An Roinn Iompair Turasóireachta agus Spóirt
Department of Transport, Tourism and Sport

# Marine Notice No. 5 of 2014

*Notice to all Seafarers, maritime training establishments, shipping companies, ship owners, ship operators, shipmasters, and all parties concerned.*

## Engineer Officer Certificates of Competency examination procedures – new requirements

### 1. Introduction

This Marine Notice provides guidance on the implementation of the Manila amendments to the International Convention on Standards of Training, Certification and Watch-keeping for Seafarers, 1978 as amended and supercedes Marine Notices 25 – 30 of 1999 in areas relevant to the Manila amendments and engineer officer certificates of competency

The **Manila amendments to the STCW Convention and Code** were adopted on 25th June 2010, marking a major revision of the STCW Convention and Code. The 2010 amendments entered into force on 1st January 2012.

Significant changes are being made to the examination system for engineer officers with the intention of:

- updating the course content and making it more relevant to industry,
- giving recognition and credit for learning achieved through the national accreditation bodies,
- making courses more accessible to serving seafarers,
- aligning work experience and learning with degree programmes.

**Transition timetable**

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|---|---|
| **1 January 2012** | Manila amendments entered into force |
| **1 July 2013** | New entrants commencing training must do so in accordance with the new Manila provisions. All training programs must be in accordance with the new Manila requirements |
| **1 January 2014** | Security training in accordance with the Manila amendments becomes mandatory |
| **1 January 2017** | All certificates must meet STCW Manila requirements. |

The changes to the examination system, outlined in this Marine Notice will be implemented from **September 2014**. The directions as to the examination of engineer officers, marine engine operators and engine room watch ratings are currently under revision. Queries regarding eligibility for examination should be directed to stcw@dttas.ie.

## 2. Existing system

In order to serve on a ship as a marine engineer officer the seafarer must be qualified and hold the relevant certificate of competency for the position being held on board. Certificates of Competency (CoC) are issued by the Marine Survey Office (MSO) of the Department of Transport, Tourism and Sport (DTTAS).

The principle route to Engineer Officer of the Watch (EOOW) certification is by completion of the level 7 ordinary degree in marine engineering, currently offered at the National Maritime College of Ireland, which satisfies the initial training requirements and sea service and generally provides exemptions from DTTAS examinations. Candidates then undertake DTTAS written and oral examinations in engineering knowledge. Other methods of completing the period of initial training are detailed in the examination directions and include completion of engineering apprenticeships or recognised engineering degree courses. Candidates then need to complete sea service and ancillary training courses together with DTTAS examinations.

Second and chief engineer certification is by completion of further periods of sea service and DTTAS written and oral examinations, however exemption from some subjects may be granted to candidates that have completed an ordinary degree in marine engineering at NMCI or other equivalent training.

Candidates for certification at all levels must comply with the requirements of STCW, as appropriate, for training and certification in fire fighting, first aid, security, personal sea survival, personal safety and social responsibilities, and proficiency in survival craft before a certificate of competency may be issued to them.

## 3. Revised System

### Engineer Officer of the Watch

The academic subjects currently known as General Engineering Science I and II will no longer be examined separately and will be replaced by specified modules of the ordinary degree programme in Marine Engineering as set out in the annex.

The professional subjects currently known as General, Motor and Steam engineering knowledge will no longer be examined separately and will be replaced by the equivalent modules of the ordinary degree programme in Marine Engineering as set out in the annex. The DTTAS will only recognize results in Marine Engineering Operations (MARI 7002) when assessment in this module is taken following the completion of approved seagoing service which includes completion of a training record book.

The oral examination in marine engineering procedures and practices at engineer officer of the watch level, conducted by an examiner of the DTTAS, will be retained and must be passed before a certificate of competency may be issued.

Candidates that successfully complete the ordinary degree programme **after September 2014**[1] in marine engineering will no longer be required to sit written DTTAS examinations and may proceed directly to the oral examination.

**Second Engineer**

The academic subjects currently known as technical drawing, mathematics, thermodynamics, mechanics, electro-technology and naval architecture will no longer be examined separately and will be replaced by specified modules of the ordinary degree programme in Marine Engineering as set out in the annex. Candidates that have already passed these modules, or equivalent, will not be required to retake them.

Note that all subjects in the Second Engineer table of the Annex must be passed for second engineer certification. Candidates will then be exempt in these subjects for chief engineer certification.

The professional subjects currently known as General, Motor and Steam engineering knowledge will no longer be examined separately and will be replaced by six new 'professional' modules in marine propulsion (steam/motor), marine auxiliary systems, ship manoeuvring systems, marine safety and environmental protection systems, and planning and resource management.

These new 'professional' modules will cover the relevant subject matter required for second and chief engineer certification in STCW and will be assessed by the NMCI using a combination of continual assessment and examination in accordance with Cork Institute of Technology (CIT) procedures.

A pass mark of at least 40% will be required in each of the new 'professional' modules, without compensation, in order to be accepted for certification at second engineer level.

A mark of at least 50% will be required in each 'professional' module, without compensation, in order to be accepted for certification at chief engineer level. Candidates that obtain a grade of at least 50% when studying for second engineer will not be required to repeat this module for certification at chief engineer level.

The oral examination in marine engineering procedures and practices, at second engineer level, conducted by an examiner of the DTTAS, will be retained and must be passed before a certificate of competency may be issued.

[1] Candidates that passed the ordinary degree programme **prior** to September 2014 and who did **not** obtain an engineer officer of the watch certificate will have to repeat the module assessments for marine engineering operations (MARI 7002) to comply with the new standards.

**Chief Engineer**

The academic subjects currently known as thermodynamics, mechanics, electro-technology and naval architecture will no longer be examined separately and will be replaced by the equivalent modules of the ordinary degree programme in Marine Engineering as set out in the annex. Candidates that have already passed these modules, or equivalent, will not be required to retake them.

Candidates that have not obtained a mark of at least 50% in marine propulsion (steam/motor), marine auxiliary systems, ship manoeuvring systems, marine safety and environmental protection systems, and planning and resource management at second engineer stage will have to retake those modules and obtain at least 50% to progress to chief engineer

The professional subjects currently known as General, Motor and Steam engineering knowledge will no longer be examined separately and will be replaced by two new modules in shipboard technical management and hull maintenance.

These new modules will expand on the subject matter required for second and chief engineer certification in STCW and will be assessed by the NMCI using a combination of continual assessment and examination in accordance with CIT procedures.

The oral examination in marine engineering procedures and practices, at chief engineer level, conducted by an examiner of the DTTAS, will be retained and must be passed before a certificate of competency may be issued.

## 4. 'Non-degree' candidates

Candidates for certification that have not completed a degree in marine engineering or an equivalent degree will be assessed on an individual basis by the DTTAS Examiner of Engineers and may be required to undergo a recognition of prior learning (RPL) assessment by the NMCI/CIT in order to establish equivalence of qualifications and learning with the ordinary degree in marine engineering. Shortfalls in learning and training may be made up by completion of relevant modules.

## 5. Transitional procedures

A number of existing seafarers are 'between' certification at second and chief engineer levels and have completed some of the examinations required for certification. DTTAS written examinations are being discontinued, to be replaced by the modules set out in section 3, from September 2014. Seafarers will not be disadvantaged by the new procedures and in some cases will benefit from previous learning achievement.

Seafarers currently working toward higher grades of engineer certificate should submit details of their progress to the Examiner of Engineers and to the NMCI for an assessment to be made.

## 6. Application procedures

Candidates for certificates of competency should make an application to the Marine Survey Office using form EXN 3 enclosing supporting documentation and the relevant fee at least six weeks before examination.

A notice of eligibility to attempt the relevant professional modules will be issued following assessment of the application and these modules may be taken in any order with the agreement of the NMCI.

Academic modules may be taken at any time with the agreement of the NMCI.

## 7. Training courses and examinations

At present training courses are provided by the National Maritime College of Ireland and will be run each semester of the college year beginning in September and February.

The Second Engineer course will run for a full semester (13 weeks).
The Chief engineer course will run for six weeks.

Candidates should contact the NMCI for course details.

Irish Maritime Administration,
Department of Transport, Tourism and Sport,
Leeson Lane, Dublin 2, Ireland.

14/08/2014

Encl.: Annex

For any technical assistance in relation to this Marine Notice, please contact:
The Marine Survey Office, Leeson Lane, Dublin 2, tel: +353-(0)1-678 3400.
For general enquiries, please contact the Maritime Safety Policy Division, tel: +353-(0)1-678 3418.
Written enquiries concerning Marine Notices should be addressed to:
Maritime Safety Policy Division, Dept. of Transport, Tourism and Sport, Leeson Lane, Dublin 2, Ireland.
email: marinenotices@dttas.ie or visit us at: www.dttas.ie

**Annex to Marine Notice No. 49 of 2014**

| **Engineer Officer of the Watch** | | | |
|---|---|---|---|
| **Existing DTTAS examination or requirement** | **B.Eng (Ord) marine engineering equivalent modules** | **CIT module code** | **RPL possible** |
| Engineering Science I<br><br>Engineering Science II | Technical Drawing 1 | MARI 6004 | Yes |
| | Technological Maths 1 | MATH 6016 | Yes |
| | Mechanics 1 | MARI 6001 | Yes |
| | Mechanics 2 | MARI 6002 | Yes |
| | Introduction to Thermodynamics | MARI 6003 | Yes |
| | Electrical and Electronics 1 | ELEC 6010 | Yes |
| Engineering Knowledge Motor, General and Steam | Introduction to Marine Engineering | MARI 6006 | Yes |
| | Marine Engineering Practice | MARI 6009 | Yes |
| | Marine Engineering Operations* | MARI 7002 | No |
| | Electrical Automation Systems | ELEC 7002 | Yes |
| | HV Operation and protection | ELEC 7020 | Yes |
| Training Record Book | Marine E&E Sea Phase | MARI 6020 | No |
| Sea service | Marine E&E Sea Phase | MARI 6020 | No |
| Modules that include some workshop time and practical experience | Mechanical Workshop 1 | MECH 6020 | Yes |
| | Mechanical Workshop 2 | MECH 6026 | Yes |
| | Mechanical Workshop 3 | MECH 6027 | Yes |
| | Mechanical Workshop 4 | MECH 7012 | Yes |
| | Physics for Marine Engineers | PHYS 6020 | Yes |
| | Marine Instrumentation | PHYS 6026 | Yes |
| | Marine Control Engineering | PHYS 7005 | Yes |
| | Technical Drawing 2 | MARI 6005 | Yes |
| | Electrical and Electronics 2 | ELEC 6014 | Yes |
| | Marine Electrical Power | ELEC 7011 | Yes |
| | Marine Project | MARI 7015 | Yes |

| Second Engineer Officer | | | |
|---|---|---|---|
| **Existing DTTAS examination or requirement** | **B.Eng (Ord) marine engineering equivalent modules** | **CIT module code** | **RPL possible** |
| Engineering Drawing | Technical Drawing 2 | MARI 6005 | Yes |
| Mathematics | Mathematics 3 | MATH 6035 | Yes |
| | Mathematics 4 | MATH 6036 | Yes |
| Thermodynamics | Thermodynamics | MARI 6012 | Yes |
| | Applied Thermodynamics | MARI 7001 | Yes |
| Mechanics | Mechanics 3 | MARI 6010 | Yes |
| | Mechanics 4 | MARI 6011 | Yes |
| | Mechanics 5 | MARI 7004 | Yes |
| Naval Architecture | Naval Architecture principals | MARI 7005 | Yes |
| | Naval Architecture Applications | MARI 7006 | Yes |
| Electrotechnology | Electrical and Electronics II | ELEC 6014 | Yes |
| | Marine Electrical Power | ELEC 7011 | Yes |
| | Marine Control Engineering | PHYS 7005 | Yes |
| | **New Modules to replace DTTAS examinations** | | |
| General Engineering Knowledge | Marine Safety and Environmental Protection Systems* | TBA | No |
| | Marine Auxiliary Systems* | TBA | No |
| | Ship Manoeuvring Systems* | TBA | No |
| Engineering Knowledge Motor | Marine Propulsion Motor* | TBA | No |
| Engineering Knowledge Steam | Marine Propulsion Steam* | TBA | No |
| | Planning and Resource Management* | TBA | No |

| Chief Engineer Officer | | | |
|---|---|---|---|
| **New DTTAS examination or requirement** | **B.Eng (Ord) marine engineering equivalent modules** | **CIT module code** | **RPL possible** |
| New Subject | Marine Technical Management* | TBA | No |
| New Subject | Hull Maintenance* | TBA | No |

* Denotes modules for which a Notice of Eligibility is required.