

STCW Convention Familiarisation with 2010 Manila amendments

Chapter III – Engine department

Lisbon, 13-15 Nov 2012

Training and Certification of Seafarers
Safety Assessments 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** in Regulation III/1:

“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 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

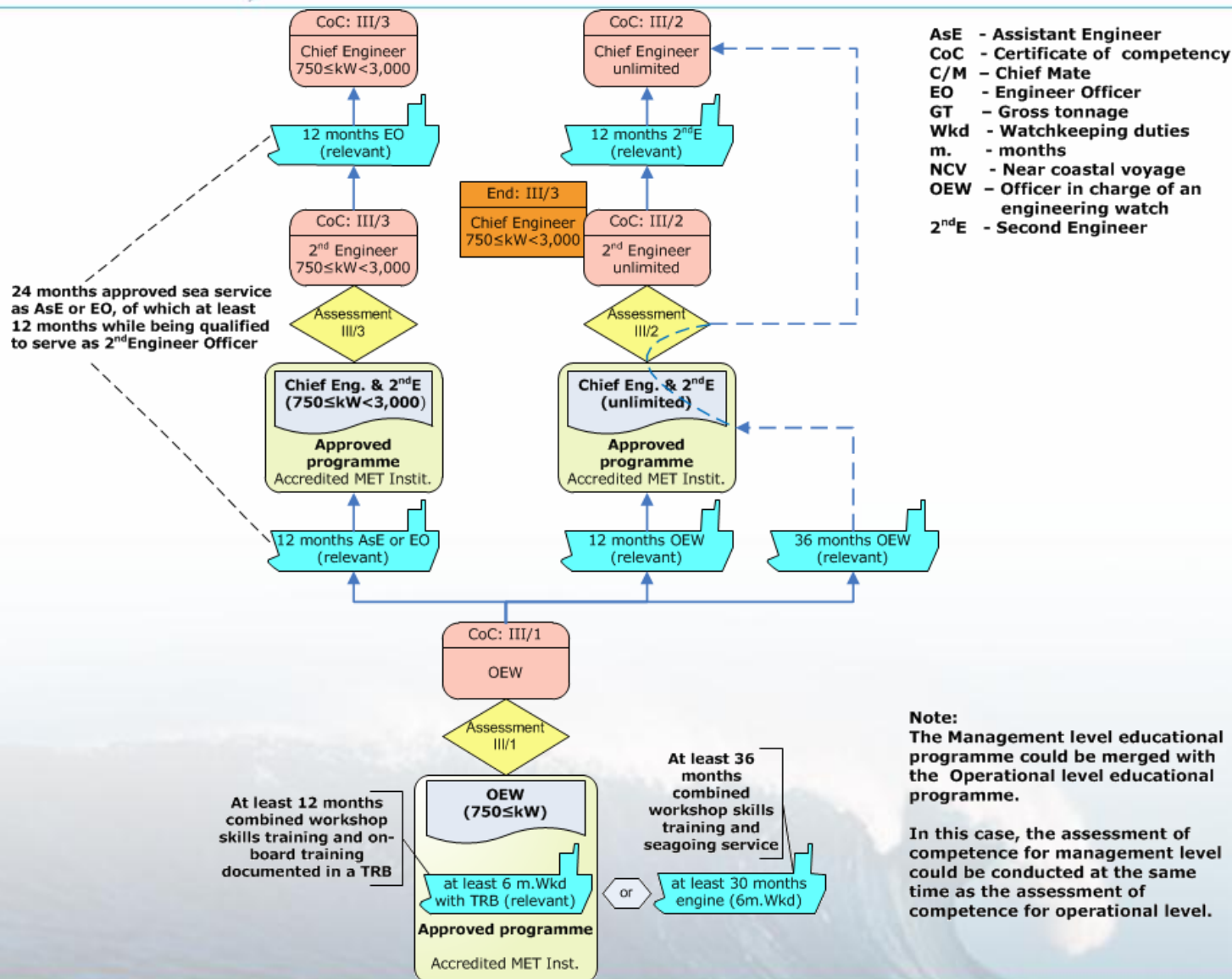
➤ paragraph **3 amended**

"**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 ?