously monitor their activities that are aimed at enhancement of their performance and record the implementation so it can provide data for future improvements. The result of such analysis should be used as input for the management review with the aim of further improving the performance of the organization.

To be taken into consideration:

- Data should be transferred into information and knowledge from which the maritime pilot organization can benefit.
- Measuring, analysis and improvement of services and processes should be used to define the required priorities for the maritime pilot organization.
- Measuring methods should be periodically judged and data should be continuously verified on accuracy and completeness.
- Benchmarking for individual processes should be used as an instrument for the enhancement of suitability and effectiveness of processes.
- Measuring customer satisfaction should be considered as indispensable for the evaluation of the maritime pilot organizations´ performance.
- Use of measurements as well as providing and communicating received information are of vital importance for the maritime pilot organization and should be the basis for further performance enhancement and for the interested parties involved; such information should be up to date and the goal should be well defined.
- Self evaluation on a periodical basis should be considered to judge the ripeness and the performance level of the maritime pilot organization and to define the chances for performance enhancement.