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国际海事组织海员行为示范

MODEL  
COURSE 1.26

# 全球海上遇险与 安全系统限用操作员证书

RESTRICTED OPERATOR'S CERTIFICATE FOR  
THE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (2004)

中华人民共和国海事局 译

中英  
对照

大连海事大学出版社  
DALIAN MARITIME UNIVERSITY PRESS



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《全球海上遇险与安全系统限用操作员证书》

翻 译： 黄耀惊      肖方兵      齐 壮

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# Foreword

Since its inception, the International Maritime Organization (IMO) has recognized the importance of human resources to the development of the maritime industry and has given the highest priority to assisting developing countries in enhancing their maritime training capabilities through the provision or improvement of maritime training facilities at national and regional levels. IMO has also responded to the needs of developing countries for postgraduate training for senior personnel in administrations, ports, shipping companies and maritime training institutes by establishing the world Maritime University in Malmö, Sweden, in 1983.

Following the adoption of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, a number of IMO Member Governments suggested that IMO should develop model training courses to assist in the implementation of the Convention and in achieving a more rapid transfer of information and skills regarding new developments in maritime technology. IMO training advisers and consultants also subsequently determined from their visits to training establishments in developing countries that the provision of model courses could help instructors improve the quality of their existing courses and enhance their implementation of associated Conference and IMO Assembly resolutions.

In addition, it was appreciated that a comprehensive set of short model courses in various fields of maritime training would supplement the instruction provided by maritime academies and allow administrators and technical specialists already employed in maritime administrations, ports and shipping companies to improve their knowledge and skills in certain specialized fields. With the generous assistance of the Government of Norway, IMO developed model courses in response to these generally identified needs and now keeps them updated through a regular revision process, taking into account any amendments to the requirements prescribed in IMO instruments and any technological developments in the field.

These model courses may be used by any training institution and, when the requisite financing is available, the Organization is prepared to assist developing countries in implementing any course.

**E. E. MITROPOULOS**

Secretary-General

## 前 言

国际海事组织(IMO)自成立伊始就认识到人力资源在海运业发展中的重要性,并最优先考虑通过在国家和地区层面上提供或改善培训设备来帮助发展中国家增强其海事培训能力。为应对发展中国家主管机关、港口、航运公司及海事培训机构高层人员对研究生培训的需求,IMO于1983年在瑞典的马尔默成立了世界海事大学。

在《1978年海员培训、发证和值班标准国际公约》(STCW)通过的初期,一些IMO成员国政府就建议IMO应制定示范课程,以帮助对该公约的实施以及对航海技术新发展方面信息和技能的迅速转化。IMO培训顾问和咨询专家在对发展中国家的培训机构进行访问后确定,提供示范课程有助于教员改进现有课程的质量,也有助于提升对相关会议和IMO大会决议的实施。

此外,令人欣慰的是,海事培训领域中一套综合性简短课程将对海事院校提供的授课加以补充,并使得已在海事行政机关、港口和航运公司工作的行政管理人员和技术专家能够提高其在某些专业领域中的知识和技能。为此,在挪威政府的慷慨帮助下,IMO编写了示范课程以应对那些普遍发现的需求,同时考虑到对IMO文件中规定要求的任何修正及该领域内的任何技术发展,通过定期修订程序对示范课程进行更新。

任何培训机构可以使用这些示范课程,在筹措到必需的资金时本组织也准备帮助发展中国家实施任何课程。

E.E.米乔普勒斯

秘书长

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# **1.26 MODEL COURSE**

# Introduction

## ■ Purpose of the model courses

The purpose of the IMO model courses is to assist maritime training institutes and their teaching staff in organizing and introducing new training courses, or in enhancing, updating or supplementing existing training material where the quality and effectiveness of the training courses may thereby be improved.

It is not the intention of the model course programme to present instructors with rigid “teaching package” which they are expected to follow “blindly”. Nor is it the intention to substitute audio-visual or “programmed” material for the instructor’s presence. As in all training endeavours, the knowledge, skills and dedication of the instructor are the key components in the transfer of knowledge and skills to those being trained through IMO model course material.

Because educational systems and the cultural backgrounds of trainees in maritime subjects vary considerably from country to country, the model course material has been designed to identify the basic entry requirements and trainee target group for each course in universally applicable terms, and to specify clearly the technical content and levels of knowledge and skill necessary to meet the technical intent of IMO conventions and related recommendations.

## ■ Use of the model course

To use the model course the instructor should review the course plan and detailed syllabus, taking into account the information provided under the entry standards specifies in the course framework. The actual level of knowledge and skills and the prior technical education of the trainees should be kept in mind during this review, and any areas within the detailed syllabus which may cause difficulties because of differences in between the actual trainee entry level and that assumed by the course designer should be identified. To compensate for such differences, the instructor may be expected to delete from the course, or reduce the emphasis on, items dealing with knowledge or skill already attained by the trainees. He should also identify any academic knowledge, skill or technical training which they may not have acquired.

By analysing the detailed syllabus and the academic knowledge required to allow training in the technical area to proceed, the instructor can design an appropriate pre-entry course or, alternatively, insert the elements of academic knowledge required to support the technical training elements concerned at appropriate points within the technical course. (Ref. 1st and 2nd class Radio Electronic Certificate).

Adjustment of the course objectives, scope and content may also be necessary if in your maritime industry the trainees completing the course are to undertake duties which differ from the course objectives specified in the model course.

## 介 绍

### ■ 示范课程的目的

IMO示范课程的目的是协助海事培训机构及其教学人员组织和引入新的培训课程,提高、更新或补充现有的培训材料,以此改进培训课程的质量和培训效果。

本示范课程计划的意图并不是向教员呈交一个他们期望“盲目遵循”的“教学包”,其意图也不是用视听或“编排的”材料来代替教员的存在。在所有的培训努力中,知识、技能和教员的奉献是向IMO示范课程材料的受训者传授知识和技能的关键构成要素。

由于不同国家接受航海类培训的学员所处的教育体系和文化背景各不相同,所以示范课程采用通用术语设计,可以适应各课程受训目标人群的基本要求,并明确提出了需要满足的IMO有关公约及相关决议案所必需的技能水平。

### ■ 示范课程的使用

为使用示范课程,教员应当审视课程计划和教学大纲细则,考虑课程框架中规定的入学标准所提供的信息。在审视过程中,应当牢记学员知识和技能的实际水准以及从前的技术教育水平,并应当识别出在教学大纲细则范围内由于学员实际入门水准与课程设计者假定的水准之间的差异,可能引起困难的任何部分。为弥补这些差异,希望教员将涉及学员已经掌握的知识和技能的项目从课程中删去或不做重视。此外,教员应当识别出学员可能还没有掌握的任何学术知识、技能或技术训练。

通过分析教学大纲细则以及技术领域培训所需的学术知识,教员可以设计出适当的预科课程,或者在技术课程中的适当处加入技术课程需要的学术知识(参考一级和二级无线电子证书)。

如果完成该课程的学员在其所处的航海事业中要从事有别于本示范课程规定的课程目标的职责,则可能有必要调整课程的目标、范围和内容。

Within the course plan the course designers have indicated their assessment of the time, which should be allotted to each learning area. However, it must be appreciated that these allocations are arbitrary and assume that the trainees have fully met all entry requirements of the course. The instructor should therefore review these assessments each specific learning objective (extension of the time may be advisable).

## ■ Lesson plans

If the course content has been adjusted to suit the trainee intake and any revision of the course objective, the instructor should draw up lesson plans based on the detailed syllabus. The detailed syllabus contains specific references to the textbooks or teaching material proposed to be used in the course.

Where no adjustments has been found necessary in the learning objectives of the detailed syllabus, the lesson plans may simply consist of the detailed syllabus with keywords or other reminders added to assist the instructor in making his presentation of the material.

## ■ Presentation

The presentation of concepts and methodologies must be repeated in various ways until the instructor is satisfied that the trainee has attained each specific learning objective. The syllabus is laid out in learning-objective format and each objective specifies ***what the trainee must be able to perform*** as the learning outcome.

## ■ Implementation

For the course to run smoothly and to be effective, considerable attention must be paid to the availability and use of:

- properly qualified instructors
- support staff
- rooms and other spaces
- real equipment (ref. table A-IV/2 in the STCW95)
- GMDSS communication simulator, where appropriate (ref. table A-IV/2 in the STCW95)
- textbooks, technical papers, and
- other reference material

Thorough preparation is the key to successful implementation of the course. IMO has produced “Guidance of the implementation of IMO model courses”, which deals with this aspect in greater detail and is included as an attachment to this course.

在课程计划中,课程设计者已经表明了其估计的、应分配给每一个学习部分的时间。但是,必须清楚的是,这些分配是主观的,并假设了学员完全符合本课程的入门要求。因此,教员应当对这些估计进行重新审视以符合每一个特定培训目标的需要(建议可以延长学习时间)。

## ■ 教案

在为适应招收的学员以及课程目标的修正而调整课程内容之后,教员应当基于大纲细则拟定教案。大纲细则中有教科书具体的参考书目以及计划用于课程的教学资料。

教案可以包括添加了关键词或提示语的大纲细则,以帮助教员授课,在这种情况下就没有必要调整大纲细则的培训目标。

## ■ 学员展示

必须以不同的方式反复讲授概念和方法,直到学员已经达到了每一个具体的培训目标或培训效果而令教员满意。教学大纲以培训目标的格式排列编排,而且每个目标规定了受训者必须能够做到的事项,以此作为学习成果。

## ■ 实施

为使课程顺利进行和卓有成效,必须充分注意下列资源的获得和使用:

- 完全合格的教员;
- 辅助人员;
- 教室或其他场所;
- 真实设备(参见STCW95公约中的表A-IV/2);
- 适合的GMDSS模拟器(参见STCW95公约中的表A-IV/2);
- 教科书、技术论文;
- 其他参考资料。

充分的准备是成功实施本课程的关键。IMO已经制定了“IMO示范课程实施指南”,它更加详尽地涉及了这一方面并作为本课程的一个附件包含在本课程中。

# Explanatory Memorandum (EU)

## 1. Introduction

The start of the Global Maritime Distress and Safety System (GMDSS) in February 1992 made it necessary to harmonise the examination requirements for certification of maritime radio operators. The CEPT Recommendation T/R 3103 (the European Conference of Postal and Telecommunications Administrations) was developed and approved by the ERC in 1993 to harmonise the examination syllabi for maritime radio personnel operating in the GMDSS and the procedures for conversion of non-GMDSS certificates to GMDSS certificates.

The efficient operation of GMDSS depends on the proficiency of the maritime radio operators. The Recommendation T/R 31-03 concerning the harmonised examination syllabi for the General Operator's Certificate and the Restricted Operator's Certificate has proved to be a valuable tool for improving the competence of operators. The importance of the harmonised procedures is emphasised by the fact that part of the content of T/R 31-03 has been adopted by the IMO into the Model Training Course.

Some part of T/R 31-03 are not relevant any more, notably the temporary procedures for limited examination. Since the period of validity of the limited examinations has ended, these procedures have not been included in the ERC Decision.

In addition to the examination syllabi described in this Decision an ERC Recommendation on the content and format of GOC and ROC certificates is under preparation.

## 2. Need for an ERC Decision

Unfortunately serious operational mistakes still take place on GMDSS frequencies, i.e. in the form of false Distress alerts and incorrect Distress relays. In order to alleviate these problems, the status of the GOC and ROC examination syllabi needs to be enhanced. The 17th meeting of ERC in June 1996 recognised that more efficient provisions than a Recommendation are required and approved in the Work Programme of WGRR the work item of converting T/R 31-3 to an ERC Decision.

After the implementation of the ERC Decision mechanism, the normal outcome of ERC should be in format of a Decision. Decisions are, presumed to be used in matters of significant harmonisation in the radio communications regulatory field. The importance of efficient and timely implementation of the GMDSS system requires the Recommendation T/R 31-03 to be converted to a Decision.

# 说明书/备忘录(欧盟)

## 1. 介绍

从1992年2月开始生效的《全球海上遇险和安全系统》(简称GMDSS)有必要与海事无线电操作员认证考试的要求相协调。CEPT(欧洲邮电机构会议)的T/R 3103号建议令在1993年由ERC开发和批准,用以协调在GMDSS系统下的海事无线电操作人员的考试大纲,以及进行非GMDSS证书和GMDSS证书的转换。

GMDSS的有效运行取决于海上无线电操作员的能力。T/R 31-03号建议令中有关统一通用操作员证书和限用操作员证书考试大纲的内容已被证明是提高操作员竞争力的一个有价值的工具。协调程序的重要性已经被T/R 31-03部分内容强调,并已得到国际海事组织采纳引入示范课程。

T/R 31-03有些部分是与本课程不相关的,特别针对限用级考试的临时程序。由于限用级考试的有效期已经结束。这些程序没有被包括在ERC的决定中。

决定中除了考试大纲外,ERC推荐的关于GOC和“限用操作员”证书的内容和形式也在准备当中。

## 2. ERC决定的必要性

不过,严重的操作失误通常发生在GMDSS的操作频率上,即误报警或不正确的遇险转发。为了缓解这些问题,通用操作员证书和限用操作员证书的考试大纲地位需要进一步地提高。ERC在1996年6月第十七次会议上承认,更有效的规定比推荐是更有必要的,并批准转换T/R 31-3为ERC决议的工作条款(the Work Programme of WGRR)。

等到该决策机制实施后,ERC的正常结果应是一种决定版的格式。这样的决策,被认为是用于无线电通信监管领域重要的协调问题。GMDSS系统有效和及时的实施需要将T/R 31-03的建议转换为决策是非常重要的。

## ERC Decision of 10 March 1999

### On the harmonised examination syllabi for the General Operator's Certificate (GOC) and the Restricted Operator's Certificate (ROC)

(ERC/DEC/(99)01)

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 ITU Radio Regulations (ITU RR) and governed by the ITU Radio Regulations and national regulations;
- b) that provisions closely related to the Maritime Mobile Service and the Maritime Mobile–Satellite Service are also given in the International Convention for the Safety of Lives at Sea (SOLAS) and other IMO 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, are adequately qualified to enable efficient operation of the station;
- d) that the GMDSS entered into force on 1 February 1992;
- e) that administrations are responsible, in accordance with Article 48 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 47 of the ITU Radio Regulations specifies the conditions governing the issue of GMDSS certificates for personnel of ship stations and ship earth stations and the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) regulates the conditions for the issue of the GMDSS certificates;
- g) that IMO resolution A. 703 (17) recommends the training for maritime radio personnel operating in the GMDSS;
- h) that the development in IMO and changes in the GMDSS need to be monitored and consequent modifications introduced in examination syllabi;
- i) that the basic requirements for the content of certificates are set down in Radio Regulations Art. 47.9 through 47.16;



## 1999年3月10日ERC的决议

### 关于协调通用操作员证书和限用操作员证书的考试大纲

#### (ERC/DEC/(99)01)

欧洲邮电机构会议

考虑:

- a) 根据ITU《无线电规则》(ITU RR)并由ITU无线电规则和相关国家规定所管理的海上移动业务和海事移动卫星业务;
- b) 《国际海上人命安全公约》(SOLAS)在和其他国际海事公约和决议中提出的与海上移动业务和海事移动卫星业务密切相关的规定也应该给予考虑;
- c) 根据GMDSS要求,针对海上移动业务站和海事移动卫星业务站的运营,建立共同的员工能力标准使其充分有资格去保证船台和船站的高效运行是可取的;
- d) 1992年2月1日生效的GMDSS;
- e) 根据ITU《无线电规则》第48条,主管机构有责任去保证船台和船站的员工依据GMDSS的规定操作,并有足够的资格去保证船台和船站的高效运行;
- f) ITU《无线电规则》第47条,以及海员培训、发证和值班标准国际公约指定了给船台和船站人员签发GMDSS证书的管理条件;
- g) IMO A. 703(17)决议建议对海上无线电人员进行GMDSS操作训练;
- h) 应该监控国际海事组织的发展和GMDSS变化,及随之而来的修改了的考试大纲;
- i) 在《无线电规则》47.9至47.16中,对证书内容的基本要求;