CEPT/ERC/RECOMMENDATION 31-04 E (Nicosia 1994)

HARMONISED EXAMINATION PROCEDURES FOR MARITIME RADIO OPERATOR´S CERTIFICATES APPROPRIATE TO VESSELS SAILING IN SEA AREA A1 WHICH USE THE FREQUENCIES AND TECHNIQUES OF THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM ON A NON-COMPULSORY BASIS

Recommendation proposed by the Working Group „Radio Regulatory“ (RR)

Text of the Recommendation adopted by the „European Radiocommunications Committee“ (ERC):

INTRODUCTION

The start of the Global Maritime Distress and Safety System (GMDSS) in February 1992 has made it necessary to harmonise the examination requirements for certificates of maritime radio operators. Harmonised examination procedures for the General Operator´s Ceriticate and Restricted Operator´s Certificate have already been introduced for maritime radio operators perfoming radiocommunication duties on board vessels subject to SOLAS[1].

The GMDSS is to be fully implemented by February 1999 for vessels subject to SOLAS. For vessels not subject to SOLAS, it is becoming clear that it would not be practicable to keep the old distress and safety system running in parallel with the GMDSS indefinitely. This Recommendation describes the examination procedures for maritime radio personnel on board vessels sailing in sea area A1 which use the frequencies and techniques of the GMDSS on a non-compulsory basis.

„The European Conference of Postal and Telecommunications Administrations,

considering

a) that the Maritime Mobile Service and the Maritime Mobile-Satellite Service are services according to the ITU Radio Regulations (Article 1) and governed by the ITU Radio Regulations and national regulations,
b) that provisions of the GMDSS, closely related to the Maritime Mobile Service and the Maritime Mobile-Satellite Service, are also given in SOLAS and other international conventions and resolutions,
c) that it is desirable to establish common standards of competence for the personnel of stations of the Maritime Mobile Service and the Maritime Mobile-Satellite Service operating in accordance with the GMDSS,
d) that the GMDSS entered into force on 1 February 1992,
e) that Administrations are responsible, in accordance with Article 56 of the ITU Radio Regulations, to ensure that the personnel of ship stations and ship earth stations operating in accordance with the GMDSS are adequately qualified to enable efficient operation of the station,
f) that Article 56 also requires the radio personnel of vessels for which a radio installation is not compulsory under international agreements and which use the frequencies and techniques of the GMDSS to be adequately qualified in accordance with the Administrations requirements,
g) that the basic requirements for the format of certificates are set down in Radio Regulations 3869 through to 3876,

[1] International Convention for the Safety of Life at Sea (1974), as amended.

recommends

a) that Administrations issue the CEPT Shor Range Certicate (SRC) for candidates passing the examination described in Annex 1,
b) that developments in IMO should be monitored and this Recommendation should be modified accordingly,
c) that Administrations mutually recognise each other´s certificates when these are issued in accordance with Recommends a),
d) that CEPT SRC certificates issued in accordance with this Recommendation should bear a reference to the Radio Regulations and this Recommendation,
e) that Administrations applying this Recommendation should complete the arrangements for introducing the examination syllabus described in Annex 1 by 1 February 1996 and, in any event, not later than 1 February 1999.“

ANNEX 1

EXAMINATION SYLLABUS FOR THE CEPT SHORT RANGE CERTIFICATE (SRC) FOR RADIOTELEPHONE OPERATORS

The examination should consist of theoretical supplemented by practical tests and/or assessed practical training, and should include at least:

A. GENERAL KNOWLEDGE OF VHF RADIOTELEPHONE COMMUNICATIONS IN THE MARITIME MOBILE SERVICE

A1. The general principles and basic features of the maritime mobile service relevant to vessels not subject to a compulsory fit under the SOLAS Convention

B. DETAILED WORKING KNOWLEDGE OF RADIO EQUIPMENT

B1. The VHF radio installation
B2. Purpose and use of Digital Selective Calling (DSC) facilities

C. OPERATIONAL PROCEDURES OF THE GMDSS AND DETAILED PRACTICAL OPERATION OF GMDSS SUBSYSTEMS AND EQUIPMENT

C1. Search and Rescue (SAR) Procedures in the Global Maritime Distress and Safety System (GMDSS)
C2. Distress, urgency and safety communication procedures in the GMDSS
C3. Protection of distress frequencies
C4. Maritime Safety Information (MSI)
C5. Alerting and Locating Signals

D. OPERATIONAL PROCEDURES AND REGULATIONS FOR VHF RADIOTELEPHONE COMMUNICATIONS

D1. Ability to exchange communications relevant to the safety of life at sea
D2. Regulations, obligatory procedures and practices
D3. Practical and theoretical knowledge of radiotelephone procedures

EXAMINATION SYLLABUS GUIDELINES FOR THE CEPT SHORT RANGE CERTIFICATE (SRC)

A. GENERAL KNOWLEDGE OF VHF RADIOTELEPHONE COMMUNICATIONS IN THE MARITIME MOBILE SERVICE

A1. The general principles and basic features of the maritime mobile service relevant to vessels not subject to a compulsory fit under the SOLAS Convention

1.1. Types of communications in the maritime mobile service
- Distress, urgency and safety communications
- Public correspondence
- Port operations service
- Ship movement service
- Intership communication
- On board communications

1.2. Types of station in the maritime mobile service
- Ship stations
- Coast stations
- Pilot stations, port stations etc.
- Rescue Coordination Centre (RCC)

1.3. Elementary knowledge of radio frequencies and channels appropriate to the VHF maritime mobile band
- The concept of frequency
- Propagation on VHF frequencies
  - Range for voice communications
  - Range for DSC transmissions
- The usage of VHF frequencies in the maritime mobile service
- The concept of radio channel: simplex, semi-duplex and duplex
- Channel plan for VHF, including allocations for the GMDSS
  - Distress and safety channels
  - National channels for small craft safety
  - Intership communications
  - Port operations
  - Ship movement
  - Calling channels
  - Public correspondence channels

1.4. Functionality of ship station equipment
- Sources of ship station equipment
- Batteries
  - Different kinds of batteries and their characteristics
  - Charging
  - Maintenance of batteries

B. DETAILED WORKING KNOWLEDGE OF RADIO EQUIPMENT

B1. The VHF radio installation

1.1. Radiotelephone channels
- Channel selection and controls
- Dual watch facilities and controls

1.2. Basic controls and usage, e.g.
- Connecting the power
- Press to transmit switch
- High/low output power switch
- Volume control
- Squelch control
- Dimmer

1.3. Portable two-way VHF radiotelephone apparatus

1.4. Maritime VHF antennas

B2. Purpose and use of Digital Selective Calling (DSC) facilities

2.1. The general principles and basic features of DSC
- DSC messages
- DSC attempt
- Call acknowledgement
- Call relay

2.2. Types of call
- Distress call
- All ships call
- Call to individual station
- Geographic area call
- Group call

2.3. The Maritime Mobile Service Identity (MMSI) number system
- The nationality identification: Maritime Identification Digits (MID)
- Ship station numbers
- Coast station numbers

2.4. Call categorisation and priority
- Distress
- Urgency
- Safety
- Ship business
- Routine

2.5. Call telecommand and traffic information
- Distress alerts
- Other calls
- Working channel information

2.6. VHF DSC facilities and usage
- The Channel-70 instant alert selector
- DSC data entry and display
  - Updating vessel position
  - Entering traffic information
  - Reviewing received messages
- DSC watchkeeping functions and controls

C. OPERATIONAL PROCEDURES OF THE GMDSS AND DETAILED PRACTICAL OPERATION OF GMDSS SUBSYSTEMS AND EQUIPMENT

C1. Search and Rescue (SAR) Procedures in the GMDSS

1.1. Sea Areas and access to GMDSS facilities

1.2. The role of RCCs

1.3. Organisation of search and rescue

C2. Distress, urgency and safety communication procedures in the GMDSS

2.1. Distress communications via VHF DSC equipment
- DSC distress alert
  - The definition of a distress alert
  - Transmission of a distress alert
  - Transmission of a shore-to-ship distress alert relay
  - Transmission of a distress alert by a station not itself in distress
- Receipt and acknowledgement of VHS DSC distress alert
  - Acknowledgement procedure
  - Receipt and acknowledgement by a coast station
  - Receipt and acknowledgement by a ship station
- Handling of distress alerts
  - Preparations for handling of distress traffic
  - Distress traffic terminology
- On-scene communications
- SAR operation

2.2. Urgency and Safety communications via DSC equipment
- The meaning of urgency and safety communications
- Procedures for DSC urgency and safety calls
- Urgency communications
- Safety communications

C3. Protection of distress frequencies

3.1. Avoiding harmful interference
- Avoidance of the transmission of false alerts
- Status of Channel 70

3.2. Transmissions during distress traffic

3.3. Prevention of unauthorised transmissions

3.4. Test protocols and procedures
- Testing DSC equipment
- Radiotelephone test procedures

3.5. Avoidance of transmissions in VHF guards bands

3.6. Procedures to follow when a false distress alert is transmitted

C4. Maritime Safety Information (MSI)

4.1. The NAVTEX system
- purpose and capabilities, including distress and safety functions

C5. Alerting and Locating Signals

5.1. Purpose and definition

5.2. Emergency Position Indicating Radio Beacons (EPIRBS)
- Registration and coding
- Operation, including automatic and manual activation
  - COSPAS/SARSAT 406 MHz EPIRB
  - Inmarsat-E 1.6 GHz EPIRB
  - VHF-DSC EPIRB
  - 121,5 MHz homing function
- Mounting considerations
- Routine maintenance
  - Testing
  - Checking battery expiry date
  - Checking the float-free mechanism

5.3. Search and Rescue Radar Transponder (SART)
- Operation
  - Operating height
  - Effect of radar reflector
- Range of a SART transmitter

D. OPERATIONAL PROCEDURES AND REGULATIONS FOR VHF RADIOTELEPHONE COMMUNICATIONS

D1. Ability to exchange communications relevant to the safety of life at sea

1.1. Distress communications
- Distress communications
  - The correct use and meaning of the signal MAYDAY
- Distress call
- Distress message
- Acknowledgement of a distress message
  - Obligation to acknowledge a distress message
  - Correct form of acknowledgement
  - Action to be taken following acknowledgement
- The control of distress traffic
  - The correct use and meanings of the signals:
    - SEELONCE MAYDAY
    - SEELONCE DISTRESS
    - PRUDONCE
    - SEELONCE FEENEE
- Transmission of a distress message by a station not itself in distress
  - The correct use and meaning of the signal MAYDAY RELAY

1.2. Urgency communications
- Urgency signal
  - The correct use and meaning the signal PAN-PAN
- Urgency message
- Obtaining urgent medical advice through a Coast Station

1.3. Safety communications
- Safety signal
  - The correct use and meaning the signal SECURITE
- Safety message
- Special procedures for communication with appropriate national organisations on matters affecting safety

1.4. Reception of MSI by VHF radiotelephon

1.5. Awareness of the existence und use of the IMO Standard Marine Navigational Vocabulary
- Knowledge of the following basic signals:
  ALL AFTER; ALL BEFORE; CORRECT; CORRECTION; IN FIGURES; IN LETTERS; I SAY AGAIN; I SPELL; OUT; OVER; RADIO CHECK; READ BACK; RECEIVED; SAY AGAIN; STATION CALLING; TEXT; TRAFFIC; THIS IS; WAIT; WORD AFTER; WORD BEFORE; WRONG;

1.6. Use of international phonetic alphabet

D2. Regulations, obligatory procedures and practices

2.1. Awareness of international documentation and availability of national publications

2.2. Knowledge of the international regulations and agreements governing the maritime mobile service
- Requirement for Ship Station Licence
- Regulations concerning control of the operation of radio equipment by the holder of an appropriate certificate of competence
- National regulations concerning the radio record keeping
- Preservation of the secrecy of correspondence
- Types of call and types of message which are prohibited

D3. Practical and theoretical knowledge of radiotelephone procedures

3.1. Public correspondence and radiotelephone call procedures
- Method of calling a Coast Station by radiotephony
  - Ordering for a manualy switched link call
  - Ending the call
- Calls to ships from Coast Stations
- Special facilities of calls
- Method of calling a coast station by DSC for general communications
- Selecting an automatic radiotelephone call

3.2. Traffic charges
- International charging system
- Accounting Authority Identification Code (AAIC)

3.3. Practical traffic routines
- Correct use of callsigns
- Procedure for establishing communication on intership, public correspondence, small craft safety and port operation and ship movement channels
- Procedure for unanswered calls and garbled calls
- Control of communications