

MSSC's Safety, Health and Environmental Protection Policy

# The Marine Society & Sea Cadets

## 1 MSSC Safety, Health and Environmental Protection Policy

- 1.1 It is the policy of the Trustees and Senior Management of the Marine Society & Sea Cadets to manage the health and safety of activities and facilities in order to minimise the risk to employees and others who may be affected by the activities of the organisation. The MSSC shall also manage the provision of welfare facilities and resources to ensure adequate care of its employees.
- 1.2 The MSSC shall take action to minimise risk and prevent injury, ill-health, loss incidents and damage to property and ensure that reasonably practicable measures are implemented, controlled and monitored. The MSSC will carry out processes of training, inspection, checks, audits, analysis, investigation and monitoring for the purpose of implementing corrective and preventive action.
- 1.3 The MSSC is committed to continuous improvement in its health, safety and environmental performance. Where reasonably practicable, The MSSC will provide a safe environment, safe equipment, safe work processes, suitable training and sufficient instruction and supervision. The MSSC shall manage its business to minimise adverse effects on the environment and support the move towards sustainability.
- 1.4 The MSSC will comply with laws applicable to the region in which it operates.
- 1.5 Employees, volunteers, students and cadets have a duty to take reasonable care for themselves and for the health and safety of others who may be affected by MSSC activities. Employees shall co-operate with arrangements for health and safety and not recklessly interfere or misuse anything provided in the interests of safety. Responsibility for health and safety will lie through the line management or as specifically defined in manuals and procedures.
- 1.6 The MSSC shall maintain a health, safety and environmental system and a manual for health, safety and the environment. The MSSC shall set objectives, plans and targets annually and review progress in meeting these.
- 1.7 For sea cadet activities and Units, the MSSC will maintain a set of rules and guidance for the management of safety and the environment. Units are to adhere to the requirements of the rules and guidance. The MSSC shall implement and maintain processes and procedures to ensure that Sea Cadet Units deliver Sea Cadet training safely.
- 1.8 The MSSC shall conduct its educational and training programmes so as to minimise risk to those affected by its programmes.
- 1.9 The Trustees, Chief Executive and Senior Management are committed to this health, safety and environmental policy and the achievement of the right safety and environmental culture at work and in the volunteer sector. Employees and volunteers are expected to commit themselves to this policy.

Chief Executive Officer  
Dated

Chairman of Trustees

12.5.08.



The Marine Society & Sea Cadets  
Registered charity numbers: England & Wales 313013, Scotland SC037808



Chapter 11 of Naval Cadet Forces Training Afloat Regulations and Safety (TARS) (2009 Edition)

## CHAPTER 11

### OFFSHORE OPERATIONS - SAIL AND POWER

**1101. This Chapter applies to all vessels designed for Coastal and Offshore uses when operated outside category A, B, C or D waters and beyond the "Area of Local Operations" in category 6 waters. Chapters 3, 4, 5, 6, 7, 8 and 9 govern all other vessels.**

#### LEGAL REQUIREMENTS

1102. Authorised NCF Offshore Training is to be conducted according to The Code of Practice (COP) legislation introduced by the Maritime and Coastguard Agency. All MOD or privately owned power and sailing vessels used for NCF training 'at sea' must hold a valid Certificate of Compliance with the appropriate MCA Code of Practice. Without a valid certificate the MOD will not accept liability for any accident arising from the use of the vessel.

#### VESSELS CHARTERED OUTSIDE THE UK

1103. Where units arrange the charter of vessels outside the UK and its territorial waters for NCF approved training, they must ensure that the vessels have either a MCA Certificate of Compliance, or an equivalent issued by the national authorities of the country concerned. Approval for the use of foreign-chartered vessels must be obtained from the NCF authority.

#### MCA CODES OF PRACTICE

1104. Historically vessels have operated under the full requirements of the MCA Codes of Practice, which are contained in the following publications, available from HMSO:

- a The Safety of Small Commercial Motor Vessels (ISBN 011511857)
- b The Safety of Small Commercial Sailing Vessels (ISBN 0115511849)
- c The COP for the safety of Small Workboats and Pilot Boats (ISBN 0115520866)
- d The COP for the Safety of Small Vessels in Commercial Use for Sport or Pleasure Operating from a Nominated Departure Point (NDP) (ISBN 0115518126)

e The COP for the Safety of Large Commercial Sailing and Motor Vessels (ISBN 0115519114)

Note: Vessels both Motor and Sail outside the criteria in the above COP must conform to the appropriate Department of Transport Load Line and Manning Regulations which are outside the scope of TARS.

1104.2 The MCA has now harmonised existing codes of practice for small vessels and a new code, the "Small Commercial Vessel and Pilot Boat (SCV) Code" is available for use as an alternate standard from December 2008. MGN 280 provides the requirements for vessels wishing to be certified under this code.

## **DUTY OF CARE**

1105. The MCA require units operating vessels under the various codes of practice to exercise a "Duty of Care" in accordance with article 102. The Captain SCC (for MSSC vessels) and FOSNNI COS Youth (for NCF training) are responsible for the exercise of this duty. Where the requirements of TARS appear to be in excess of those required by the various MCA "Codes Of Practice", the requirements of TARS must be met. In all other cases, the MCA COP is to be considered the minimum standard required by the NCF.

## **AREAS OF OPERATION**

1106. The Codes of Practice introduce "Areas of Operation" as the basis for determining the standards of construction, stability, manning and equipment that are required. Areas of operation are designated as Categories 6 to 0. No vessel may proceed outside its approved area of offshore operation without the approval in writing of the NCF Authority.

## **AREAS OF OPERATION FOR PRIVATE MOTOR VESSELS AND YACHTS**

1107. The MCA defines the following Areas of Operation:

Category 6 – within 3 miles of land and not more than 3 miles radius from either the point of departure to sea or the seaward boundary of protected waters.

Category 5 – up to 20 miles from a nominated departure point in favourable weather in daylight.

Category 4 – up to 20 miles from a safe haven in favourable weather

Category 3 – up to 20 miles from a safe haven Day or Night

Category 2 – up to 60 miles from a safe haven Day or Night

Category 1 – up to 150 miles from a safe haven Day or Night

Category 0 – Unrestricted service

## **MATERIEL AND EQUIPMENT**

### **FIRST AID KIT**

1108. Every vessel operating in MCA area category 2, 3 or 4 is to carry a First Aid Kit in accordance with the appropriate MCA Code of Practice. The minimum requirements are given in Annex C.

### **SAFETY AND MAINTENANCE – MOD OWNED POWER VESSELS**

1109. The Operating Authority (OA) is responsible for the following inspections being carried out. (i.a.w. MCA Code of Practice)

- a. At start of Season:
  - (i) Lifejacket tests – see 4.15
  - (ii) General checks:
  - (iii) Hull inspection.
  - (iv) Overhaul of the engine, electrical system and steering gear.
  - (v) Examination of the anchor and cable or hawser, warps and towing equipment.
  - (vi) Adjustment of the compass and checking of the deviation card.
  - (vii) Maintenance and testing of Radio (s) and electronic Nav aids.
  - (viii) Examination of pyrotechnic distress signals and renewal as required.
  - (ix) Testing of visual signalling apparatus and navigation lights.
  - (x) Checking of contents and state of First Aid Box.
  - (xi) Testing of Firefighting equipment.
  - (xii) Examination of life-saving appliances and renewal if necessary.
  - (xiii) Examination of all safety harness.
  - (xiv) Checking of all bilge pumps.
  - (xv) Examination of bottled gas arrangements.
  
- b. Periodical:
  - i) Lifejacket Tests: The Commanding Officer is to ensure that crewmembers test their lifejackets by fitting before sailing. They are to be partially inflated and the mouthpiece valve, whistle and (where provided) batteries and lamps checked for correct functioning.
  - ii) Gas Cylinders: When changing gas cylinders, all threads of the connections are to be visually examined for damage and

the joining faces and washers checked to ensure that they are clean and in good conditions. After making the joint to the gas container, the joint is to be checked for leakage using soapy water.

- c. Daily when Operating:
  - i) Check that indicating lights are attached to lifebuoys.
  - ii) Check that the operating cord for each inflatable liferaft is properly secured to the standing structure and all seals on the containers are intact.
  
- d. Monthly when Operating:
  - i) Inspect lifesaving equipment.
  - ii) Inspect safety lighting arrangements and check for efficient operation.
  - iii) Examine all pyrotechnics other than those in inflatable liferafts. (Renew as necessary through Head of Sea Cadet Stores.)
  - iv) Examine First Aid box and renew contents as necessary.
  
- e. Three Monthly When Operating:
  - i) Inspect Hydrostatic Release Gear for inflatable liferafts. If deemed necessary the release mechanism should be checked for freedom of movement. Before operating the release gear the liferaft is to be secured to ensure it does not move from its stowage. The locking wire must be replaced on completion.
  
- f. Four Monthly When Operating:
  - i) CO2 Fire Extinguishers. Prove the small vent holes each side of the hexagonal nut at top of valve assembly clear with fine wire. DO NOT slacken the hexagonal nut. Check distribution horn is in good condition. Cylinders are to be check-weighed and replaced if loss of charge exceeds 10%. Underweight cylinders should be discharged in open air and returned to the local PSTO(N) for replacement.
  - ii) 9 litre SPE Extinguishers. (AFFF or CP). Check pressure charge and recharge as necessary. Note: All pressure must be released BEFORE attempting to remove discharge head assembly.

## **ANNUAL SAFETY CERTIFICATE**

1110. MOD owned vessels are to be inspected before the start of each season by the Operating Authority to ensure that they are in all respects ready for service. Apart from a check that all safety equipment and appropriate publications are available, in date and serviceable, the inspection is to include a functional check of all machinery, electrical and other systems. On satisfactory completion of this inspection an NCF Safety Certificate is to be issued. It is to be displayed in a prominent position. No MOD vessel is to be used for NCF training until a safety certificate has been issued.

## **LIFERAFTS**

1111. DE&S is the responsible authority for arranging the supply of inflatable liferafts and the associated Hydrostatic releases, their survey and repair annually. Requests for survey of inflatable liferafts are to be forwarded by the Local Cadet Authority to the SCC Head of Stores. This survey/exchange should normally be done before the start of the season. The log card should be issued with the raft by DE&S and held by the local NCF Authority. It must accompany the raft when it is sent for survey.

## **FIRE FIGHTING EQUIPMENT**

1112. At four yearly intervals, return all items of fire fighting equipment and demand replacements.

1113 – 1120 Spare

## **PERSONNEL**

### **QUALIFICATIONS REQUIRED OF SKIPPER / COMMANDING OFFICER AND MATE/SECOND IN COMMAND**

1121. The minimum qualifications required by the Skipper/Commanding Officer and the Mate/Second in Command for voyages within the above envelopes are set out in Annexes A (Sail craft) and B (Motor craft). Serving Royal Navy Officers with appropriate qualifications and holders of in date Department of Transport Deck Officer Certificates of Competency and other appropriate qualifications may be considered for exemption from these requirements at the discretion of FOSNNI COS YOUTH / MSSC Offshore Commander/

### **SEA CADET VESSELS**

1122. Vessels operated by the Marine Society and Sea Cadets (MSCC) and under the command of a permanently employed Skipper, may relax the required level of qualifications of the Mates when operating within Category 2,3,4 and subject to the approval of the Offshore Commander MSSC.

### **MANNING LEVELS**

1123. The proposed voyage and level of expertise and experience of the whole crew must determine the manning of the vessel. Minimum adult levels are given in Annexes H and I. Cadets undertaking a training programme will be accorded the status of Trainees by the MCA, which imposes no absolute limit to the number of Trainees that may be carried. Any offshore training activity conducted under the auspices of TARS will, by definition, meet this

requirement and thus there is no upper limit on the number of cadets who may be embarked. However when the passage being undertaken requires the vessel to be at sea overnight, cadet numbers are not to exceed the number of permanent berths provided in the vessel for their use. In other circumstances the maximum numbers recorded on the appropriate Code of Practice compliance certificate are not to be exceeded if proceeding to sea. However, in vessels over 15 metres in length, when operating in Category C or D waters in daylight hours and in favourable weather, up to 12 additional persons may be embarked provided an appropriate number of lifejackets is carried.

### **MINIMUM AGE OF CADETS**

1124. The minimum age for cadets carrying out offshore training is twelve on commencement of training. For the MSSC the minimum age is 12 for power vessels and 13.5 for sailing vessels.

### **ACCOMPANYING FEMALE ADULT**

1125. Whenever female cadets are embarked there is always to be a female adult on board.

### **MEDICAL CERTIFICATES**

1126. Where the COP requires a medical certificate, a MCA Medical Fitness Certificate or a Medical Report on an application for a Boat master's Licence is mandatory.

### **VHF AND FIRST AID CERTIFICATES**

1127. The COP only requires one person onboard to hold the above two qualifications.

## **OPERATIONS**

### **OPERATING AUTHORITIES**

1128. The Operating Authorities for offshore OA boatwork are:

- a. Offshore Commander (Sea Cadets) for vessels allocated to him by the CEO Marine Society & Sea Cadets.
- b. SOCCF (RN) for CCF and SCC Area Officer for Sea Cadet unit, privately owned, chartered or loan power or sailing vessels operating with NCF personnel drawn from his region. If two or more regions are involved the OA is to be mutually agreed.

## **APPLICATIONS TO USE VESSELS**

1129. Application to use vessels for NCF Training is to be made to the appropriate Operating Authority (OA).

## **RESPONSIBILITY OF OPERATING AUTHORITY**

1130. The Operating Authority is responsible for the safety of the vessel and those embarked at all times. In addition OAs are to ensure that:

- a. The vessel complies with the requirements of 1101 and is approved for use for Cadet Training (see 1101 and 1110 – 1111).
- b. The vessel is properly manned for the planned voyage. (See 1121 -1127).
- c. The planned voyage is properly authorised.
- d. The vessel is currently seaworthy and all its gear and equipment has been adequately maintained.
- e. vessel has a current certificate of compliance with the COP.

## **COMMAND AND CONTROL OF VESSELS USED FOR NAVAL CADET FORCES TRAINING**

1131. Operational Control (OPCON) will be maintained by the Local Cadet Authority who may be the Headmaster/Contingent Commander, Unit Commanding Officer / Committee Chairman, or MSSC Offshore Commander as appropriate or their nominated representative, providing cover for the whole voyage. The OPCON is responsible for knowing the whereabouts of its vessels at all times and that skippers report their departure and arrival times promptly, they are to be provided with an up to date crew list including next of kin details and a copy of the proposed programme.

## **SAFETY CHECK BEFORE SAILING**

1132. Before sailing, the Commanding Officer/Skipper/Coxswain of each vessel is to check that all safety equipment is in place and serviceable. He is also to carry out a functional check on all mechanical, electrical or other equipment and ensure that it is working correctly.

## **PROGRAMME DETAILS AND REPORTING PROCEDURE**

1133. For vessels operated by the MSSC Offshore Commander a copy of the annual programme detailing the planned programme for all vessels for the

year will be forwarded to the MSSC HQ in London together with HM Coastguard Form 66. A copy of Coastguard Form 66 will be passed to appropriate HM Coastguards at the same time. The MSSC Offshore Commander will manage ship movement from the shore side office in Fort Blockhouse. Out of working hours duty staff provide coverage and may be contacted on 07979 802122 or 07917 138200. For other vessels, when yachts propose to remain away from their parent base (or Mooring) overnight a NAVMOVE Form (example at Annex D) MUST be completed and sent well in advance to the officer responsible for authorising the voyage and a copy forwarded to SAC and NCF authorities to arrive at least twenty-four hours before sailing. Units/Contingents remain responsible, as the OPCON authority, for monitoring their vessel's movements and ensuring that arrival reports and future intentions (i.e. departures) are received immediately after its arrival in port. All contact names, addresses and telephone numbers must be listed on the NAVMOVE. Any changes due to weather etc must be passed to the OPCON and local SAC by telephone.

### **VESSEL INFORMATION FORM**

1134. OPCON Authorities are to render to their local SAC via their NCF Authority a Coastguard form CG 66 and vessel Information Form (example at Annex E, which gives details for each vessel for which they are responsible. Additionally, all vessels must be registered with the YACHT SAFETY SCHEME administered by HM Coastguard and a Form CG66, updated annually, lodged with the local MRCC and MRSC.

### **SEARCH AND RESCUE**

1135. The SAC is only to be informed if there is concern for the safety of a vessel after a sensible check has taken place to ensure that this is not merely a reporting oversight by the vessel. The SAC will then be responsible for initiating the SAR action and involving other SACs as appropriate. There can be no hard and fast rules as to when the SAC is informed and at what stage SAR action is initiated, as this will depend on the length of passage and the weather conditions prevailing. As a general guide, in coastal waters around the UK, action should be taken when a vessel becomes 6 hours overdue.

### **FOREIGN VISITS**

1136. Providing the vessels are operating in the standard continental cruising ground from the Elbe to Brest, there is no requirement for any form of clearance to be obtained for foreign visits. However crews should carry passports and European Health Insurance Cards at all times. If cruising outside this area (excluding the French Atlantic Coast), early advice on clearances should be sought from Sec (NS) via the appropriate NCF Authority.

## **TENDERS**

1137. The Commanding Officer is responsible that those placed in charge of any tender operated from the vessel are competent. The appropriate rules in TARS Chapters 3 to 9 are to be used as a guide, particularly with respect to personal safety requirements.

Annexes:

- A. Sailing vessel crew requirements
- B. Motor vessel crew requirements
- C. Medical Stores list
- D. Navmove form
- E. Vessel Information Form

Offshore Commander's Directive

## TS ROYALIST – SAFETY STATEMENT

### INTRODUCTION

1. TS ROYALIST is a brig operated by the Marine Society and Sea Cadets (Offshore) to provide sail training experience in a square rig vessel. This experience gives young people from the age of 13.5 the opportunity to be challenged, develop life skills, teamwork and live under arduous conditions. The permanent and relief staff onboard are experienced in dealing with teenagers and work hard to ensure that the six day voyages present an interesting and developmental programme.

### SAFETY STATEMENT

2.
  - a. The sea, with variance in weather conditions presents a challenging environment and there are a number of risks inherent in going to sea in any type of vessel. Provision of safety equipment, thorough briefing and training is in place to ensure that safety at sea is at the forefront of the seagoing experience.
  - b. TS ROYALIST has a current Certificate of Compliance with an appropriate Code of Practice for the construction, machinery, equipment, stability, operation and manning of sailing vessels up to 24 metres published by the Maritime and Coastguard Agency (MCA). The vessel is inspected annually by Lloyds to ensure that all requirements of the code are met.
  - c. The Marine Society and Sea Cadets (Offshore) is a recognised Royal Yachting Association (RYA) Sea Training Establishment. All training follows RYA guidelines and syllabi and is conducted by RYA/MCA qualified instructors.
  - d. Staff and instructors are members of the Marine Society and Sea Cadets (MSSC), or are approved by the MSSC, and comply with the Training Afloat - Regulations and Safety (TARS) and the Code of Conduct of the MSSC.

### SAFETY

3. Briefing of Safety Precautions Before leaving harbour all embarked personnel are to be comprehensively briefed on:

- a. Emergency Stations - abandon ship drill
- b. Man Overboard Procedures
- c. 'Knock-down' countermeasures
- d. Operation and Wearing of Lifejackets and Immersion Suits
- e. Fire Precautions

4. Emergency Stations are to be exercised within 24 hours of the crew joining. Man overboard drill is to be exercised as soon as possible after sailing at the start of the voyage and Fire Drill is to be exercised at least once during the voyage.

5. Going Aloft All embarked personnel are to be encouraged to go aloft though some may decline to do so and are not to be forced. Safety harnesses are to be worn and properly used. There may be occasions when an individual already aloft is suddenly so daunted as to be unable to move either up or down. Experience has shown that he may be coaxed to safety by sympathetic but firm guidance by an adult. During the voyage initially reluctant climbers if left alone may well make progress aloft through their own efforts, which can lead to great personal satisfaction.

#### CHILD PROTECTION STATEMENT

6. The wellbeing of young people is a key consideration and all staff members are fully aware of their responsibilities. All voyages will have both male and female staff and all will have undertaken a CRB check.

7. ROYALIST usually has both boy and girl Cadets embarked. The adult female is present both to act as chaperone to her young charges and be available as confidante. Whilst a high degree of supervision is to be exercised over both boys and girls it is important not to create an atmosphere of suspicion. All concerned are to help engender a respectful understanding of the needs of both sexes for personal privacy. A general sense of tolerance and well mannered behaviour is to be promoted. Whenever organised parties ashore include girl cadets the female adult must be in attendance.

#### INSURANCE

8. Insurance of the vessel is with Groves, John and Westrup.

#### DISCIPLINE

9. Despite the historic connections of the Sea Cadets with the Royal Navy, ROYALIST is a merchantman and conforms to Merchant Shipping practices. Personal conduct onboard and disciplinary procedures are therefore governed by the Code of Conduct for the Merchant Navy and nothing in this directive or in other orders should be taken to conflict with the Code. A copy of code is held on board.

## DUTIES OF THE CAPTAIN

10. The Captain is responsible to the Offshore Commander for the safety of the ship and her company and for the effective and timely execution of her planned operational and training programme.

## VOYAGE PLANNING

11. Wind Limits Unless the Captain has very good reason no passage is to be commenced when winds are forecast at Force 8 or above.

12. Nights at Sea The aim should be to complete at least one period of 5 hours of sailing in darkness in any week at sea.

13. Use of Sails for Entering and Leaving Harbour With permission from the appropriate Harbour Control sails may be used for unberthing, or for leaving and entering harbour provided that wind, tide and state of crew training permit a smart and seaman-like demonstration

## MEDICAL TREATMENT

14. The medical kit contains controlled drugs which should normally be administered only on advice from a qualified Medical Practitioner. In extremis the Ships Captain's Medical Guide must be consulted.

15. There must always be two people present, apart from the casualty, whenever medical treatment is given. In the case of a girl cadet, the adult female must be one of them.

## SHIP'S ROUTINE

16. Mealtimes It is important that mealtimes are punctual and sufficient time is allowed for preparation and consumption of food.

17. The Coxswain is charged with discipline and the running of the ship's routine.

## REPORTS

18. A report of proceedings is to be submitted at the end of the voyage and any incident during the week is to be brought to the attention of the Offshore Commander without delay.

Annex 7 to Vhe Blue Code

## ANNEX 7

### THE MANNING OF SMALL VESSELS

#### THE MANNING OF SMALL SAILING VESSELS IN COMMERCIAL USE

This Annex gives information relating to the manning and operation of small sailing vessels in commercial use as follows:

Section 1 -	Areas of Application
Section 2 -	Minimum Qualifications of the person in charge of the vessel and the additional person when required to be carried
Section 3 -	Revalidation of Certificates
Section 4 -	Responsibility of the Owner/Managing Agent for the Safe Manning of the vessel
Section 5 -	Keeping a Safe Navigational Watch
Section 6 -	Withdrawal of Certificate
Section 7 -	Phasing-in Arrangements

#### General

Vessels of less than 80 tons gross or under 24 metres in length carrying not more than 12 passengers, being commercially operated sailing vessels as defined in section 1.4 of the Code, and which comply with the requirements of the Code will be exempt from the need to comply fully with the Merchant Shipping (Certification of Deck Officers) Regulations 1985 and the Merchant Shipping (Certification of Marine Engineer Officers and Licensing of Marine Engine Operators) Regulations 1986 provided the manning of the vessel, when operating in the areas described in 1 below, is in accordance with the standards given in 2 below.

#### 1 Areas of Application

Commercially operated sailing vessels operating within the following areas should carry at least the qualified personnel shown in 2 below:-

Area category 3 or 4	Up to 20 miles from a safe haven
Area category 2	Up to 60 miles from a safe haven
Area category 1	Up to 150 miles from a safe haven
Area category 0	Unrestricted service

#### 2 Minimum Qualifications of the Person In Charge of the Vessel (Skipper) and of the Additional Persons Required to be Carried On Board

##### 2.1 Endorsement of Certificates

All certificates of competency and/or service should carry the endorsement - "valid for pleasure vessels of up to 24 metres in length used for commercial purposes".

##### 2.2 Qualifications Required

##### 2.2.1 Voyages up to 20 miles from a safe haven - operating area category 3 or 4

The skipper should hold at least an RYA/DTp Certificate of Competency as Coastal Skipper (Sailing).

**2.2.2 Voyages of up to 60 miles from a safe haven - operating area category 2**

The skipper should hold at least an RYA/DTP Certificate of Competency as Yachtmaster Offshore (Sailing).

There should also be on board a second person deemed by the skipper to be experienced.

**2.2.3 Voyages of up to 150 miles from a safe haven - operating area category 1**

The skipper should hold at least an RYA/DTP Certificate of Competency as Yachtmaster Offshore (Sailing).

There should also be on board a second person holding an RYA/DTP Certificate of Competency as Coastal Skipper (Sailing).

One of the persons referred to above should be familiar with the operation and maintenance of the main propulsion machinery of the boat, and should have attended a suitable engine course.

**2.2.4 Unrestricted Service - operating area category 0**

The skipper should hold at least an RYA/DTP Certificate of Competency as Yachtmaster Ocean (Sailing).

There should also be on board another person holding at least an RYA/DTP Certificate of Competency as Yachtmaster Ocean or Yachtmaster Offshore (Sailing).

One of the persons referred to above, or another person, should be familiar with the operation and maintenance of the main propulsion and associated machinery of the vessel and should have attended a suitable course.

**2.2.5 Radio Qualifications**

Every vessel should carry at least one person holding a Radio Operator's Certificate suitable for the radio equipment on board.

**2.2.6 Medical Fitness Certificates**

The skipper should hold a Medical Fitness Certificate issued by the DTP or an equivalent certificate. A DTP Medical Report on an applicant for a Boatmaster's Licence or a Health and Safety Executive Medical report for a sea diver will be considered to be equivalent to a DTP Medical Fitness Certificate.

**2.2.7 Basic Sea Survival Course**

Skippers of vessels to which the Code applies should hold an approved Basic Sea Survival Course Certificate.

**2.2.8 First Aid Courses**

Skippers or another member of the crew of vessels which operate in area category 2, 3 or 4 should hold a DTP First Aid at Sea Certificate or a certificate issued by a voluntary society following the successful completion of a first aid course approved by the Health and Safety Executive. Such courses should have extra emphasis on the treatment of hypothermia and casualty evacuation.

Skippers of vessels operating in area category 0 or 1 should hold a DTP Ship Captain's Medical Training Certificate unless another member of the crew holds a medical or nursing qualification of an equivalent or a higher standard.

### **3 Revalidation of Certificates**

All RYA/DTP Yachtmaster Certificates, whether of competency or service should be revalidated every five years, at which time a valid Medical Fitness Certificate should be produced.

### **4 Responsibility of the Owner/Managing Agent for Safe Manning of the Vessel**

It is the responsibility of the owner/managing agent to ensure that the skipper and where necessary the crew of the vessel have, in addition to any qualifications required in 2 above, recent and relevant experience of the type and size of vessel and the type of operation in which the vessel is engaged. The owner/managing agent should also ensure that there are sufficient additional crew on board having regard to the type and duration of voyage being undertaken.

### **5 Keeping a Safe Navigational Watch**

It is the responsibility of the skipper to ensure that there is, at all times, a person with adequate experience in charge of the navigational watch. In taking this decision the skipper should take into account all the factors affecting the safety of the boat, including:-

- .1 the present and forecast state of the weather, visibility and sea;
- .2 the proximity of navigational hazards;
- .3 the density of traffic in the area.

### **6 Withdrawal of Certificate of Competency or Service**

The Yachtmaster Qualifications Panel reserves the right to withdraw a RYA/DTP Certificate of Competency or Certificate of Service at any time if due cause is shown.

### **7 Phasing-in Arrangements**

- 7.1 When the Code comes into operation and until 31 March 1996, existing skippers who do not already hold the Certificates of Competency required by the Code, will be eligible to be issued with a Certificate of Service appropriate to their previous experience.

The Certificates of Service will be issued by the RYA to the applicant upon satisfactory proof of sea service.

Applicants for Certificates of Service should also obtain the appropriate qualification in First Aid.

#### **7.2 Applicants for RYA Certificate of Service (COS)**

- .1 Applicants for Coastal Skipper COS should have a total of at least two years experience of which at least 100 days should have been spent actually at sea. Included in this two years at least one year, which includes at least 50 days actually at sea, should have been served as skipper of a small commercial sailing vessel.
- .2 Applicants for Yachtmaster Offshore COS should have a total of at least five years experience of which at least 250 days should have been spent actually at sea. Included in this five years at least two years, which includes at least 100 days actually at sea, should have been served as skipper of a small commercial sailing vessel. Additionally, the required sea service should include at least 12 voyages of over 60 miles and at least 6 of these voyages should have been served in the capacity of skipper.

RYA/MCA Coastal Skipper and Yachtmaster Offshore examination syllabus

## COASTAL SKIPPER AND YACHTMASTER OFFSHORE EXAM SYLLABUS

Candidates may be given the opportunity to demonstrate knowledge or competence in the areas listed below. In each section the examiner will expect to see the candidate take full responsibility for the management of the yacht and crew.

In Yachtmaster Offshore exams the candidate will be expected to demonstrate competence based on broad experience.

In Coastal Skipper exams the candidate will be expected to demonstrate understanding but may not have had the opportunity to practise all aspects of the syllabus under a range of different weather conditions.



### **1 International Regulations for Preventing Collisions at Sea**

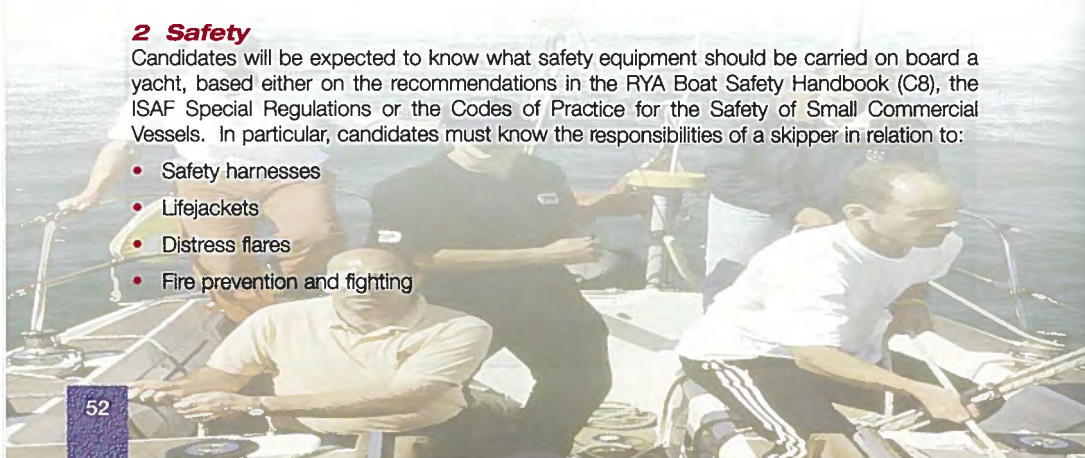
Questions will be confined to the International Regulations and although candidates must be aware of the existence of Local Regulations, they will not be expected to memorise specific local regulations.

- General rules (1-3)
- Steering and sailing rules (4-19)
- Lights and shapes (20-31)
- Sound and light signals (32-37)
- Signals for vessels fishing in close proximity (Annex II)
- Distress signals (Annex IV)

### **2 Safety**

Candidates will be expected to know what safety equipment should be carried on board a yacht, based either on the recommendations in the RYA Boat Safety Handbook (CB), the ISAF Special Regulations or the Codes of Practice for the Safety of Small Commercial Vessels. In particular, candidates must know the responsibilities of a skipper in relation to:

- Safety harnesses
- Lifejackets
- Distress flares
- Fire prevention and fighting



- Liferrafts
- Knowledge of rescue procedures.
- Helicopter rescue

### **3 Boat Handling**

Candidates for Coastal Skipper examinations will be expected to answer questions or demonstrate ability in simple situations only. Candidates for Yachtmaster Offshore will be expected to answer questions or demonstrate ability in more complex situations and will also be expected to show a higher level of expertise:

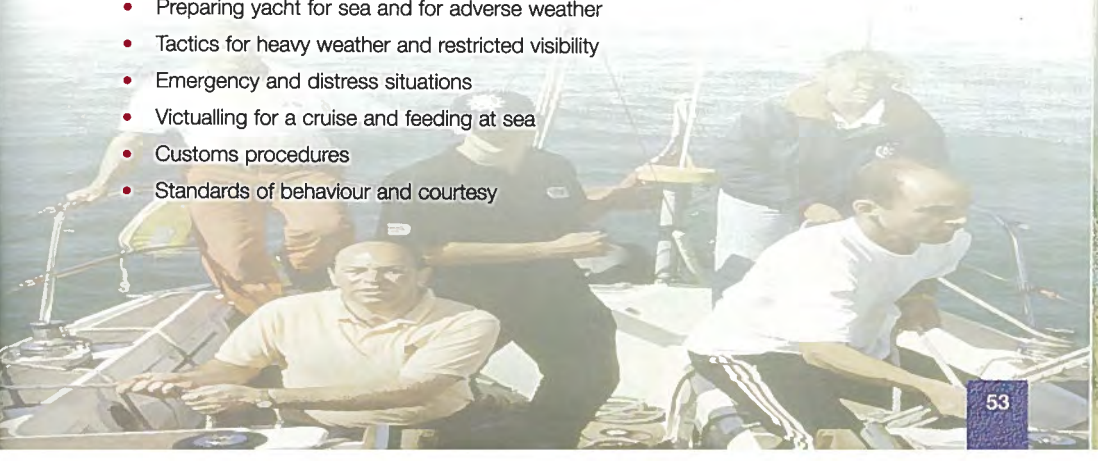
- Coming to and weighing anchor under power or sail in various conditions of wind and tide
- All berthing and unberthing situations in various conditions of wind and tide
- Recovery of man overboard
- Towing under open sea conditions and in confined areas
- Boat handling in confined areas under sail
- Boat handling in heavy weather
- Helmsmanship and sail trim to sail to best advantage
- Use of warps for securing in an alongside berth and for shifting berth or winding

### **4 General seamanship, including maintenance**

- Properties, use and care of synthetic fibre ropes
- Knots
- General deck-work at sea and in harbour
- Engine operations and routine checks
- Improvisation of jury rigs following gear failure

### **5 Responsibilities of skipper**

- Can skipper a yacht and manage the crew
- Communication with crew
- Delegation of responsibility and watch-keeping organisation
- Preparing yacht for sea and for adverse weather
- Tactics for heavy weather and restricted visibility
- Emergency and distress situations
- Victualling for a cruise and feeding at sea
- Customs procedures
- Standards of behaviour and courtesy



## **6 Navigation**

- Charts, navigational publications and sources of navigational information
- Chartwork including position fixing and shaping course to allow for tidal stream and leeway
- Tide and tidal stream calculations
- Buoyage and visual aids to navigation
- Instruments including compasses, logs, echo sounders, radio nav aids and chartwork instruments
- Passage planning and navigational tactics
- Pilotage techniques
- Navigational records
- Limits of navigational accuracy and margins of safety
- Lee shore dangers
- Use of electronic navigation aids for passage planning and passage navigation
- Use of waypoints and electronic routing

## **7 Meteorology**

- Definition of terms
- Sources of weather forecasts
- Weather systems and local weather effects
- Interpretation of weather forecasts, barometric trends and visible phenomena
- Ability to make passage planning decisions based on forecast information

## **8 Signals**

- Candidates for Yachtmaster Offshore and Coastal Skipper must hold the Restricted (VHF only) Certificate of Competence in radiotelephony or a higher grade of certificate in radiotelephony.



Regulation 34 of Chapter V of SOLAS, together with the  
MCA's and IMO's guidance on voyage planning



## Regulation 34 - Safe navigation and avoidance of dangerous situations

### Summary

- **Voyage planning is required on all vessels which go to sea.**
- **Master to ensure plan is drawn up.**
- **Details of factors to take into account.**

### Regulation 34

1. *Prior to proceeding to sea, the master shall ensure that the intended voyage has been planned using the appropriate nautical charts and nautical publications for the area concerned, taking into account the guidelines and recommendations developed by the Organization.\**
2. *The voyage plan shall identify a route which:*
  - 2.1 *takes into account any relevant ships' routing systems*
  - 2.2 *ensures sufficient sea room for the safe passage of the ship throughout the voyage*
  - 2.3 *anticipates all known navigational hazards and adverse weather conditions; and*
  - 2.4 *takes into account the marine environmental protection measures that apply, and avoids, as far as possible, actions and activities which could cause damage to the environment*

*\*Refer to the Guidelines for Voyage Planning, adopted by the Organization by Resolution A.893(21)*

### MCA Guidance

1. Reg. 34 applies to all ships which proceed to sea.
2. The Regulation requires the voyage to be planned in accordance with the IMO Guidelines for Voyage Planning - Resolution A.893(21) (issued as SN/Circ.92) The Regulation authorises the Master to take voyage planning decisions for safety or environmental reasons.
3. It is important to note that Regulation 34 makes a properly prepared voyage plan mandatory and the plan is liable to be checked during port State control inspections.
4. Small vessels and pleasure craft - Regulation 34 applies to all vessels. For small vessels and pleasure-craft the degree of voyage planning will be depend upon the size of vessel, its crew and the length of the voyage. The MCA expects all mariners to make a careful assessment of any proposed voyage taking into account all dangers to navigation, weather forecasts, tidal predictions and other relevant factors including the competence of the crew.
5. See also Regulation 34.1 Master's Discretion.

[The paragraph originally in this Regulation covering Master's Discretion was redrafted as (new) Regulation 34.1. The change came into force on 1 July 2006.]

### Associated Documents

Annex 24 - Voyage Planning: MCA Guidance Notes

Annex 25 - Voyage Planning: IMO Resolution A.893

## Regulation 34-1 - Master's Discretion

### Summary

- **Master's discretion in decision-making not to be compromised.**

### Regulation 34-1

*The owner, the charterer, the company operating the ship as defined in regulation IX/1, or any other person shall not prevent or restrict the master of the ship from taking or executing any decision which, in the master's professional judgement, is necessary for safety of life at sea and protection of the marine environment.*

### MCA Guidance

1. This regulation ensures the master has absolute discretion to take decisions in the interests of safety of life at sea and or protection of the marine environment.  
The word "Company" is as defined in SOLAS Chapter IX/1 (ISM Code): "Company" meaning the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship and who on assuming such responsibility has agreed to take over all the duties and responsibilities imposed by the International Safety Management Code.
2. Regulation 34.1 replaces the paragraph on Master's Discretion originally contained in Regulation 34. The change came into force on 1 July 2006. [IMO Resolution MSC.153(78)]

## Annex 24 - Voyage Planning

The Annex to IMO Resolution A.893(21) (See ANNEX 25), "Guidelines for Voyage Planning", should be followed on all vessels. The key elements of the Voyage Plan are:

- Appraising** all relevant information
- Planning** the intended voyage
- Executing** the plan taking account of prevailing conditions
- Monitoring** the vessel's progress against the plan continuously

These notes should be read in conjunction with the IMO Guidelines for Voyage Planning.

### 1.) General

Investigations show that human error contributes to 80% of navigational accidents and that in many cases essential information that could have prevented the accident was available to but not used by those responsible for the navigation of the vessels concerned. Most accidents happen because of simple mistakes in use of navigational equipment and interpretation of the available information, rather than because of any deficiency in basic navigational skills or ability to use equipment.

Masters, skippers and watchkeepers should therefore adhere to the IMO Guidelines taking the following measures to ensure that they appreciate and reduce the risks to which they are exposed:

- a)** ensure that all the vessel's navigation is planned in adequate detail with contingency plans where appropriate;
- b)** ensure that there is a systematic bridge organisation that provides for:
  - i)** comprehensive briefing of all concerned with the navigation of the vessel;
  - ii)** close and continuous monitoring of the vessel's position ensuring as far as possible that different methods of determining the position are used to check against error in any one system;
  - iii)** cross-checking of individual human decisions so that errors can be detected and corrected as early as possible;
  - iv)** information available from plots of other traffic is used carefully to ensure against over-confidence, bearing in mind that other vessels may alter course and/or speed
- c)** ensure that optimum and systematic use is made of all appropriate information that becomes available to the navigational staff; and
- d)** ensuring that the intentions of a pilot are fully understood and acceptable to the vessel's navigational staff.

### 2.) Responsibility for Voyage planning

In most deep-sea vessels the master delegates the initial responsibility for preparing the plan for a voyage to the officer responsible for navigational equipment and publications (hereafter referred to as the navigating officer.) On smaller vessels, including fishing vessels, the master or skipper may have the responsibility of the navigating officer for voyage planning purposes. Prior to departure the navigating officer will prepare the detailed voyage plan from berth to

berth in accordance with the Guidelines and to the master's requirements. If the port of destination is not known or is subsequently altered, the navigating officer must extend or amend the original plan as appropriate.

### **3.) Principles of Voyage planning**

The four stages of Appraisal, Planning, Execution and Monitoring logically follow each other. An appraisal of all information available must be made before detailed plans can be drawn up and a plan must be in existence before tactics for its execution can be decided upon. Once the plan and the manner in which it is to be executed have been decided, monitoring must be carried out to ensure that the plan is followed.

**4.) Appraisal** is the process of gathering all information relevant to the proposed voyage, including ascertaining risks and assessing its critical areas. The Guidelines list the items that should be taken into account.

An overall assessment of the intended voyage should be made by the master, in consultation with the navigating officer and other deck officers who will be involved, after all relevant information has been gathered. This appraisal will provide the master and his bridge team with a clear and precise indication of all areas of danger, and delineate the areas in which it will be possible to navigate safely taking into account the calculated draught of the vessel and planned under-keel clearance. Bearing in mind the condition of the vessel, her equipment and any other circumstances, a balanced judgement of the margins of safety which must be allowed in the various sections of the intended voyage can now be made, agreed and understood by all concerned.

Once a full appraisal has been carried out the navigating officer carries out the **Planning** process, acting on the master's instructions. The detailed plan should cover the whole voyage, from berth to berth, and include all waters where a pilot will be on board. The plan should be completed and include all the relevant factors listed in the Guidelines.

The appropriate charts should be marked clearly showing all areas of danger and the intended track taking into account the margins of allowable error. Where appropriate, due regard should be paid to the need for advanced warning to be given on one chart of the existence of a navigational hazard immediately on transfer to the next. The planned track should be plotted to clear hazards at as safe a distance as circumstances allow. A longer route should always be accepted in preference to a shorter more hazardous route. The possibility of main engine or steering gear breakdown at a critical moment must not be overlooked.

Additional information which should be marked on the charts include:

- All radar-conspicuous objects and RACONs, which may be used in radar position fixing.
- Any transit marks, clearing bearings or clearing ranges (radar) which may be used to advantage. It is sometimes possible to use two conspicuous clearing marks where a line drawn through them runs clear of natural dangers with the appropriate margin of safety; if the vessel proceeds on the safe side of this transit she will be clear of the danger. If no clearing marks are available, a line or lines of bearing from a single object may be drawn at a desired safe distance from the danger; provided the vessel remains in the safe segment, it will be clear of the danger. Parallel index lines should also be drawn where appropriate.

If an electronic chart system is used to assist voyage planning the plan should also be drawn up on the paper charts. Where official (ENC) vector data is available an ECDIS provided with fully compliant ENC data for the vessel's voyage may be used instead of paper charts. Raster Chart Display Systems (RCDS) using official and up to date Raster charts can be used in conjunction with paper charts to assist voyage planning and route monitoring. Hazards should

be marked on the RCDS as well as on the paper chart. Systems that use unofficial chart data should not be used for voyage planning or navigation.

Depending on circumstances, the main details of the plan should be marked in appropriate and prominent places on the charts to be used during the voyage. They should also be programmed and stored electronically on an ECDIS or RCDS where fitted. The main details of the voyage plan should also be recorded in a bridge notebook used specially for this purpose to allow reference to details of the plan at the conning position without the need to consult the chart. Supporting information relative to the voyage, such as times of high and low water, or of sunrise or sunset, should also be recorded in this notebook.

It is unlikely that every detail of a voyage will have been anticipated, particularly in pilotage waters. Much of what will have been planned may have to be adjusted or changed after embarking the pilot. This in no way detracts from the real value of the plan, which is to mark out in advance, areas where the vessel must not go and the appropriate precautions which must be taken, and to give initial warning that the vessel is standing into danger.

**5.) Execution** of the finalised the voyage plan should be carried out taking into account the factors listed in the Guidelines. The Master should take into account any special circumstances which may arise, such as changes in weather, which may require the plan to be reviewed or altered.

**6.) Monitoring** of the vessel's progress along the pre-planned track is a continuous process. The officer of the watch, whenever in any doubt as to the position of the vessel or the manner in which the voyage is proceeding, should immediately call the master and, if necessary, take appropriate action for the safety of the vessel.

The performance of navigational equipment should be checked prior to sailing, prior to entering restricted or hazardous waters and at regular and frequent intervals at other times throughout the voyage.

Advantage should be taken of all the navigational equipment with which the vessel is fitted for position monitoring, bearing in mind the following points:

- a.)** positions obtained by electronic positioning systems must be checked regularly by visual bearings and transits whenever available;
- b.)** visual fixes should, if possible, be based on at least three position lines;
- c.)** transit marks, clearing bearings and clearing ranges (radar) can be of great assistance;
- d.)** it is dangerous to rely solely on the output from a single positioning system;
- e.)** the echo sounder provides a valuable check of depth at the plotted position;
- f.)** buoys should not be used for position fixing but may be used for guidance when shore marks are difficult to distinguish visually; in these circumstances their positions should first be checked by other means;
- g.)** the charted positions of offshore installations should be checked against the most recent navigational notices;
- h.)** the functioning and correct reading of the instruments used should be checked;
- i.)** account must be taken of any system errors and the predicted accuracy of

positions displayed by electronic position fixing systems; and

**j.)** the frequency at which the position is to be fixed should be determined for each section of the voyage.

Each time the vessel's position is fixed and marked on the chart in use, the estimated position at a convenient interval of time in advance should be projected and plotted. With ECDIS or RCDS care should be taken to ensure that the display shows sufficient "look-ahead" distance and that the next chart can be readily accessed.

Radar can be used to advantage in monitoring the position of the vessel by the use of parallel indexing, which is a simple and most effective way of continuously monitoring that a vessel is maintaining its track in restricted coastal waters. Parallel indexing can be used in any situation where a radar-conspicuous navigation mark is available and it is practicable to monitor continuously the vessel's position relative to such an object. It also serves as a valuable check on the vessel's progress when using an electronic chart.

## **7.) Pilotage**

The Plan covers the voyage from berth to berth and therefore includes the Pilotage stage. The IMO Guidelines do not give specific advice on this important stage therefore the following notes should be taken into consideration when planning and executing the pilotage stages.

Pilots make a significant contribution to the safety of navigation in the confined waters and port approaches of which they have up to date knowledge, but it must be stressed that the responsibilities of the vessel's navigational team and the officer of the watch do not transfer to the pilot. After boarding the vessel, in addition to being advised by the master of the manoeuvring characteristics and basic details of the vessel for its present condition, the pilot should be clearly consulted on the voyage plan to be followed. The general aim of the master should be to ensure that the expertise of the pilot is fully supported by the vessel's bridge team.

Attention is drawn to the following extract from IMO Resolution A.285 (VIII):

"Despite the duties and obligations of a pilot, his presence on board does not relieve the officer of the watch from his duties and obligation for the safety of the vessel. He should co-operate closely with the pilot and maintain an accurate check on the vessel's position and movements. If he is in any doubt as to the pilot's actions or intentions, he should seek clarification from the pilot and if doubt still exists he should notify the master immediately and take whatever action is necessary before the master arrives."

## **8.) Weather Routeing Services**

Regulation 34.2.3 specifies "adverse weather conditions" as one of the principal considerations that should be used by masters when formulating the voyage plan. Weather Routeing Services are available to mariners but they are largely unregulated and in some cases operate as an enhancement for commercial expedience rather than directly as a safety precaution. Safer use of Weather Routeing Services can be achieved by increased dialogue between ship's masters and their weather routeing service providers and through a continuous review of the information that is provided by them. MSC/Circ.1063 itemises the minimum standards that should be adhered to for the provision of Weather Routeing Services.

## **9.) Small vessels and pleasure craft**

Regulation 34 applies to all vessels but the degree of voyage planning may sensibly be less for small vessels and pleasure craft. There is still a need for prior planning but the plan need not

be written down. The following should particularly be taken into account when planning a trip:

- **weather:** before you leave harbour, check the weather forecast and get regular updates if you are planning to be out for any length of time.
- **tides:** check the tidal predictions for your trip and ensure that they fit with what you are planning to do.
- **limitations of the vessel:** consider whether your vessel and crew are suited to the proposed trip and that you have sufficient safety equipment and stores with you.
- **navigational dangers:** make sure that you are familiar with any navigational dangers you may encounter during your trip. This generally means checking an up to date chart and a current pilot book or almanac.
- **contingency plan:** always have a contingency plan should anything go wrong. Before you sail, consider "bolt-holes" and places where you can take refuge should conditions deteriorate or if you suffer an accident or injury. Bear in mind that your GPS set is vulnerable and could fail at any time. It is sensible and good practice to make sure that you are not over-reliant on your GPS and that you can navigate yourself to safety without it should it fail you.
- **information ashore:** make sure that someone ashore knows your plans and knows what to do should they become concerned for your well being. The Coastguard Voluntary Safety Identification Scheme (commonly known as CG66) is also free and easy to join.

Although Regulation 34 only applies when proceeding to sea, small craft users should adhere to the voyage planning principles when also sailing in categorised waters.

## 10.) Other publications

In addition to the IMO Guidelines mariners are also referred to the following publications which contain valuable advice on bridge watchkeeping in general and voyage planning in particular:

"Bridge Team Management - A practical guide" published by the Nautical Institute and

"Bridge Procedures Guide" published by the International Chamber of Shipping.

See also: ANNEX 25 – IMO Resolution A.893(21)

## Associated Documents

Regulation 34 - Safe Navigation

## **Annex 25 - Guidelines for Voyage Planning - IMO Resolution A.893(21)**

### **CONTENTS**

Resolution text

Annex- Draft guidelines for Voyage Planning

1. Objectives
2. Appraisal
3. Planning
4. Execution
5. Monitoring

### **RESOLUTION A.893(21) adopted on 25 November 1999 Guidelines For Voyage Planning**

#### **THE ASSEMBLY,**

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO section A-VIII/2, Part 2 (Voyage planning) of the Seafarers' Training, Certification and Watchkeeping Code,

RECALLING FURTHER the essential requirements contained in the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers and the International Convention for the Safety of Life at Sea concerning voyage planning, including those relating to officers and crew, shipborne equipment, and safety management systems,

RECOGNIZING the essential importance for safety of life at sea, safety of navigation and protection of the marine environment of a well planned voyage, and therefore the need to update the 1978 Guidance on voyage planning issued as SN/Circ.92,

NOTING the request of the Assembly in resolution A.790(19) that the Maritime Safety Committee consider the issue of voyage planning in conjunction with its review of the Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes in Flasks on Board Ships (INF Code), and the Committee's decision that consideration of the issue of voyage planning should not be restricted to vessels carrying materials subject to the INF Code but should apply to all ships engaged on international voyages;

HAVING CONSIDERED the recommendation made by the Sub-Committee on Safety of Navigation at its forty-fifth session:

- 1.)** ADOPTS the Guidelines for voyage planning set out in the Annex to the present resolution;
- 2.)** INVITES Governments to bring the annexed Guidelines to the attention of masters of vessels flying their countries' flag, shipowners, ship operators, shipping companies, maritime pilots, training institutions and all other parties concerned, for information and action as appropriate;
- 3.)** REQUESTS the Maritime Safety Committee to keep the said Guidelines under review and to amend them as appropriate.

### **ANNEX**

## Draft Guidelines For Voyage Planning

### 1.) Objectives

**1.1)** The development of a plan for voyage or passage, as well as the close and continuous monitoring of the vessel's progress and position during the execution of such a plan, are of essential importance for safety of life at sea, safety and efficiency of navigation and protection of the marine environment.

**1.2)** The need for voyage and passage planning applies to all vessels. There are several factors that may impede the safe navigation of all vessels and additional factors that may impede the navigation of large vessels or vessels carrying hazardous cargoes. These factors will need to be taken into account in the preparation of the plan and in the subsequent monitoring of the execution of the plan.

**1.3)** Voyage and passage planning includes appraisal, i.e. gathering all information relevant to the contemplated voyage or passage; detailed planning of the whole voyage or passage from berth to berth, including those areas necessitating the presence of a pilot; execution of the plan; and the monitoring of the progress of the vessel in the implementation of the plan. These components of voyage/passage planning are analysed below.

### 2.) Appraisal

**2.1)** All information relevant to the contemplated voyage or passage should be considered. The following items should be taken into account in voyage and passage planning:

**2.1.1)** the condition and state of the vessel, its stability, and its equipment; any operational limitations; its permissible draught at sea in fairways and in ports; its manoeuvring data, including any restrictions;

**2.1.2)** any special characteristics of the cargo (especially if hazardous), and its distribution, stowage and securing on board the vessel;

**2.1.3)** the provision of a competent and well-rested crew to undertake the voyage or passage;

**2.1.4)** requirements for up-to-date certificates and documents concerning the vessel, its equipment, crew, passengers or cargo;

**2.1.5)** appropriate scale, accurate and up-to-date charts to be used for the intended voyage or passage, as well as any relevant permanent or temporary notices to mariners and existing radio navigational warnings;

**2.1.6)** accurate and up-to-date sailing directions, lists of lights and lists of radio aids to navigation; and

**2.1.7)** any relevant up-to-date additional information, including:

**2.1.7.1)** mariners' routing guides and passage planning charts, published by competent authorities;

**2.1.7.2)** current and tidal atlases and tide tables;

**2.1.7.3)** climatological, hydrographical, and oceanographic data as well as other appropriate meteorological information;

**2.1.7.4)** availability of services for weather routing (such as that contained in Volume D of the World Meteorological Organization's Publication No. 9);

**2.1.7.5)** existing ships' routing and reporting systems, vessel traffic services, and marine environmental protection measures;

**2.1.7.6)** volume of traffic likely to be encountered throughout the voyage or passage;

**2.1.7.7)** if a pilot is to be used, information relating to pilotage and embarkation and disembarkation including the exchange of information between master and pilot;

**2.1.7.8)** available port information, including information pertaining to the availability of shore-based emergency response arrangements and equipment; and

**2.1.7.9)** any additional items pertinent to the type of the vessel or its cargo, the particular areas the vessel will traverse, and the type of voyage or passage to be undertaken.

**2.2)** On the basis of the above information, an overall appraisal of the intended voyage or passage should be made. This appraisal should provide a clear indication of all areas of danger; those areas where it will be possible to navigate safely, including any existing routing or reporting systems and vessel traffic services; and any areas where marine environmental protection considerations apply.

### **3.) Planning**

**3.1)** On the basis of the fullest possible appraisal, a detailed voyage or passage plan should be prepared which should cover the entire voyage or passage from berth to berth, including those areas where the services of a pilot will be used.

**3.2)** The detailed voyage or passage plan should include the following factors:

**3.2.1)** the plotting of the intended route or track of the voyage or passage on appropriate scale charts: the true direction of the planned route or track should be indicated, as well as all areas of danger, existing ships' routing and reporting systems, vessel traffic services, and any areas where marine environmental protection considerations apply;

**3.2.2)** the main elements to ensure safety of life at sea, safety and efficiency of navigation, and protection of the marine environment during the intended voyage or passage; such elements should include, but not be limited to:

**3.2.2.1)** safe speed, having regard to the proximity of navigational hazards along the intended route or track, the manoeuvring characteristics of the vessel and its draught in relation to the available water depth;

**3.2.2.2)** necessary speed alterations en route, e.g., where there may be limitations because of night passage, tidal restrictions, or allowance for the increase of draught due to squat and heel effect when turning;

**3.2.2.3)** minimum clearance required under the keel in critical areas with restricted water depth;

**3.2.2.4)** positions where a change in machinery status is required;

**3.2.2.5)** course alteration points, taking into account the vessel's turning circle at the planned speed and any expected effect of tidal streams and currents;

**3.2.2.6)** the method and frequency of position fixing, including primary and secondary options, and the indication of areas where accuracy of position fixing is critical and where maximum reliability must be obtained;

**3.2.2.7)** use of ships' routing and reporting systems and vessel traffic services;

**3.2.2.8)** considerations relating to the protection of the marine environment; and

**3.2.2.9)** contingency plans for alternative action to place the vessel in deep water or proceed to a port of refuge or safe anchorage in the event of any emergency necessitating abandonment of the plan, taking into account existing shore-based emergency response arrangements and equipment and the nature of the cargo and of the emergency itself.

**3.3)** The details of the voyage or passage plan should be clearly marked and recorded, as appropriate, on charts and in a voyage plan notebook or computer disk.

**3.4)** Each voyage or passage plan as well as the details of the plan, should be approved by the ships' master prior to the commencement of the voyage or passage.

#### **4.) Execution**

**4.1)** Having finalized the voyage or passage plan, as soon as time of departure and estimated time of arrival can be determined with reasonable accuracy, the voyage or passage should be executed in accordance with the plan or any changes made thereto.

**4.2)** Factors which should be taken into account when executing the plan, or deciding on any departure therefrom include:

**4.2.1)** the reliability and condition of the vessel's navigational equipment;

**4.2.2)** estimated times of arrival at critical points for tide heights and flow;

**4.2.3)** meteorological conditions, (particularly in areas known to be affected by frequent periods of low visibility) as well as weather routing information;

**4.2.4)** daytime versus night-time passing of danger points, and any effect this may have on position fixing accuracy; and

**4.2.5)** traffic conditions, especially at navigational focal points.

**4.3)** It is important for the master to consider whether any particular circumstance, such as the forecast of restricted visibility in an area where position fixing by visual means at a critical point is an essential feature of the voyage or passage plan, introduces an unacceptable hazard to the safe conduct of the passage; and thus whether that section of the passage should be attempted under the conditions prevailing or likely to prevail. The master should also consider at which specific points of the voyage or passage there may be a need to utilize additional deck or engine room personnel.

## **5.) Monitoring**

**5.1)** The plan should be available at all times on the bridge to allow officers of the navigational watch immediate access and reference to the details of the plan.

**5.2)** The progress of the vessel in accordance with the voyage and passage plan should be closely and continuously monitored. Any changes made to the plan should be made consistent with these Guidelines and clearly marked and recorded.

### **Associated Documents**

Regulation 34 - Safe Navigation

ANNEX 24 – MCA Guidance Notes for Voyage Planning

MGN 315(M) Keeping a Safe Navigational Watch on Merchant Vessels



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## KEEPING A SAFE NAVIGATIONAL WATCH ON MERCHANT VESSELS

### Notice to Owners, Operators, Managers, Masters and Officers of Merchant Vessels

*This notice should be read in conjunction with MGN 137 (M+F) and MGN 202 (M+F)*

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#### Summary

This Merchant Guidance Notice (MGN) gives guidance on the application of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, as amended (**STCW 95**)<sup>1</sup> regarding the keeping of a safe navigational watch.

#### Key Points

This notice gives information and guidance on the keeping and maintaining of a safe navigational watch in accordance with the requirements of STCW 95 and its associated code (**STCW Code**).

The areas that this notice covers are:

- General application for Masters and officers in charge of a navigational watch;
- Fitness for duty;
- Performing the navigational watch;
- Watch arrangements, handing over the watch and taking over the watch;
- Maintaining a safe look-out and relationship with the look-out;
- Restricted visibility, safe speed, stopping distance and vessel at anchor;
- Certification.

### 1.0 Introduction

- 1.1 This notice contains guidance for officers in charge of a navigational watch, which Masters are expected to supplement as they consider appropriate. It is essential that officers of the watch (**OOW**) appreciate that the proper performance of their duties is necessary in the interests of the safety of life and property at sea and the prevention of pollution to the marine environment.

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<sup>1</sup> Available from the Publications Department, International Maritime Organisation, 4 Albert Embankment, London SE1 7SR

- 1.2 It is the responsibility of Masters, and companies owning or operating UK registered seagoing vessels, to ensure that the principles applying to the keeping of a safe watch, as detailed in STCW 95 are followed.
- 1.3 The Master shall not be constrained by the shipowner, charterer or any other person from taking any decision which, in the Master's professional judgment, is necessary for safe navigation. It is the duty of the Master of every vessel to ensure that watchkeeping arrangements are adequate for maintaining a safe navigational watch at all times.
- 1.4 The International Chamber of Shipping (**ICS**) Bridge Procedures Guide is established as the principle guide to best watchkeeping practice and includes additional guidance on bridge resource management and the conduct of the bridge team including the use of passage planning, integrated electronic navigation systems and the use of GMDSS.
- 1.5 This notice, which should be read in conjunction with STCW 95 and ICS Bridge Procedures Guide, highlights the Maritime and Coastguard Agency (**MCA**) concerns and interpretations with respect to what constitutes the 'Keeping of a Safe Navigational Watch' in the light of recent maritime accidents and incidents.
- 1.6 The Annex to this notice lists relevant publications.

## **2.0 General**

- 2.1 The OOW is the Master's representative and is primarily responsible at all times for the safe navigation of the vessel and for complying with the International Regulations for Preventing Collisions At Sea (**ColRegs**).
- 2.2 It is of special importance that the OOW ensures that at all times an efficient look-out is maintained and that ColRegs are complied with.
- 2.3 Officers and Masters are reminded that the vessel must at all times proceed at a safe speed.
- 2.4 The vessel's engines are at the disposal of the OOW and there should be no hesitation in using them in case of need. Where possible, timely notice of intended variations of engine speed should be given to the duty engineer. The OOW should know the handling characteristics of the vessel, including the stopping distance, and should appreciate that other vessels may have different handling characteristics.
- 2.5 Officers in charge of a navigational watch are responsible for navigating the vessel safely during their periods of duty with particular concerns for avoiding collision and stranding. The OOW shall also be aware of the serious effects of operational or accidental pollution of the marine environment and shall take all possible precautions to prevent such pollution.
- 2.6 Masters, owners and operators are reminded that the MCA considers it dangerous and irresponsible for the OOW to act as sole look-out during periods of darkness or restricted visibility.
- 2.7 The factors to be considered before the dedicated bridge look-out can be dispensed with are detailed in paragraph 8.3. It is implicit in STCW 95 that at all times when a ship is underway a separate dedicated look-out must be kept in addition to the OOW.

## **3.0 Fitness for Duty**

- 3.1 The Merchant Shipping (Hours of Work) Regulations 2002 (**the Regulations**) apply to all seafarers employed or engaged in any capacity on board a seagoing vessel and includes officers and ratings assigned to bridge watchkeeping duties.
- 3.2 In summary, and unless covered by an exception, the Regulations provide for a minimum of 10 hours rest in any 24 hour period and 77 hours in any seven day period.

Hours of rest may be divided into no more than two periods, one of which should be at least six hours long, and the intervals in between should not exceed 14 hours.

- 3.3 The watch system shall be such that the efficiency of watchkeeping personnel is not impaired by fatigue. The Master shall take into account the quality and quantity of rest taken by the watchkeepers when determining fitness for duty.
- 3.4 It is the overall responsibility of the Master and the responsibility of every watchkeeping officer and rating to ensure that they are sufficiently rested prior to taking over a navigational watch. It is the responsibility of the owner or operator to ensure that the vessel is manned with a sufficient number of personnel so that a safe navigational watch can be maintained at all times by appropriately qualified and rested personnel in all foreseeable circumstances.
- 3.5 In circumstances where the Regulations cannot be met there should be established procedures and contingencies in place to ensure that the vessel is brought to or remains in a place of safety until a safe navigational watch can be established. In some circumstances this may require delay to a vessel's departure.
- 3.6 Watchkeepers should ensure they remain alert by moving around frequently and ensuring good ventilation. Marine Accident Investigation Branch (**MAIB**) reports have shown that it is all too easy to fall asleep, especially while sitting down in an enclosed wheelhouse.
- 3.7 The OOW shall be free from the effects of alcohol and any other substance, including prescription drugs or other medication that may have a detrimental effect on the officer's judgments.

#### **4.0 Performing the Navigational Watch**

- 4.1 The officer of the navigational watch shall:
  - keep the watch on the bridge
  - in no circumstances leave the bridge until properly relieved by an appropriate officer
  - continue to be responsible for the safe navigation of the vessel despite the presence of the Master on the bridge until informed specifically that the Master has assumed the con and this is mutually understood
  - notify the Master when in any doubt as to what action to take in the interests of safety
  - continue to be responsible for the safe navigation of the vessel despite the presence of a pilot on board
  - if in any doubt as to the pilot's actions or intentions, seek clarification from the pilot; if doubt still exists, they should notify the Master immediately and take whatever action is necessary until the Master arrives
  - not undertake any other duties that would interfere or compromise the keeping of a safe navigational watch
  - ensure there are no distractions caused by the use of domestic radios, cassettes, CD players, personal computers, television sets, mobile phones, etc
  - have available at all times, the services of a qualified helmsman

- in areas of high traffic density, in conditions of restricted visibility and in all hazardous navigational situations ensure the vessel is in hand steering
- keep in mind that the perceptions of watchkeeping officers on different types and sizes of vessels may vary considerably when assessing a close quarter situation and the time in which avoiding action should be taken
- keep a proper record during the watch on the movement and activities relating to the navigation of the vessel
- station a person to steer the vessel and to put the steering into manual control in good time to allow any potentially hazardous situation to be dealt with in a safe manner. Officers are further reminded that when the vessel is in automatic steering it is highly dangerous to allow a situation to develop to the point where the OOW is without assistance and has to break the continuity of the look-out in order to take emergency action
- use the radar at all times in areas of high traffic density and whenever restricted visibility is encountered or expected and shall have due regard to its limitations. Radar should be available for use at all times to enable the officers to use the equipment in clear weather so as to fully appreciate the limitations of the equipment
- at sufficiently frequent intervals during the watch check the vessel's position, course and speed using all appropriate navigational aids and means necessary to ensure that the vessel follows the planned track
- take fixes at frequent intervals. These fixes shall be carried out by more than one method whenever circumstances allow. The largest scale chart on board, suitable for the area and corrected with the latest available information shall be used. This includes local navigation warnings, and temporary and preliminary notices to mariners

Mariners are also reminded of the requirement to use the latest editions of all supporting navigational publications such as charts, list of lights, list of radio signals, pilot books etc. Such publications should be fully corrected.

## **5.0 Watch Arrangements**

- 5.1 The composition of a navigational watch should comprise one (or more) qualified officers supported by appropriately qualified ratings. The actual number of officers and ratings on watch at a particular time will depend on the prevailing circumstances and conditions.
- 5.2 At no time shall the bridge be left unmanned without a qualified watchkeeping officer.
- 5.3 Factors to be taken into account when composing a bridge watch:
- fatigue
  - weather conditions and visibility
  - proximity of navigational hazards which may make it necessary for the officer in charge of the watch to carry out additional navigational duties
  - use and operational condition of navigational aids
  - whether the vessel is fitted with automatic steering
  - whether there are radio duties to be performed

- unmanned machinery space (**UMS**) alarms, controls and indicators provided on the bridge, procedures for their use and limitations
- any unusual demands on the navigational watch that may arise as a result of special operational circumstances

In circumstances where a single man bridge is considered permissible support personnel should be readily and immediately available should assistance be required. There should be an established and continuously available means of communications for the watchkeeper to summon such assistance at all times.

## **6.0 Handing Over the Watch**

6.1 The OOW shall:

- ensure that the members of the relieving watch are fully capable of performing their duties
- ensure that the vision of the relieving watch is fully adjusted to the light conditions
- ensure that all standing orders and the Master's night orders are fully understood

6.2 The OOW shall not hand over the watch:

- if there is reason to believe that the relieving officer is not capable of carrying out the watchkeeping duties effectively, in which case the Master should be notified
- when a manoeuvre is in progress until such action has been completed

## **7.0 Taking Over the Watch**

7.1 The relieving officer shall:

- prior to taking over the watch verify the vessel's estimated or true position
- confirm the vessel's intended track, course and speed
- note any dangers to navigation expected to be encountered during the watch
- be aware of prevailing and predicted tides, currents, weather, visibility and the effect of these factors upon course and speed
- note any errors in gyro and magnetic compasses
- note the status of all bridge equipment
- note the settings of bridge/engine controls and manning of engine room
- be aware of the presence and movement of vessels in sight or known to be in the vicinity
- give watchkeeping personnel all appropriate instructions and information which will ensure the keeping of a safe navigational watch, including maintenance of a proper look-out

## 8.0 Look-out

- 8.1 The ColRegs require that every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of risk of collision.
- 8.2 The look-out must be able to give full attention to the keeping of a proper look-out and no other duties shall be undertaken that could interfere with that task. The duties of the look-out and helmsman are separate and the helmsman should not be considered to be a look-out except in small vessels where an un-obstructed all round view is provided at the steering position and there is no impairment of night vision or other impediment to the keeping of a proper look-out.
- 8.3 In certain circumstances of clear daylight conditions the Master may consider that the OOW may be the sole look-out. On each occasion the Master should ensure that:
- The prevailing situation has been carefully assessed and it has been established without a doubt that it is safe to do so;
  - Full account has been taken of all relevant factors including but not limited to:
    - state of the weather
    - visibility
    - traffic density
    - proximity of dangers to navigation
    - the attention necessary when navigating in or near traffic separation schemes
    - design and layout of the bridge
    - arcs of visibility
    - radar equipment fitted and their limitations with respect to navigation
    - other duties that the officer may have to engage in and which could be a distraction from the keeping of a proper look-out such as:
      - operation of GMDSS and other communications equipment such as cell phones and email systems
      - navigational maintenance such as completion of logs and other record keeping and correction of charts and publications
      - routine testing and maintenance of bridge equipment

In any event, an OOW acting as sole look-out should always be able to fully perform both the duties of a look-out and those of keeping a safe navigational watch. Assistance must be immediately available to be summoned to the bridge when any change in the situation so requires.

- 8.4 It is of special importance that at all times the officer in charge of the navigational watch ensures that a proper look-out is maintained. In vessels with a separate chartroom the officer in charge of the navigational watch may visit the chartroom, when essential, for a short period for the necessary performance of navigational duties, but shall first ensure that it is safe to do so and that a proper look-out is maintained.

## **9.0 Relationship Between the OOW and Look-out**

- 9.1 The OOW should consider the look-out as an integral part of the Bridge Team and utilise the look-out to the fullest extent.
- 9.2 As a way of fully engaging the look-out's attention consideration should be given to keeping the look-out apprised of the current navigational situation with regard to expected traffic, buoyage, weather, landfall, pilotage and any other circumstance relevant to good watchkeeping.

## **10.0 In Restricted Visibility**

- 10.1 When restricted visibility is encountered or expected, the first responsibility of the OOW is to comply with the ColRegs with particular regard to the keeping of a look-out, sounding of fog signals, proceeding at a safe speed and having the engines ready for immediate manoeuvre.
- 10.2 In addition the OOW shall:
- inform the Master
  - ensure that a dedicated look-out is posted at all times
  - exhibit navigation lights
  - operate and use the radar
  - put the engines on standby

## **11.0 Safe Speed and Stopping Distance**

- 11.1 The ColRegs require that every vessel shall at all times proceed at a safe speed so that proper effective action can be taken to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions.
- 11.2 In cases of need, the OOW shall not hesitate to use the engines to reduce speed further and allow more time for consideration and assessment of a developing situation. However, timely notice of the intended variations of engine speed shall be given to the engineers where possible or effective use made of UMS engine controls.
- 11.3 Whatever the pressure on Masters to make a quick passage or to meet the wishes of owners, operators, charterers or port operators, it does not justify vessels and those on board them being unnecessarily put at risk. The MCA is concerned that proper standards be maintained and will take appropriate action against officers who jeopardize their vessels or the lives and property of others. Such action may lead to fines and/or the suspension or cancellation of their certificates.
- 11.4 In the well known case of THE LADY GWENDOLEN, the Court of Appeal stated that "excessive speed in fog is a grave breach of duty and vessel owners should use their influence to prevent it." Because of their failure to do so, it was held in that case that the owners could not limit their liability.

## **12.0 Vessel at Anchor**

- 12.1 The OOW shall:
- determine and plot the vessel's position on the appropriate chart as soon as practicable

- when circumstances permit, check at sufficiently frequent intervals whether the vessel is remaining securely at anchor by taking bearings of fixed navigation marks or readily identifiable shore objects. The use of carefully chosen transits can give an almost instant indication as to whether the vessel's position has changed
- ensure that a proper look-out is maintained
- ensure that inspection rounds are made periodically
- observe meteorological and tidal conditions and state of sea, notify the Master and undertake all necessary measures if the vessel drags anchor
- ensure the state of readiness of the main engines and other machinery complies with the Masters requirements
- ensure the vessel exhibits the appropriate lights and shapes and that appropriate ColRegs sound signals are made
- avoid placing reliance on guard zones when using radar in lieu of a look-out as this is not considered acceptable practice.

In all the above circumstances it remains the Master's responsibility to ensure that the anchor watch to be kept is appropriate to the prevailing conditions.

### **13.0 Certification**

- 13.1 The Regulations require that any officer in charge of a navigational watch shall be duly qualified in accordance with the requirements of STCW 95. It is the responsibility of the owner or operator, and Master to ensure that every navigational watchkeeping officer is appropriately qualified with respect to the size of the vessel and limitations in area of operation. Under no circumstances is it permitted for an un-qualified person to take charge of a navigational watch.
- 13.2 Similarly STCW 95 Section A-II/4 requires that every rating forming part of a navigational watch on a seagoing vessel of 500gt or more shall be required to demonstrate competence in the duties associated with the keeping of a safe navigational watch at the support level. This competence is evidenced by the issue of a Navigational Watch Rating Certificate. No rating should be assigned to navigational watchkeeping duties unless suitably qualified.
- 13.3 A qualification demonstrates that the holder has reached a minimum level of competence as defined in STCW 95. However, it does not imply that the holder has achieved all the necessary management or operational experience particular to a vessel, its operation or operational area. In considering an officer's or rating's qualifications due consideration should also be given to an individual's experience with respect to the vessel type and/or area of operation(s). In some circumstances it may be prudent to 'double-up' a watch or provide additional supervision to a qualified watchkeeper whilst particular operational experience is achieved.

## Further Information

Further information on the contents of this Notice can be obtained from:

Seafarer Training and Certification Branch  
Maritime and Coastguard Agency  
Spring Place  
105 Commercial Road  
Southampton  
SO15 1EG

Tel : +44 (0) 23 8032 9231  
Fax : +44 (0) 23 8032 9252  
e-mail: [exams.section@mcga.gov.uk](mailto:exams.section@mcga.gov.uk)

General Inquiries: 24 Hour Infoline  
[infoline@mcga.gov.uk](mailto:infoline@mcga.gov.uk)  
0870 600 6505

MCA Website Address: [www.mcga.gov.uk](http://www.mcga.gov.uk)

File Ref: MC 049/044/0010

Published: February 2006

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*An executive agency of the  
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**Transport***

## **Annex**

Mariner's attention is drawn to the following publications relating to this notice:

- International Regulations for Preventing Collisions at Sea 1972 (ColRegs)
- STCW 95, Code Sections A-VIII/2 Part 3, 3-1,3-2 and A-II/4
- ICS Bridge Procedures Guide

Annex 2 to The Large Commercial Yacht Code



## ANNEX 2 SAFETY MANAGEMENT SYSTEM FOR VESSELS UNDER 500GT

### INTRODUCTION

1. The purpose of this Annex is to provide guidance on how to develop and implement an effective safety management system for vessels under 500GT, where full certification to the International Safety Management Code is not a requirement.

### GENERAL

2. Each operator should create a safe working environment, which should include the following:

#### **A health and safety protection policy.**

- 2.1 This must address the issues of health, safety and the environment as they affect the company and its staff, both ashore and afloat. Such a policy might read along the following lines:

*"The policy of (name of Company/Owner) is to conduct its activities taking full account of the health and safety of its employees and of all persons using or connected with the Company/Owner. In implementing this policy, (name of Company/Owner) will ensure that the [vessel] is, at all times, properly maintained and operated by qualified personnel in full compliance with relevant legislation. In particular the [Company/Owner] will carry out an assessment of the risks to the health and safety of workers and others affected by [the undertaking], and will take the necessary measures to minimise the risks identified."*

- 2.2 The owner/operator is recommended to develop and implement an oil management plan to the same standard as the garbage management plan and to integrate it with the Health and Safety Protection Policy. This is not required for vessels over 400GT, for which an IOPP certificate is required.

#### **Procedures to ensure safe operation of vessels in compliance with the regulations and rules.**

- 2.3 The regulations and rules, not addressed by this Code of Practice, which apply to all vessels include, but are not limited to:

- International Regulations for Preventing Collisions at Sea;
- Local Navigation Rules;
- National health and safety regulations;
- The Code of Safe Working Practices for Merchant Seamen;
- All relevant national shipping or guidance notices.

- 2.3.1 The company should draw up simple procedures to ensure that safe working practices are carried out in the operation of the vessel. These may be in the form of checklists which can be followed by all personnel.

- 2.3.2 For some vessels, it might be appropriate to have permanently exhibited checklists, e.g. in the wheelhouse for navigational items. Alternatively, in a smaller vessel, the record could take any suitable form such as a diary as distinct from a specially printed logbook. Whatever form the record takes, such entries should be accepted as evidence of compliance with the ONBOARD PROCEDURES requirements.

## **Lines of communication between personnel, ashore and afloat.**

2.4 Responsibility and authority of each employee should be clear. This may be best illustrated in a simple diagram, showing who reports to whom.  
**Procedures for reporting accidents.**

2.5 The requirement for reporting accidents should be well understood by all personnel and in so doing improve the safety culture practiced on board.

## **Procedures for responding to emergency situations.**

2.6 There should be clearly stated procedures for responding to emergency situations. These may include but not be limited to:

- fire
- collision
- grounding
- violent act
- main propulsion or steering failure
- man overboard

2.6.1 Checklists may be useful in this regard.

## **HEALTH AND SAFETY PROTECTION POLICY**

3. One or more competent persons should be delegated to take responsibility for health and safety, and that person/persons should be clearly identified. It is the responsibility of the owner/operator to ensure that the policy is complied with, and that the responsibilities are understood.

4. The company/owner should develop a policy on prevention of alcohol and drug abuse.

5. All personnel both ashore and afloat have a duty to take care of themselves and other persons who may be affected by their acts or omissions.

6. It is essential that, in the event of an emergency, there is the ability to communicate with the emergency services via a shore base. The shore base may be the company office ashore, the local Coastguard, Police or Fire Station, or another office as may be agreed between the vessel and the shore base.

## **RESPONSIBILITIES**

7. The Master must have authority at all times, to make decisions with regard to the safety of the vessel and the persons on board. To ensure that there is no ambiguity regarding the authority of the Master, there should be a simple written statement to this effect.

## **PERSONNEL AND TRAINING**

8. All personnel should receive training appropriate to the tasks they undertake. It is the responsibility of the company/owner to ensure that this training is given, and that the personnel have an understanding of the relevant regulations and rules.

9. As a minimum, this means:
- for the Master, the relevant qualifications;
  - for the crew, relevant qualifications and any additional training appropriate to their designated duties.
10. Prior to the first occasion of working on the vessel, each employee must receive appropriate familiarisation training and proper instruction in onboard procedures. This could include, but not necessarily be, limited to:
- mooring and unmooring;
  - launching and recovery of survival craft;
  - evacuation from all areas of the vessel;
  - donning of lifejackets; and
  - use and handling of fire fighting equipment.

### **ONBOARD PROCEDURES**

11. Simple procedures should be developed for the operation of the vessel. These should include, but not be limited to:
- testing of equipment, including steering gear, prior to commencing a passage;
  - navigation and handling of the vessel;
  - maintenance routines;
  - bunkering operations;
  - watertight/weathertight integrity;
  - stability of the vessel; and
  - conduct of passengers and crew while on board.

### **PREPARATION FOR EMERGENCIES**

12. The potential emergencies likely to be encountered by the vessel should be considered. Exercises should then be carried out in the handling of these emergencies and evacuation from the vessel.
13. Where possible, all personnel should be involved in these exercises, both ashore and afloat.
14. The roles and responsibilities of all personnel in an emergency situation should be defined.
15. The exercises should be recorded. The names of those who participated should also be recorded.

### **REPORTING OF ACCIDENTS**

16. Vessels operating under this Code are required to report any accidents to the Administration and the company must therefore have a procedure in place. Additionally, all accidents and near accidents should be recorded and reported to the operator/owner, who should implement corrective action, with the aim of improving safety.

### **MAINTENANCE OF THE VESSEL AND EQUIPMENT**

17. Maintenance of the vessel and equipment is an essential ingredient of safety management. The equipment should be checked and tested daily when in use, in addition to the tests referred to in the ONBOARD PROCEDURES section of the Code.

18. There should be procedures for a more detailed inspection and maintenance programme of the vessel and equipment.
19. The frequency of the inspections should be determined by the owner/operator, but every event should be recorded.
20. A checklist could be employed as an aide memoir for the inspection of equipment.

### **REVIEW**

21. Every company/owner should undertake a review of the safety management system of all vessels at least once in every three years.

MAIB Flyer to the Sail Training Industry



## FLYER TO THE SAIL TRAINING INDUSTRY

### TS *ROYALIST*

#### GROUNDING OFF CHAPMAN'S POOL

#### 5 APRIL 2009



TS *Royalist*

At about 1120 on 5 April 2009, the square-rigged sail training vessel, TS *Royalist*, ran aground while leaving Chapman's Pool off the south coast of the UK. There were no resulting injuries to the 32 people on board, which included 23 sea cadets, and the vessel sustained no damage.

While navigating and steering the vessel under power, the master became distracted by overseeing the setting of sails and inadvertently allowed the vessel to deviate from her intended track into shallow waters. The vessel's watertight doors were closed following the grounding and an inspection of the internal compartments confirmed no resulting ingress of water. TS *Royalist* was refloated with the help of Weymouth RNLi lifeboat, and she was then able to return to her home port of Gosport without further assistance.

The master, although a qualified yachtmaster, was not a professional mariner, but served as a relief master for one or two weeks per year. He had not had any assessment at sea during the 3 years leading up to the accident. He had joined TS *Royalist* on the previous day. Although he had navigated yachts to and from Chapman's Pool, he did not recognise the need for additional caution in view of the fact that TS *Royalist* was a larger and more demanding vessel than the yachts he had previously navigated; he was over-confident that his level of planning and monitoring would suffice. He did not plot his intended track, or employ anyone to navigate, take the helm or act as lookout. In deciding to set sail while continuing to navigate, look out and steer the vessel himself, he became distracted. No other crew members were in place to monitor his actions, so his error in deviating from the intended track went undetected and unaddressed, resulting in the grounding.

Although there was no statutory requirement for TS *Royalist* to be operated under a formal safety management system, MSSC did provide a suite of safety management procedures for its fleet. However, with respect to cockpit manning and navigational practices, the causes and circumstances of this accident demonstrate that those procedures were insufficient.

The Association of Sail Training Organisations and the MCA are setting up a working group to consider the management of safety and establish best practice guidelines.

### **Safety Lessons**

- For many sail training vessels, there is no legal requirement to have a Safety Management System. Nevertheless, in order to execute their duty of care, it is essential that sail training organisations ensure that best practice is consistently applied onboard their vessels. Actions should include the provision of detailed safety instructions, and sufficient training, continuation training and monitoring to ensure that the organisation's required standards are achieved and maintained.
- The master is key to the safety of a sail training vessel. It is therefore imperative that his/her selection is carefully considered and that his/her continued knowledge and proficiency are regularly assessed.
- In sail training vessels with a number of crew, permanent and/or trainees, team working is a key requirement. In particular, it is essential that those responsible for the safe navigation of a vessel work closely together, and are free from potential distractions; in vessels with sufficient crew, there should routinely be a helmsman and a dedicated lookout to support the watch officer. When in confined waters, or in heavy traffic, the master must organise the crew, so that he/she is left free to maintain a safety oversight.

This flyer and the MAIB's investigation report are posted on its website:

[www.maib.gov.uk](http://www.maib.gov.uk)

Alternatively, a copy of the flyer and / or report will be sent on request, free of charge.

Marine Accident Investigation Branch  
Mountbatten House  
Grosvenor Square  
Southampton,  
SO15 2JU.

Telephone 023 8039 5500

Email: [maib@dft.gsi.gov.uk](mailto:maib@dft.gsi.gov.uk)

December 2009