

# **STCW Convention Familiarisation with 2010 Manila amendments**

## **Chapter III – Engine department**

Lisbon, 1-3 April 2014

Training of Seafarers  
Visits and Inspections  
EMSA

## Regulation III/1

- **"appropriate certificate" replaced by "certificate of competency (CoC)"**
- sub-paragraph **2.2 changed** into:  
"have completed **combined workshop skills training** and an **approved seagoing service** of not less than **12 months** as **part of an approved training programme** which includes **on-board training** that meets the requirements of section A-III/1 of the STCW Code and is **documented in an approved TRB, or otherwise**  
  
**combined workshops skills training** and **approved seagoing service** of not less than **36 months** of which **at least 30 months shall be seagoing service** in the engine department";

## Regulation III/1

➤ **new** sub-paragraph **2.3**

“have performed during the seagoing service, **engine-room watchkeeping duties** under the supervision of the chief engineer or a qualified engineer officer for a period of **not less than six months**”.

➤ **new** sub-paragraph **2.4** (old sub-paragraph 2.3) the text related to education and training “**of at least 30 months which includes on-board training documented in a TRB**” was **deleted**

➤ **new** sub-paragraph **2.5**

“Every candidate for certification shall meet the standard of competence specified in: section A-VI/1, paragraph 2 (**BT**); section A-VI/2, paragraphs 1 to 4 (**SCR**); section A-VI/3, paragraphs 1 to 4 (**AFF**) and section A-VI/4, paragraphs 1 to 3” (**MFA**)

## Section A-III/1

- **new** paragraph **8**

*Knowledge requirements for certain types of machinery **may be omitted** → **limitations must be stated on the certificate and in the endorsement***

- **amended** paragraph **10**

***Clarifications** on the **variations** that can be made in the requirements for **near-coastal voyages***

## Section A-III/1; Table A-III/1

### ***FUNCTION – Marine engineering at the operational level***

#### **Competence**

#### **KUPs**

Maintain a safe engineering watch

- **Engine-room resource management**

Use internal communication systems

Operate main and auxiliary machinery and associated control systems

- Basic construction and operation principles of machinery systems, including: marine diesel engine; marine steam turbine; marine gas turbine; ...
- Safety and emergency procedures for operation of propulsion plant machinery, including control systems
- Preparation, operation, fault detection and necessary measures to prevent damage for the following machinery items and control systems

Operate fuel, lubrication, ballast and other pumping systems and associated control systems

- Operational characteristics of pumps and piping systems, including control systems
- Oily-water separators (or similar equipment) requirements and operation

## Section A-III/1; Table A-III/1

### **FUNCTION – Electrical, electronic and control engineering at the operational level**

#### **Competence**

Operate electrical, electronic and control systems

Maintenance and repair of electrical and electronic equipment

#### **KUPs**

- Basic configuration and operation principles of ... :
  - .1 electrical equipment ... **high-voltage installations** ...
  - .2 electronic equipment ...
  - .3 control systems ...



## Section A-III/1; Table A-III/1

### ***FUNCTION – Maintenance and repair at the operational level***

#### ***Competence***

Appropriate use of hand tools, machine tools and measuring instruments for fabrication and repair on board

Maintenance and repair of shipboard machinery and equipment

#### ***KUPs***

- Methods for carrying out safe emergency/temporary repairs
- Safety measures to be taken to ensure a safe working environment ...
- Use of hand tools, machine tools and measuring instruments
- Use of various types of sealants and packings

- Maintenance and repairs ...
- The use of appropriate specialized tools and measuring instruments
- Design characteristics and selection of materials in construction of equipment
- Interpretation of machinery drawings and handbooks
- Interpretation of piping, hydraulic and pneumatic diagrams

## Section A-III/1; Table A-III/1

***FUNCTION - Controlling the operation of the ship and care for persons on board at the operational level***

### ***Competence***

Ensure compliance with pollution-prevention requirements

Application of leadership and team-working skills

Contribute to the safety of personnel and ship (BT)

### ***KUPs***

- Importance of proactive measures to protect the marine environment



## Regulation III/2

➤ **“appropriate certificate” replaced by CoC**

➤ sub-paragraph **2.1 changed** into:

*“meet the requirements for certification as an officer in charge of an engineering watch **on seagoing ships powered by main propulsion machinery of 750 kW propulsion power or more** and have approved seagoing **service in that capacity**:*

- .1.1 for certification as **second engineer** officer, have not less than **12 months** as qualified engineer officer;
- .1.2 for certification as **chief engineer officer**, have not less than **36 months**; however, this period may be reduced to not less than **24 months if** not less than **12 months** of such seagoing service has been **served as second engineer officer**”

## Section A-III/2; Table A-III/2

### ***FUNCTION – Marine engineering at the management level***

#### ***Competence***

#### ***KUPs***

Manage the operation of propulsion plant machinery

Plan and schedule operations

Operation, surveillance, performance assessment and maintaining safety of propulsion plant and auxiliary machinery

Manage fuel, **lubrication** and ballast operations

## Section A-III/2; Table A-III/2

### ***FUNCTION – Electrical, electronic and control engineering at the management level***

#### ***Competence***

Manage operation of electrical and electronic control equipment

#### ***KUPs***

Manage trouble-shooting, restoration of electrical and electronic control equipment to operating condition

## Section A-III/2; Table A-III/2

### ***FUNCTION – Maintenance and repair at the management level***

#### ***Competence***

Manage safe and effective maintenance and repair procedures

Detect and identify the cause of machinery malfunctions and correct faults

#### ***KUPs***

- Planning maintenance, including statutory and class verifications
- Planning repairs
- Inspection and adjustment of equipment
- Non-destructive examination

## Section A-III/2; Table A-III/2

***FUNCTION - Controlling the operation of the ship and care for persons on board at the management level***

### ***Competence***

***Use of leadership and managerial skills***

### ***KUPs***

- Ability to apply task and workload management
- Knowledge and ability to apply effective resource management
- Knowledge and ability to apply decision-making techniques
- Development, implementation, and oversight of standard operating procedures

## Section B-III/2

❖ ***new provision:***

*identification of at least **seven key elements** to be included in **relevant** training programmes **on high voltage***



## Regulation III/3

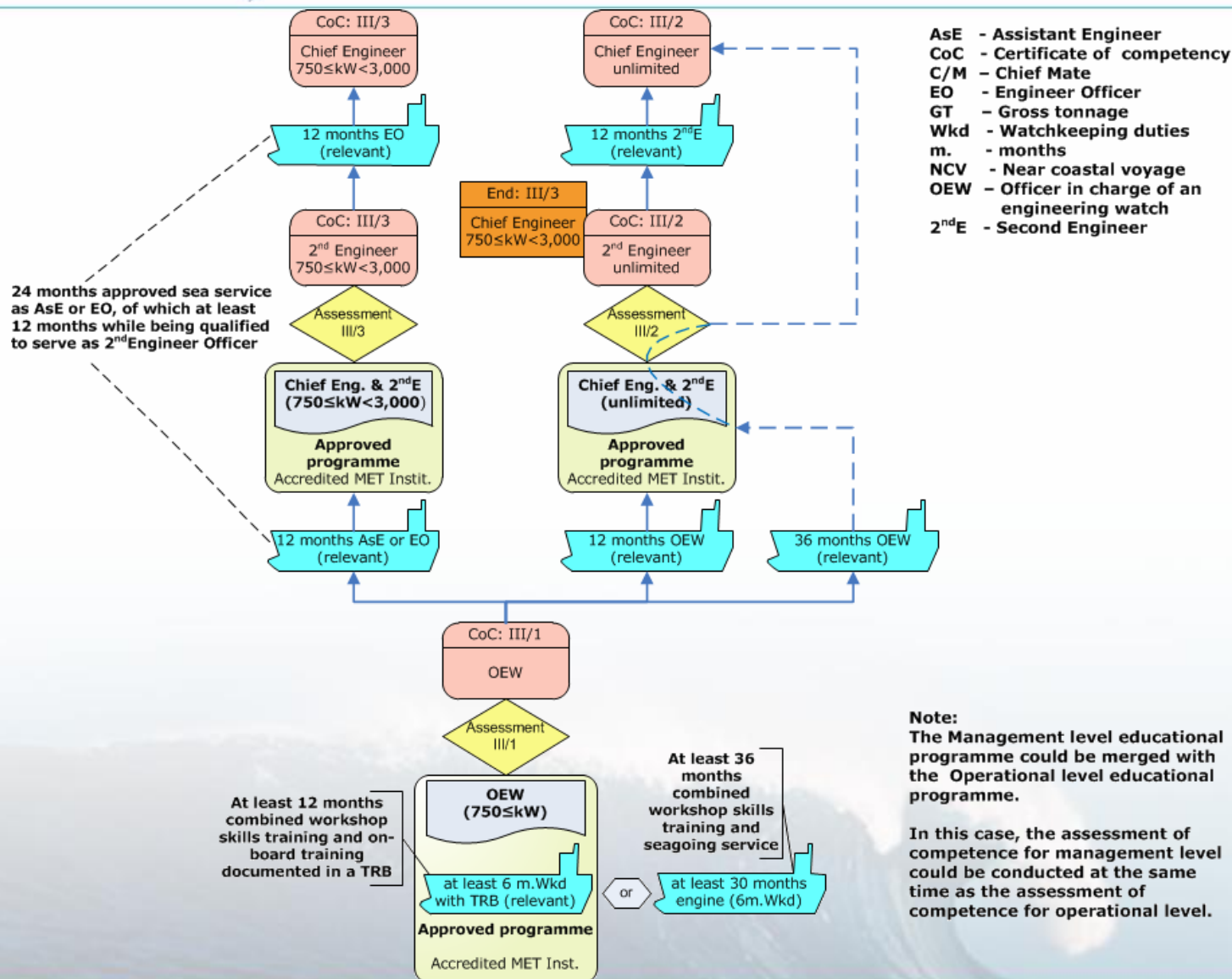
➤ paragraph **3 amended**

"**Every** engineer officer who is qualified to serve as **second engineer** officer on ships powered by main propulsion machinery of **3,000 kW propulsion power or more**, may serve as chief engineer officer on ships powered by main propulsion machinery of less than 3,000 kW propulsion power, **provided the certificate is so endorsed**"

## Section A-III/3

- paragraph **8** on near-coastal voyages **amended**

"To provide for **variations** in knowledge, understanding and proficiency requirements under the different sections listed in column 2 of table A-III/2 and in paragraphs 2.1.1 and 2.1.2 of regulation III/3 **related to ships** powered by main propulsion machinery of **less than 3,000 kW** engaged on **near-coastal voyages**, as considered necessary"



## Regulation III/6

### ***Electro-technical officer (kW ≥ 750)***

**18 years**

1. **12 months** combined **workshop skills** and **seagoing service**  
(**6 months** seagoing service – **part of an approved training**  
programme & **TRB**)

**or**

2. **36 months** combined **workshop skills** and **seagoing service**

**completed** approved education and training

**meet the standards of competence**

**meet** the standards of competence in **A-VI/1, A-VI/2, A-VI/3**  
**and A-VI/4**

## Regulation III/6

➤ paragraphs **3 and 4** → **transitional provisions**

**3 ...** → **gap analysis**

**4 ...** → **may be considered as qualified** if served, in a relevant capacity, **12 months** in the **preceding 60 months** of entry into force of this regulation for the Party

➤ paragraph **5** → **flexibility provision**

**5 ...** → qualified persons **may be considered** by a Party to be **able to perform certain functions** of Section A-III/6

## **Section A-III/6; Table A-III/6**

### ***FUNCTIONS:***

- ***Electrical, electronic and control engineering at the operational level***
- ***Maintenance and repair at the operational level***
- ***Controlling the operation of the ship and care for persons on board at the operational level***



## Regulation III/4

- paragraph **4 deleted** (*relates to previous transitional provisions*)
- **Table A-III/4**

**Boiler watch – permitting approved simulator training,**  
*where appropriate, for demonstration of competence*



## Regulation III/5

**able seafarer engine  
(kW  $\geq$  750)**

18 years

*prerequisite:*

- **meet** the requirements for certification as **rating forming part of an engineering watch**

*required after being qualified as III/4:*

1. **12 months** seagoing service in the engine department,  
**or**  
**6 months** seagoing service in the engine department & **completed approved training**
2. **meet the standards of competence**

## Regulation III/5

➤ paragraphs **3 and 4** → **transitional provisions**

**3 ...** → **gap analysis;**

**4 ...** → **may be considered as qualified if** served , in a **relevant capacity** in the **engine** department, **12 months** in the **preceding 60 months** of entry into force of this regulation for the Party

## **Section A-III/5; Table A-III/5**

### ***FUNCTIONS:***

- ***Marine engineering at the support level***
- ***Electrical, electronic and control engineering at the support level***
- ***Maintenance and repair at the support level***
- ***Controlling the operation of the ship and care for persons on board at the support level***

## Regulation III/7

***electro-technical rating  
(kW ≥ 750)***

*18 years*

*required:*

1. approved seagoing service including **12 months** training and experience,

***or***

**completed approved training** which includes **6 months** seagoing service

***or***

**equivalent qualifications** and **3 months** seagoing service  
***and***

2. **meet the standards of competence**

## Regulation III/7

➤ paragraphs **3 and 5** → **transitional provisions**

**3 ...** → **gap analysis**

**4 ...** → may be **considered** as **qualified if** served, in a relevant capacity, **12 months** in the **preceding 60 months** of entry into force of this regulation for the Party

➤ paragraph **5** → **flexibility provision**

**5...** → a **suitable qualified** person may be considered by a Party to be able to **perform certain functions** of section A-III/7



## **Section A-III/7; Table A-III/7**

### ***FUNCTIONS:***

- ***Electrical, electronic and control engineering at the support level***
- ***Maintenance and repair at the support level***
- ***Controlling the operation of the ship and care for persons on board at the support level***

# Questions ?