



Training & Certification Guidance: UK Requirements for Engineer Officers and Engineer Operators

Notice to all Owners, Masters, Officers, Ratings and those concerned with maritime training.

This notice replaces MGN 91, MGN 93 (M) and MIN 468 (M)

Summary

This Merchant Shipping Notice (MSN) sets out and explains the regulatory requirements regarding the implementation of training elements applicable under Chapter III of the Standards of Training, Certification and Watchkeeping (STCW) Convention and Code. It outlines the certification structure and examination and training requirements for Merchant Navy engineer officers. The certification system provides a structured progression route for trainee officers and ratings entering the industry to achieve an Engineer Officer of the Watch (EOOW), Second Engineer Officer and Chief Engineer Officer qualifications. It also details the requirements to obtain non-STCW Marine Engineer Operators Licences (MEOL) and Senior Marine Engineer Operators Licences (SMEOL).

This MSN covers:

1. Introduction
2. Engineering Merchant Navy Certificate of Competency (CoC) Structure
3. Mandatory Requirements for Engineer Officers
4. Seagoing Service Requirements
5. Acceptable Special Services Towards Approved Seagoing Service
6. Ancillary and Safety Courses Certification
7. Approved Education and Training Programmes
8. Medical Fitness and Eyesight Standards
9. Conversions to a UK Certificate of Competency (STCW)
10. Marine Engine Operator License (MEOL) and Senior Marine Operator Engine License (SMEOL)
11. Application Procedure
12. Notice of Eligibility (NOE)
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Please note that the Revalidation of all Certificates of Competency is covered in MSN 1861.



1. Introduction

1.1 The Merchant Shipping (Standards of Training, Certification and Watchkeeping) Regulations 2015 implement the requirements of the International Convention and Code on Standards of Training, Certification and Watch-keeping (STCW) 1978, as amended (referred to in this MSN as the 'STCW Convention' and 'STCW Code' respectively), including the provisions prescribing the mandatory minimum requirements for the certification of engineer officers.

1.2 To obtain a United Kingdom (UK) STCW Certificate of Competency you must:

- Meet the minimum age requirements;
- Complete the minimum period of seagoing service;
- Undertake ancillary technical and safety training;
- Complete the appropriate programme(s) of education and training, meeting the minimum vocational and academic standard;
- Meet medical standards (including eyesight);
- Pass an oral examination conducted by an MCA examiner.

If you are considering a seagoing career it is strongly advised that you undergo a medical and sight test, which includes testing of colour and visual acuity, before starting training. Please refer to section 8 of this MSN.

1.3 Prior to joining your first Merchant Navy ship for your first sea voyage you will need to hold the following certificates;

- A valid ENG1 (medical fitness certificate) or accepted equivalent;
- Personal Survival Techniques (STCW Code – Table A-VI/1-1);
- Fire Prevention and Fire Fighting (STCW Code – Table A-VI/1-2);
- Elementary First Aid (STCW Code – Table A-VI/1-3);
- Personal Safety and Social Responsibilities (STCW Code - Table A-VI/1-4);
- Security Awareness (STCW)¹.

All references to Certificates of Competency in this notice pertain to those issued by the MCA, unless otherwise stated. All references to Kilowatt (kW) pertain to the propulsion power of the vessel, unless otherwise stated.

1.4 Relevant organisations:

MNTB: The Merchant Navy Training Board is the UK shipping industry's central body for promoting and developing sector specific education, training and skills. They work to create a structure of qualifications, learning pathways and education and training arrangements, based on national occupational standards, which ensure compliance with statutory standards.

IAMI: The International Association of Maritime Institutions (IAMI) is an association of colleges and other organisations involved in providing education and training for personnel involved with the Merchant Navy.

¹ If you are to serve on ships to which the International Ship and Port Facility (ISPS) Code applies you must hold a Security Awareness certificate (STCW A-VI/6- 4). If you are assigned designated security duties aboard a vessel you must obtain a Designated Security Duties certificate (STCW A-VI/6 - 6 to 8). Please refer to MSN 1865.



The Association and its members have worked together with the MNTB, MCA and industry to develop and maintain occupational standards and to devise schemes of training for entrants at a variety of levels to meet the needs of industry and the requirements of STCW.

SQA: The Scottish Qualifications Authority is a national accreditation and awarding body for qualifications other than degrees. The SQA quality-assures awarding bodies (nautical colleges) that plan to enter candidates for these qualifications. As an awarding body the SQA:

- Devises and develops qualifications;
- Validates qualifications (ensures they are well written and meet the needs of learners and tutors);
- Reviews qualifications to ensure they are up to date;
- Arranges for, assists in, and carries out the assessment of candidates taking SQA qualifications;
- Quality-assures education and training establishments which offer SQA qualifications;
- Issues certificates to candidates.

2. Engineering Merchant Navy Certificate of Competency (CoC) Structure

2.1 The following Certificate of Competency requirements are listed in this MSN:

CoC	Area limitation	Power limitation	STCW Convention regulation	Available additional endorsement
EOOW	Unlimited	Unlimited	III/1	Second Engineer, near coastal, less than 3000 kW, Reg III/3
Second Engineer	Unlimited	Less than 3,000 kW	III/3	Second Engineer, near coastal, less than 9000 kW, Reg III/2
	Unlimited	Unlimited	III/2	Chief Engineer, unlimited area, less than 3,000 kW and Chief Engineer, less than 9000 kW near coastal endorsement, Reg. III/2
Chief Engineer	Unlimited	Less than 3,000 kW	III/3	Chief Engineer, less than 9000 kW near coastal endorsement, Reg. III/2
	Unlimited	Unlimited	III/2	N/A



2.2 Engineering officer Certificates of Competency will carry the following STCW functions:

- Controlling the operation of the ship and care for persons onboard (function 3);
- Marine engineering (function 4);
- Electrical, electronic and control engineering (function 5);
- Maintenance and repair (function 6).

These will be at the granted at the STCW capacities levels Operational (O) and Management (M).

Function	Applicable CoC	
	EOOW	Second / Chief Engineer
3	O	M
4	O	M
5	O	M
6	O	M

3. Mandatory Requirements for Engineer Officers

3.1 For unlimited trading areas:

Certification for Engineer Officers of the Watch (EOOW), unlimited, STCW Convention regulation III/1

To be issued with an EOOW Certificate of Competency you must follow either route **3.2**, **3.3** or **3.4** and be at least 18 years old.

3.2 **Standard MNTB and MCA-approved programmes for Engineer Officer of the Watch (EOOW) unlimited, STCW Convention regulation III/1**

If you are following an MNTB approved officer training programme or an MCA-approved overseas collaborative programme (“one plus one scheme”), to qualify for the issue of this Certificate of Competency you must meet the following requirements:

(a) Since the age of 16, have completed;

- 12 months’ combined seagoing service and workshop skills training. This must include a minimum of 6 months’ seagoing service engaged in watchkeeping or Unmanned Machinery Space (UMS) duties and 3 months’ workshop skills training. Seagoing service must be completed on merchant ships of at least 750 kW and include onboard training that meets the requirements of section A-III/1 of the STCW Code. This training must be documented in an approved MNTB Training Record Book (TRB) and its associated workbook. The remaining 3 months’ combined workshop skills and seagoing service can be made up of either:
 - 1 months’ MCA-approved laboratory time and 2 months’ combined seagoing service and/or industrial training; **or**
 - 3 months’ seagoing service; **or**
 - 3 months’ combined approved workshop and/or industrial training;

(b) Successfully complete approved education and training programme, meeting the standards of competency specified in section A-III/1 of the STCW Code and listed in



- section 7 of this MSN, (for Foundation Degree/ Scottish Professional Diploma **7.2** for HND/HNC **7.3**);
- (c) Hold the applicable ancillary and safety course certificates listed in section 6;
 - (d) Pass the IAMI EOOW written examinations at an approved centre in the following subjects:
 - Engineering Knowledge sections²:
 - General;
 - Motor **and/or** steam;
 - (e) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;
 - (f) Pass the MCA oral examination 'STCW Reg – III/1 Engineer Officer of the Watch motor **and/or** steam' (for the syllabus see MGN 69 or any subsequent publication).

If you successfully complete an MNTB Foundation Degree/ Scottish Professional Diploma you will be exempt from all of the IAMI Engineering Knowledge written examinations.

The Engineering Knowledge written examination and MCA oral examination must be passed within 3 years prior to the date of the issue of your Certificate of Competency.

The completion of either motor **or** steam seagoing service, the motor **or** steam sections of the MNTB TRB, the motor **or** steam IAMI written examinations and the MCA motor **or** steam oral examination will determine the type of ship you will be permitted to work on. Your Certificate of Competency will be limited to either motor ships **or** steam ships unless you meet the requirements listed in either **3.2.1** or **3.2.2**. A summary of the requirements and routes to obtain motor and/or steam ship endorsements can be found in Annex A.

3.2.1 Combined motor ship and steam ship EOOW Certificate of Competency

In order to obtain this endorsement while following either an MNTB or MCA-approved programme, you must provide additional evidence of meeting the following requirements:

- Completion of 4 months' watchkeeping or UMS duties on each type of ship (motor and steam);
- Completion of both the motor and steam sections of the TRB and its associated workbook;
- If you have not completed the Foundation Degree, pass both the motor and steam sections of the IAMI EOOW Engineering Knowledge examination;
- Passing the combined MCA oral examination 'STCW Reg – III/1 Engineer Officer of the Watch motor and steam'.

² These sections must be passed in a single attempt. If you fail one or both of the sections you will need to retake all of the sections again.



3.2.2 Additional endorsement for motor ships or steam ships

If you already hold an EOW Certificate of Competency limited to motor or steam ships, in order to obtain a combined endorsement, you must meet the following requirements:

- Complete at least 4 months' watchkeeping or UMS duties as a trainee/junior engineer officer under the supervision of qualified engineer officers, on the type of ship for which you do not hold an endorsement;
- Complete the motor or steam sections of the TRB (whichever one you do not currently hold an endorsement in);
- If you have not completed the Foundation Degree, pass the IAMI EOW Engineering Knowledge motor or steam examination (whichever one you do not currently hold an endorsement in);
- Pass the MCA oral examination in motor or steam EOW (whichever one you do not currently hold an endorsement in). For the syllabus see MGN 69 or any subsequent publication.

3.3 Experienced seafarer programme

3.3.1 If you are eligible to enter onto this programme you will need to apply directly to an MCA-approved nautical college. Contact details of the nautical colleges offering this programme are available from the MCA website, search www.gov.uk for "MCA approved nautical colleges".

To be eligible to register on a study programme you must meet the following requirements:

- (a) Have completed 24 months' seagoing service on merchant ships of at least 350 kW³;
(b) Hold either:

- An Engine Watch Rating Certificate STCW regulation III/4; **or**
- A Marine Engine Operator Licence (MEOL); **or**
- A Senior Marine Engine Operator Licence (SMEOL);

(c) Hold basic STCW safety training certificates;

- Personal Survival Techniques (STCW Code A-VI/1-1);
- Fire Prevention and Fire Fighting (STCW Code A-VI/1-2);
- Elementary First Aid (STCW Code A-VI/1-3);
- Personal Safety and Social Responsibilities (STCW Code A-VI/1-4);

(d) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent.

If you meet the above requirements and are accepted by a UK nautical college you will then undertake the experienced seafarer route.

3.3.2 Notice of Eligibility

To be issued with a Notice of Eligibility (NOE) to sit an MCA oral examination you must:

- (a) Have completed 33 months' approved seagoing service in an engine department, which includes:

³ Engine room seagoing service consisting of cleaning duties only will not be accepted.



- 9 months' seagoing service in merchant ships of at least 750 kW, which includes 6 months' engaged in watchkeeping or UMS duties;
- (b) Have completed an MNTB Training Record Book (TRB);
- (c) Have completed a workbook supporting your TRB;
- (d) Have evidence of acceptance (college letter) to an approved training and education program meeting the standards specified in section A-III/1 of the STCW Code and detailed in section 7.4.

3.3.3 Exemptions

If you hold engineering qualifications (degree, HND/HNC or equivalent) completed in the UK or an EU member state, you may apply for an exemption from the academic subjects only. The modules of your engineering programme must show a match of at least 70% with the IAMI syllabus and you must secure at least 50% pass marks in the respective modules. To apply for exemptions please contact IAMI whose contact details are available on our website: search www.gov.uk for "Experienced Engineer Seafarer route" or email IAMI directly: iamiexemption@hotmail.co.uk.

3.3.4 Certificate of Competency requirements

To be issued with an EOOW unlimited, III/1, Certificate of Competency you must meet the following requirements:

- (a) Since the age of 16, have obtained 36 months' combined seagoing service (in the engine room) and workshop skills training. This must include:
- Seagoing service of not less than 24 months in merchant ships of at least 350 kW;
 - A further 9 months' seagoing service on merchant ships of at least 750 kW, which includes onboard training that meets the requirements of section A-III/1 of the STCW Code and is documented in an approved MNTB Training Record Book (TRB) and its associated workbook;
 - 3 months' approved workshop skills training;
- (b) Successfully complete approved education and training programme, meeting the standards of competency specified in section A-III/1 of the STCW Code, as listed in section 7.4.1;
- (c) Hold the applicable ancillary and safety course certificates listed in section 6;
- (d) Pass the IAMI EOOW written examinations at an approved centre in the following subjects:
- Engineering Knowledge sections⁴:
 - General,
 - Motor **and/or** steam,
 - Control Engineering;
- (e) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;
- (f) Pass MCA the oral examination 'STCW Reg – III/1 Engineer Officer of the Watch' (for the syllabus see MGN 69 or any subsequent publication).

⁴ The General and Motor sections must be passed in a single attempt. If you fail one or both of the sections you will need to retake both sections again.



The Engineering Knowledge written examination and MCA oral examination must be passed within 3 years prior to the date of the issue of your Certificate of Competency.

The completion of either motor or steam seagoing service, the motor or steam sections of the MNTB TRB, the motor or steam IAMI written examinations and the MCA motor or steam oral examination will determine the type of ship you will be permitted to work on. Your Certificate of Competency will be limited to either motor or steam ships unless you meet the requirements listed in either **3.2.1** or **3.2.2**.

3.4 Alternative route

If you have completed a suitable engineering apprenticeship and/or are a qualified engineer, you may apply through the alternative route. This will include:

- University Graduates or Higher National Diploma (HND)/Higher National Certificate (HNC) holders (preferably in Mechanical or Marine Engineering or in an engineering subject that at least covers four of the following 6 subjects: Mathematics, Engineering Drawing, Applied Mechanics, Applied Heat, Electrotechnology and Naval Architecture);
- Royal Navy Engineers;
- Suitable engineering apprenticeship (NVQ level 3 or above) holders.

If you would like to pursue one of these routes to achieve an MCA Certificate of Competency then you must apply for a Letter of Initial Assessment (LIA) from the Seafarer Training and Certification Branch. This will specify the requirements for achieving your first and subsequent Certificates of Competency. The LIA application form (MSF 4352) is available from the MCA website: search www.gov.uk for "MCA LIA". **The information in this section has been updated by MIN 511.**

You can progress through the MCA Certificate of Competency structure by completing the required training, education and seagoing service specified in your Letter of Initial Assessment. You should submit a copy of your LIA with every application you make for a Certificate of Competency.

3.5 Second Engineer unlimited, STCW Convention regulation III/2

3.5.1 If you were issued with a Letter of Initial Assessment (LIA) for your EOOW Certificate of Competency, you must refer to this for any exemptions from the requirements listed in **3.5.2**.

3.5.2 To qualify for the issue of this Certificate of Competency you must meet the following requirements:

- (a) Have completed 12 months' seagoing service as an EOOW, III/1, on vessels of at least 750 kW in engine power. This time must include at least 9 months in full charge of the watch or with designated UMS duties*;
- (b) Successfully complete an approved education and training programme, meeting the standards of competency specified in section A-III/2 of the STCW Code, as listed in section 7;
- (c) Hold the applicable ancillary and safety course certificates listed in section 6;



(d) Pass the SQA Second Engineer or Management level⁵ examination in:

- Engineering Knowledge sections⁶:
 - General;
 - Motor **and/or** steam;

(e) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;

(f) Pass the MCA oral examination 'STCW Reg – III/2 Second Engineer' (for the syllabus see MGN 69 or any subsequent publication).

* If you are an EOOW working on cruise ships or for the Royal Fleet Auxiliary (RFA), watchkeeping service may be accepted if it has been performed in a subsidiary capacity rather than in full charge of the watch.

The SQA examination 'Engineering Knowledge' is in two parts. The general part will have to be completed by all applicants. You will need to complete either the motor **and/or** steam paper(s). This will be determined by the type of ship you wish to work on. Your Engineering Knowledge written examination pass is valid for a period of 3 years, all other qualifying conditions must be met within this period.

The Engineering Knowledge written examination and MCA oral examination must be passed within 3 years prior to the date of the issue of your Certificate of Competency.

Your Certificate of Competency will be limited to either motor or steam ships depending on the route you have taken up to this point. For example, to obtain the Second Engineer **motor** Certificate of Competency you will; hold an EOOW **motor** Certificate of Competency, have completed your seagoing service on **motor** ships, passed the **motor** section of the SQA Second Engineer or Management level Engineering Knowledge written examination and passed the Second Engineer **motor** MCA oral examination. A summary of the requirements and routes to obtain motor and/or steam ship endorsements can be found in Annex A.

3.5.3 Combined steam and motor ship Second Engineer Certificate of Competency

In order to obtain this endorsement you must provide additional evidence of meeting the following requirements:

- Holding a combined motor and steam ship EOOW unlimited, III/1, Certificate of Competency;
- Completion of at least 6 months' watchkeeping or UMS duties in each type of ship (motor and steam) while holding an EOOW unlimited, III/1, Certificate of Competency;
- Passing both the motor and steam sections of the SQA Second Engineer or Management level Engineering Knowledge examination;
- Passing the combined MCA oral examination 'STCW Reg – III/2 Second Engineer for motor and steam'.

⁵ It is expected that from 01 January 2017 the Second and Chief Engineer 'Engineering Knowledge' examinations will be combined to form one management level 'Engineering Knowledge' examination. If you pass the management examination prior to obtaining your Second Engineer Certificate of Competency you will not need to repeat it to gain a Chief Engineer Certificate of Competency.

⁶ These sections must be passed in a single attempt. If you fail one or both of the sections you will need to retake all of the sections again.



3.5.4 Obtaining an EOW motor or steam ship endorsement:

You can obtain an EOW motor or steam ship endorsement if you hold Second Engineer unlimited, III/2, Certificate of Competency by meeting all the requirements listed in **3.2.2**⁷.

3.5.5 Second Engineer unlimited steam ship endorsement:

To obtain a steam ship endorsement on your Second Engineer unlimited, III/2, motor ship Certificate of Competency you must meet the following requirements:

- Hold an EOW unlimited, III/1, steam ship endorsement;
- Complete at least 6 months' seagoing service in steam vessels as EOW while holding an EOW steam endorsement. This seagoing service must be performed in steam vessels of at least 750 kW;
- Pass the SQA Second Engineer or Management level Engineering Knowledge steam paper;
- Pass MCA oral examination 'Second Engineer Steam' (for the syllabus see MGN 69 or any subsequent publication).

3.5.6 Second Engineer unlimited motor ship endorsement:

To obtain a motor ship endorsement on your Second Engineer unlimited, III/2, steam ship Certificate of Competency, you must meet the following requirements:

- Hold an EOW unlimited, III/1, motor ship endorsement;
- Complete at least 6 months' seagoing service in motor vessels as EOW while holding an EOW motor endorsement. This seagoing service must be performed in motor ships of at least 750 kW;
- Pass the SQA Second Engineer or Management level Engineering Knowledge motor paper;
- Pass the MCA oral examination 'Second Engineer motor ship' EOW (for the syllabus see MGN 69 or any subsequent publication).

3.6 Chief Engineer, unlimited, STCW Convention regulation III/2

3.6.1 If you were issued with a Letter of Initial Assessment (LIA) for your EOW Certificate of Competency, you must refer to this for any exemptions from the requirements listed in section **3.6.2**.

3.6.2 To qualify for the issue of this Certificate of Competency you must meet the following requirements:

(a) You must have obtained either:

- 36 months' seagoing service as an EOW. A minimum of 18 months of this seagoing service must have been on vessels of at least 3000 kW, in charge of the watch* or with designated UMS duties **and** the remainder on vessels of at least 750 kW; **or**

⁷ If you complete the management level 'Engineering Knowledge' examination and the management level SQA academic subjects examinations (see section **7.2.2**), you will only need to complete the applicable oral exam: MCA 'STCW Reg — III/3 EOW Engineer' (motor or steam).



- 12 months' seagoing service as a Second Engineer III/2, **OR** Chief Engineer III/2, on vessels of less than 9000 kW. A minimum of 9 months of this seagoing service must be on vessels of at least 3000 kW, **and** the remainder on vessels of at least 750 kW;
- (b) Hold a valid Second Engineer unlimited, III/2, Certificate of Competency **or** have met all of the requirements for a Second Engineer unlimited, III/2, Certificate of Competency listed in **3.5.2**;
- (c) Hold the applicable ancillary and safety course certificates listed in section **6**;
- (d) Successfully complete an approved education and training programme, meeting the standards of competency specified in section A-III/2 of the STCW Code as listed in section **7**;
- (e) Pass the SQA Chief Engineer or Management level examination in ⁸:
- Engineering Knowledge sections⁹:
 - General,
 - Motor **and/or** steam;
- (f) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;
- (g) Pass the MCA oral examination 'STCW Reg – III/2 Chief Engineer' (for the syllabus see MGN 69 or any subsequent publication)¹⁰.

The Engineering Knowledge written examination and MCA oral examination must be passed within 3 years prior to the date of the issue of your Certificate of Competency.

* If you are an EOOW working on cruise ships or for the Royal Fleet Auxiliary (RFA), watchkeeping service may be accepted if it has been performed in a subsidiary capacity rather than in full charge of the watch.

Your Certificate of Competency will be limited to either motor or steam ships depending on the route you have taken up to this point. For example, to obtain the Chief Engineer **motor** Certificate of Competency you will; hold a Second Engineer **motor** Certificate of Competency, have completed your seagoing service on **motor** ships, passed the **motor** section of the SQA Chief Engineer or Management level Engineering Knowledge written examination and passed the Chief Engineer **motor** MCA oral examination. A summary of the requirements for motor and/or steam ship endorsements can be found in Annex A.

3.6.3 Combined motor or steam ship Chief Engineer Certificate of Competency

In order to obtain this endorsement you must provide additional evidence of meeting the following requirements:

- Holding a combined motor and steam ship Second Engineer unlimited, III/2, Certificate of Competency;

⁸ It is expected that from 01 January 2017 the Second and Chief Engineer 'Engineering Knowledge' examinations will be combined to form one management level 'Engineering Knowledge' examination. If you pass the management examination prior to obtaining your Second Engineer Certificate of Competency you will not need to repeat it to gain a Chief Engineer Certificate of Competency.

⁹ These sections must be passed in a single attempt. If you fail one or both of the sections you will need to retake all of the sections again.

¹⁰ Candidates progressing straight from EOOW, unlimited, III/1, will have to undertake both the Second Engineer and Chief Engineer oral examination.



- Completion of at least 6 months' seagoing service as a Second Engineer on each type of ship (motor and steam);
- Passing both the motor and steam sections of the SQA Chief Engineer or Management level Engineering Knowledge written examination;
- Passing the combined MCA oral examination 'STCW Reg – III/2 Chief Engineer' (for the syllabus see MGN 69 or any subsequent publication).

3.6.4 **Obtaining an EOW motor or steam ship endorsement:**

You can obtain an EOW motor or steam ship endorsement if you hold a Chief Engineer, unlimited, III/2, Certificate of Competency by completing the applicable MCA oral exam: 'STCW Reg – III/1 EOW' motor or steam.

3.6.5 **Chief Engineer unlimited steam ship endorsement:**

To obtain a steam ship endorsement on your Chief Engineer unlimited, III/2, motor ship Certificate of Competency you must meet the following requirements:

- Hold an EOW unlimited, III/1, steam ship endorsement;
- While holding an EOW unlimited, III/1, steam endorsement, complete at least 6 months as an EOW on steam vessels. This seagoing service must include 3 months on vessels of at least 1500 kW and 3 months on vessels 3000 kW or more;
- Pass the SQA Management or Chief Engineer Engineering Knowledge steam paper;
- Pass the MCA oral examination 'Chief Engineer steam' (for the syllabus see MGN 69 or any subsequent publication).

3.6.6 **Chief Engineer unlimited motor endorsement:**

To obtain a motor ship endorsement on your Chief Engineer unlimited, III/2, steam ship Certificate of Competency, you must meet the following requirements:

- Hold an EOW unlimited, III/1, motor ship endorsement;
- While holding an EOW unlimited, III/1, motor endorsement, complete at least 6 months as an EOW on motor vessels. This seagoing service must include 3 months on vessels of at least 1500 kW and 3 months on vessels 3000 kW or more;
- Pass the SQA Management or Chief Engineer Engineering Knowledge motor examination;
- Pass the MCA oral examination 'Chief Engineer motor' (for the syllabus see MGN 69 or any subsequent publication).

3.7 **Second and Chief Engineer Officers, less than 3000 kW, unlimited area, STCW Convention regulation III/3**

3.7.1 A summary of the requirements for limited Certificates of Competency and near coastal endorsements can be found in Annex B.

3.7.2 **Second Engineer, less than 3000 kW, unlimited area, STCW Convention regulation III/3**

To qualify for the issue of this Certificate of Competency you must meet the following requirements:



- (a) Hold an EOOW unlimited, III/1, Certificate of Competency;
- (b) Complete 12 months' approved seagoing service as an assistant engineer officer, or an officer in charge of the engineering watch, or with designated UMS duties;
- (c) Hold the applicable ancillary and safety course certificates listed in section 6;
- (d) Successfully complete an approved education and training programme, meeting the standards of competency specified in section A-III/3 of the STCW Code and covered by passing the following SQA written examinations in:
 - SQA General Engineering Science (GES) I and II (if applicable¹¹);
 - Applied Marine Engineering;
 - Advanced Hotel Services;
 - Chief Engineer Statutory and Operational Requirements;
- (e) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;
- (f) Pass the applicable MCA oral examination: 'STCW Reg – III/3 Second Engineer less than 3000 kW' (for the syllabus see MGN 69 or any subsequent publication).

3.7.3 Chief Engineer, less than 3000 kW, unlimited area, STCW Convention regulation III/3

To qualify for the issue of this Certificate of Competency you must meet the following requirements:

- (a) Either:
 - Hold a Second Engineer, less than 3000 kW, unlimited area, III/3, Certificate of Competency **and** complete at least 12 months' seagoing service on vessels of at least 750 kW; **or**
 - Hold a Second Engineer unlimited, III/2, Certificate of Competency;
- (b) Hold the applicable ancillary and safety course certificates listed in section 6;
- (c) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;
- (d) Pass the MCA oral examination 'STCW Reg – III/3 Chief Engineer less than 3000 kW' (for the syllabus see MGN 69 or any subsequent publication).

3.8 Near coastal trading area

3.8.1 "Near-coastal" means an area of operation restricted to 150 miles from a safe haven on the coast of the United Kingdom and 30 miles from Ireland. A summary of the requirements for limited Certificates of Competency and near coastal endorsements can be found in Annex B.

3.8.2 Second Engineer, less than 3000 kW, near coastal endorsement, STCW Convention regulation III/3

If you have met all the requirements listed in 3.2 for an EOOW, unlimited, III/1, Certificate of Competency you may also be issued with a Second Engineer, less than 3000 kW, near coastal endorsement. To qualify for the issue of this Certificate of Competency you must meet the following requirements:

¹¹ If you have completed an MNTB approved Engineering Foundation Degree or the Marine Engineering HND you will not need to complete SQA General Engineering Science (GES) I and II. If you have completed a Marine Engineering HNC, you will need to check with the awarding body to see if you are exempt.



- (a) Have completed 6 months' seagoing service above that required to be eligible to sit the EOOW oral examination;
- (b) Pass the MCA oral examination 'Second Engineer less than 3000 kW near coastal' (for the syllabus see MGN 69 or any subsequent publication).

The 'Second Engineer less than 3000 kW near coastal' oral examination may be taken at the same time as the 'EOOW oral examination' if the seagoing service requirement has been met.

3.8.3 Second Engineer, near coastal, less than 9000 kW, STCW Convention regulation III/2

To qualify for this endorsement you must already hold a Second Engineer, less than 3000 kW, III/3, Certificate of Competency, and since gaining this have completed 8 months' seagoing service in full charge of the watch while holding this Certificate of Competency on vessels of at least 750 kW.

3.8.4 Chief Engineer less than 9000 kW, near coastal endorsement, STCW Convention regulation III/2

To qualify for this endorsement you must already hold a Chief Engineer, less than 3000 kW, III/3, Certificate of Competency, and since gaining this have completed 8 months' seagoing service, of which at least:

- 4 months' seagoing service must be on vessels of at least 750 kW; **and**
- 4 months' seagoing service must be on vessels of at least 3000 kW.

4. Seagoing Service Requirements

4.1 Before being considered for an MCA oral examination you are required to provide evidence of having completed the full amount of qualifying seagoing service applicable to the Certificate of Competency you are applying for.

4.2 Calculating seagoing service

Seagoing service is defined as time spent onboard a ship, relevant to the issue of the certificate or other qualification being applied for. Seagoing service must be in the engineering department reckoned from the date of engagement to the date of discharge. At least 6 months of the qualifying seagoing service must have been performed within the 5 years immediately preceding the date your application is received by the MCA.

A month is defined as a calendar month or 30 days if made up of periods less than 1 month.

4.3 Requirements for seagoing service

Seagoing service may be performed on vessels of any flag.

Seagoing service must be performed on merchant ships proceeding to sea. Proceeding to sea means, beyond the categorised waters around the coast of the United Kingdom or beyond the harbour limits for waters outside the United Kingdom.

At least 75% of the required seagoing service must be performed while the vessel is underway on sea passage. Seagoing service (steaming time) will be calculated from the seagoing service testimonials.



For Second and Chief Engineer Certificates of Competency; you may count a total of 25% or 3 months (whichever is least) of the required qualifying service; at lay-up, at maintenance berth, at extended anchorage or in dry dock.

If you hold a Letter of Initial Assessment (LIA), this will detail your seagoing service requirements.

4.4 Requirements for watchkeeping service

If you are applying for an Engineer Officer of the Watch Certificate of Competency, a minimum of 6 months of your seagoing service must be spent performing engine room watchkeeping duties or UMS duties. This duty can be performed in a subsidiary capacity.

If you are applying for a Second Engineer Certificate of Competency, a minimum of 9 months of your seagoing service must be spent performing engine room watchkeeping duties while in **FULL CHARGE** of the entire watch or performing UMS duties. However, if you are an EOOW working on a cruise ship or for the Royal Fleet Auxiliary (RFA), watchkeeping service may be accepted if it has been performed in a subsidiary capacity rather than in full charge of the watch.

Watchkeeping service is defined as time spent on an engine room watch, for a minimum of 4 hours out of every 24 hours.

4.5 Required documentary evidence

You will be required to submit documentary evidence of seagoing service for each Certificate of Competency you apply for. Proof of seagoing service must be documented by either Merchant Navy discharge book entries or certificates of discharge. Entries must be supported by testimonials completed and signed by the Chief Engineer. Examples of seagoing testimonials can be found in Annex C. The testimonials must cover your conduct and ability and include details of seagoing and watchkeeping service as applicable.

Your seagoing service testimonials must clearly detail your watchkeeping duties, specifying how much of your sea time was spent performing watchkeeping and indicating in what capacity this was performed, i.e. in a subsidiary capacity or in full charge of the watch. If your seagoing service was spent on a vessel with unmanned machinery spaces and you performed duties associated with this operation, your testimonials must state this.

5. Acceptable Special Services Towards Approved Seagoing Service

5.1 Sporadic use of main propelling machinery

Service performed on ships where, for considerable periods, the main propelling machinery is not used (such as yachts, movable Oil Rigs etc), is reckoned as one and a half (1.5) times the number of days actually spent underway. In no case can this exceed the total time served under a crew agreement. Sea service testimonials must state the number of days actually spent underway with the main propelling machinery in full use.

5.2 Categorised or sheltered water service

Service on ships operating on lakes or rivers, or within category C and D waters as defined in MSN 1837 (or any subsequent amendment), may be accepted at half rate. A restricted Certificate of Competency will be issued on the basis of sheltered water service only. 3 months' seagoing service is required before this restriction can be lifted.



5.3 Offshore service

Service in self-propelled offshore units, where the unit is undertaking seagoing passages or well shifts, or when engaged in maintaining a fixed station by continuous use of the main propelling machinery, will be accepted at full rate.

Service in self-propelled offshore units, where the unit is fixed on station in either drilling or service mode, will be accepted at full rate. Such service will be accepted up to a maximum of half the minimum required watchkeeping service, as counting towards the minimum required time to be spent on watchkeeping or UMS duties on the main propelling machinery.

Service in an offshore unit which is not self-propelled but is termed a ship under the Merchant Shipping Act 1995 will be accepted at half rate. However, such service will not be accepted as counting towards the minimum required time to be spent on watchkeeping or UMS duties (this must be completed on self-propelled vessels meeting the requirements listed above).

5.4 Royal Navy personnel

Seagoing service performed on Royal Navy ships will be assessed according to the same criteria as seagoing service performed on Merchant Navy ships. Service performed while holding a Royal Navy Marine Engineer Officer of the Watch Certificate will be assessed as if it had been performed while in possession of a Certificate of Competency for an Engineer Officer of the Watch in the Merchant Navy, issued in accordance with regulation III/1. This does not, however, entitle the holder to be issued with such a certificate unless all other requirements, including a pass in the MCA oral examination, are met.

The above candidates for a Second Engineer Certificate, issued in accordance with STCW regulation III/2 or III/3, must perform at least 3 months' merchant vessel familiarisation seagoing service in the engine room as an officer in charge of the engineering watch, while holding an EOOW unlimited, III/1, Certificate of Competency.

5.5 Service on gas turbine ships

Service on gas turbine ships can be used at full rate for both motor and steam certification. Engineer Officers holding motor or steam Certificates of Competency are eligible to serve on this type of vessel; however, some additional training related to the gas turbine machinery may be required for senior Engineer Officers.

6. Ancillary and Safety Courses Certification

6.1 The ancillary and safety courses that are required for the issue of each Certificate of Competency are contained in the table below. On successful completion of the relevant course you will be issued with an STCW certificate of proficiency.

6.2 The ancillary technical courses form part of the education and training specified in sections; A-III/1, or A-III/2 of the STCW Code. The safety courses form part of mandatory training for; emergency, occupational safety, security, medical care and survival functions specified in chapter A-VI STCW of the STCW Code.

6.3 You must successfully complete **all** the required ancillary and safety training applicable to the regulation of your Certificate of Competency.



Ancillary/ Safety Course Certificate	Certificate of Competency					STCW Code Reference	Updating required
	MEOL/ SMEOL	III/1	III/2	III/3, near coastal	III/3, unlimited area		
Personal Survival Techniques ^a	Yes	Yes	Yes	Yes	Yes	A-V1/1-1	•
Fire Prevention and Fire Fighting ^a	Yes	Yes	Yes	Yes	Yes	A-VI/1-2	•
Elementary First Aid ^a	Yes	Yes	Yes	Yes	Yes	A-V1/1-3	
Personal Safety and Social Responsibility ^a	Yes	Yes	Yes	Yes	Yes	A-V1/1-4	
Proficiency in Survival Craft and Rescue Boats ^b	Yes	Yes	Yes	Yes	Yes	A-V1/2	•
Advanced Fire Fighting ^b	Yes	Yes	Yes	Yes	Yes	A-VI/3	•
Medical First Aid ^b	Yes	Yes	Yes	Yes	Yes	A-V1/4-1	
High Voltage (operational) ^c		Optional		Optional		A-III/1	
High Voltage (management) ^c			Optional		Optional	A-III/2	
HELM (operational) ^c		Yes		Yes		A-III/1	
HELM (management) ^c			Yes		Yes	A-III/2	

- From 01 January 2017 you will be required to provide documentary evidence of either completing the training course or updating your training within the preceding 5 years for all Certificate of Competency applications. To satisfy Port State Control requirements you will need to hold evidence onboard your vessel of completing or updating your training within the last 5 years. For further information relating to STCW course certificates, including their validity, please refer to MSN 1865.

6.4 For the issue of a Certificate of Competency:

- a** - The MCA will accept certificates issued under the authority of any IMO 'White List' country.
- b** - The MCA will accept certificates issued under the authority of any EU Member State, as well as; Canada, New Zealand and South Africa¹².
- c** – Course must be MCA-approved.

6.5 Human Element Leadership and Management (HELM)

6.5.1 HELM forms part of the education and training requirements to obtain a UK Certificate of Competency. HELM aims to provide you with the leadership and managerial skills required by the STCW Code.

6.5.2 If you are following an MNTB-approved officer training programme leading to the issue of an Engineer Officer of the Watch Certificate of Competency, no additional training is required and you will not need to submit a course completion certificate. If you are following an MCA-approved overseas collaborative programme (one plus one scheme),

¹² The MCA will accept these certificates of proficiency issued by India and Pakistan up until 01 January 2017. After this date the MCA may accept some certificates of proficiency issued by DG Shipping-approved training providers, for details please refer to our website, search www.gov.uk for "MCA ATP".



you should consult with the UK parent college as agreements will be made with the MCA on a programme by programme basis.

6.5.3 HELM Management is a standalone course. You must submit a course completion certificate regardless of the education and training route you have followed.

6.5.4 The following Royal Navy training will be accepted in place of HELM training:

- HELM (O) - Royal Navy Engineering Watchkeeping Officers (EWKO), Petty Officers and Ratings who hold First Line Management 'Leadership and Management (L&M). Royal Navy ratings who have completed Royal Navy Senior Ratings' Command Course;
- HELM (M) - Royal Navy CQ1 and CQ2 who hold level 4 L&M certificate (issued by the Royal Navy).

6.6 High voltage

The high voltage course forms part of the education and training required to obtain a UK Certificate of Competency. A high voltage (over 1000V) system is where voltage is generated and distributed at high voltage or transformed to and distributed at high voltage. It does not include systems where high voltage is utilised locally e.g. ignition systems, radio transmission, radar and other navigational equipment.

If you are following an MNTB approved Foundation Degree or HNC/HND you may submit a college letter confirming that the high voltage operational element has been completed as part of your MCA-approved education and training programme. This letter will be accepted in lieu of a High Voltage operational certificate. High voltage at the management level is a standalone course for all seafarers, you must submit a course completion certificate, regardless of the education and training route you have followed.

You will not be required to have a High Voltage operational or management certificate if you do not intend to work on ships with high voltage systems. If you do not submit a course completion certificate your certificate of competency will not be valid for service on ships fitted with high voltage (over 1000 V) systems after 31 December 2016.

6.7 Further information

Further information about: Personal Survival Techniques, Fire Prevention and Fire Fighting, Elementary First Aid, Personal Safety and Social Responsibility, Proficiency in Survival Craft and Rescue Boats, Advanced Fire Fighting, Medical First Aid, Medical Care and other required shipboard courses can be found in MSN 1865.

7. Approved Education and Training Programmes

7.1 Education and training programmes leading to the issue of a Certificate of Competency must be approved by the MCA. The MCA will ensure that each programme meets the STCW regulatory requirements. The MCA will monitor and audit all nautical colleges that offer training and education leading to the issue of an STCW Certificate of Competency. Details of the approval process are contained in Annex D.

To ensure learning outcomes can be successfully delivered, the MCA requires a classroom attendance rate of at least 80%. Shipping companies and nautical colleges may set a higher rate of attendance.



7.2 Standard MNTB approved Foundation Degree/ Scottish Professional Diploma

The Foundation Degree (FD) is a route into the Merchant Navy for officer cadets. The MCA, together with the Merchant Navy Training Board (MNTB), will approve nautical colleges that run these programmes to ensure STCW regulatory requirements for training and competency are met.

Foundation Degrees consist of alternating periods of seagoing service and college-based work, which encompass the training and education requirements for a Certificate of Competency.

The contact details for the nautical colleges offering MCA/MNTB approved Foundation Degrees are available from the MCA website: go to www.gov.uk and search “nautical colleges”.

7.2.1 Engineer Officer of the Watch

On successful completion of an MCA/MNTB approved Foundation Degree, you will be issued with a university letter confirming your academic qualification and a university certificate. Either document will provide you with the evidence that you have successfully completed the education and training programme required under the STCW Code.

7.2.2 Second Engineer and Chief Engineer:

Providing you obtain a pass of at least 50% in your Foundation Degree, you will be exempt from all SQA Second and Chief Engineer examinations apart from the Engineering Knowledge examination. If you did not achieve this pass mark, you will need to pass the applicable SQA Second Engineer Officer examinations and SQA Chief Engineer Officer examinations in the academic subjects where 50% was not achieved.

The SQA Second Engineer and Chief Engineer Officer academic examinations are currently:

Second Engineer: Mathematics, Applied Mechanics, Applied Heat, Engineering Drawing, Electro Technology and Naval Architecture.

Chief Engineer: Applied Mechanics, Applied Heat, Electro-Technology and Naval Architecture.

If necessary, your applicable SQA pass certificate(s) will provide you with evidence that you have successfully completed the education and training programme required under the STCW Code.

It is expected that from 01 January 2017 the Second Engineer and Chief Engineer academic examinations will be combined to form management examinations for each subject: Mathematics, Applied Mechanics, Applied Heat, Engineering Drawing, Electro Technology and Naval Architecture. If required, your SQA Management pass certificate(s) will provide you with evidence that you have successfully completed the education and training programme required under the STCW Code for Second Engineer Officers and Chief Engineer Officers.

7.3 Standard MNTB/MCA-approved HND/HNC programme

7.3.1 The Higher National Diploma/Certificate (HND/HNC) route will enable you to gain the education and training required for the issue of a Certificate of Competency. The MCA, together with the Merchant Navy Training Board (MNTB), will approve nautical colleges that run these programmes to ensure the STCW regulatory requirements for training and



competency are met. Nautical colleges offering this route will need approval from the SQA in order to administer SQA exams.

Upon successful completion of your Marine Engineering HND and HNC, you will be issued with a certificate of successful completion, a certificate of achievement from the awarding body and a transcript(s) detailing the results of module exam results. This will provide you with evidence that you have successfully completed the education and training programme required under the STCW Code.

7.3.2 Completing the HNC only

The completion of a HNC will enable you to attain the education and training at the standard required for the issue of an EOOW unlimited, III/ 1, Certificate of Competency. If you obtain a HNC and wish to progress to a higher Certificate of Competency, you will need to complete all SQA examinations at Second or Chief Engineer level listed in section 7.3.3.

7.3.3 Second Engineer and Chief Engineer:

Providing you obtain a pass of at least 50% in each academic subject in your HND, you will be exempt from all SQA Second and Chief Engineer examinations, apart from the Engineering Knowledge examinations. You must provide the MCA with a copy of your course transcript(s) so that we can identify the exemptions you are entitled to.

If you did not achieve this pass mark you will need to pass the applicable SQA Second Engineer Officer examinations and Chief Engineer Officer examinations in the academic subjects where 50% was not achieved. If you only obtained an HNC you will need to pass **all** SQA Second Engineer and Chief Engineer Officer academic examinations.

The SQA Second Engineer and Chief Engineer Officer academic examination(s) are currently:

Second Engineer: Mathematics, Applied Mechanics, Applied Heat, Engineering Drawing, Electro Technology and Naval Architecture.

Chief Engineer: Applied Mechanics, Applied Heat, Engineering, Electro Technology and Naval Architecture.

If necessary, your applicable SQA pass certificate(s) will provide you with evidence that you have successfully completed the required education and training programme specified in the STCW Code.

It is expected that from 01 January 2017 the Second Engineer and Chief Engineer academic examinations will be combined to form management examinations for each subject: Mathematics, Applied Mechanics, Applied Heat, Engineering Drawing, Electro Technology and Naval Architecture. If required, your SQA Management pass certificate(s) will provide you with evidence that you have successfully completed the education and training programme required under the STCW Code for Second Engineer Officers and Chief Engineer Officers.

Contact details for nautical colleges offering MCA/MNTB approved HND/HNC programmes are available from the MCA website: go to www.gov.uk and search "nautical colleges".



7.4 Experienced seafarers programme

7.4.1 Engineer Officer of the Watch

The educational training requirements are covered by the completion of the IAMI General Engineering Science A & B programme. To qualify for the Engineer Officer of the Watch, III/1, Certificate of Competency, you must obtain a minimum 50% pass in each section.

Upon successful completion of your General Engineering Science A & B programme you will be issued with a certificate of successful completion and a certificate of achievement from your nautical college. This will provide you with evidence that you have successfully completed the education and training programme required under the STCW Code for an EOWW.

7.4.2 Second Engineer

To progress you will need to complete a Second Engineer course at an MCA-approved nautical college. This will lead onto the SQA academic examinations. To qualify for the Second Engineer, III/2, Certificate of Competency, you must obtain a pass mark of at least 50% in all SQA Second Engineer academic examinations at this level. These are currently: Mathematics, Applied Mechanics, Applied Heat, Engineering Drawing, Electro Technology and Naval Architecture.

Your SQA pass certificate(s) will provide you with evidence that you have successfully completed the education and training programme required under the STCW Code for Second Engineer Officers.

7.4.3 Chief Engineer

To progress you will need to complete a Chief Engineer course at an MCA-approved nautical college. This will lead onto the SQA academic examinations. To qualify for the Chief Engineer, III/2, Certificate of Competency, you must obtain a pass mark of at least 50% in all SQA Chief Engineer academic examinations at this level. These are currently: Applied Mechanics, Applied Heat, Electro Technology and Naval Architecture.

Your SQA pass certificate(s) will provide you with evidence that you have successfully completed the education and training programme required under the STCW Code for Chief Engineer Officers.

It is expected that from 01 January 2017 the Second Engineer and Chief Engineer course will be combined and lead onto management examinations in the following academic subjects: Mathematics, Applied Mechanics, Applied Heat, Engineering Drawing, Electro Technology and Naval Architecture. If required, your SQA Management pass certificate(s) will provide you with evidence that you have successfully completed the education and training programme required under the STCW Code for Second Engineer Officers and Chief Engineer Officers.

8. Medical Fitness and Eyesight Standards

8.1 For any Certificate of Competency, you must meet the medical fitness and eyesight standards as required by the Merchant Shipping (Maritime Labour Convention) (Medical Certification) Regulations 2010 (S.I. 2010/737) as amended. Details on the application of those regulations are found in MSN 1839, or any subsequent amendment.

8.2 The seafarer medical examination includes a sight test for both colour vision and visual acuity. Failure to meet the statutory requirements will mean that an unrestricted medical certificate cannot be issued. **If you are considering a seagoing career it is strongly advised that you have a medical and sight test, which includes testing of both**



colour and visual acuity, before you start the training. You can arrange a separate sight test with a local optometrist by taking along an Application for Seafarer Vision Test Form (MSF 4100). The form can be obtained by contacting an MCA Marine Office or the MCA Seafarer Health and Safety Branch: seafarer.s&h@mcga.gov.uk.

8.3 For any Certificate of Competency you must produce a valid medical fitness certificate, either:

- (a) The UK medical fitness certificate, currently known as an ENG1, issued by an MCA-approved medical practitioner; **or**
- (b) A certificate issued by the Administration of any country whose medical fitness certificate is recognised as equivalent to the UK ENG1.

Updated lists are available from the MCA website.

The medical fitness certificate must specify the date of examination, the period of validity and any restriction applied.

9. Conversions to a UK Certificate of Competency (STCW)

If you apply through this route to obtain your first Certificate of Competency, you will not be eligible for any exemptions when applying for a higher certificate. All Certificates of Competency will be limited to motor ships only.

9.1 Holders of a UK Fishing Certificate of Competency

If you hold a UK Engineering Class 1 or 2 Fishing Certificate of Competency, you may be eligible to convert to an EOW unlimited, III/1, Certificate of Competency.

9.1.1 Class 1 Fishing Certificate of Competency

If you hold a UK Engineering Class 1 (Fishing) Certificate of Competency, you must meet the following requirements to obtain an EOW unlimited, III/1, (STCW) Certificate of Competency (motor ship only):

- (a) Complete 3 months' workshop skills training;
- (b) Hold the applicable ancillary and safety course certificates listed in section 6;
- (c) Pass the IAMI EOW written examinations at an MCA-approved centre, in Engineering Knowledge, sections:
 - Motor;
 - Control Engineering;
- (d) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;
- (e) Pass MCA oral examination 'STCW Reg – III/1 Engineer Officer of the Watch motor' (for the syllabus see MGN 69 or any subsequent publication).



Holders of Class 1 Fishing Certificates of Competency may be issued the following additional endorsements if they can meet all the requirements of 9.1.1:

For a Second Engineer less than 3,000 kW, unlimited area, Certificate of Competency with a less than 9,000 kW, near coastal endorsement you must¹³:

- (a) Complete an additional 6 months' seagoing service on Merchant Navy vessels of at least 750 kW;
- (b) Pass the MCA oral examination 'STCW Reg – III/3 Second Engineer less than 3000 kW' (for the syllabus see MGN 69 or any subsequent publication).

To obtain Chief Engineer less than 3,000 kW, unlimited area, Certificate of Competency with a less than 9,000 kW, near coastal endorsement you must¹⁴:

- (a) Complete an additional 12 months' seagoing service on Merchant Navy vessels of at least 750 kW;
- (b) Pass the MCA oral examination 'STCW Reg – III/3 Chief Engineer less than 3000 kW' (for the syllabus see MGN 69 or any subsequent publication).

9.1.2 Class 2 Fishing Certificate of Competency

If you hold a UK Engineering Class 2 (Fishing Vessel) Certificate of Competency, you must meet the following requirements to obtain an EOW unlimited, III/1, (STCW) Certificate of Competency (motor ship only):

- (a) Be at least 18 years of age;
- (b) Have completed at least 33 months' seagoing service on fishing and merchant vessels. This must include a minimum of 6 months' seagoing service engaged in watchkeeping or UMS duties on merchant ships of at least 750 kW, incorporating onboard training that meets the requirements of section A-III/1 of the STCW Code and is documented in an approved MNTB Training Record Book;
- (c) Complete 3 months' workshop skills training;
- (d) Hold the applicable ancillary and safety course certificates listed in section 6;
- (e) Successfully complete approved education and training programme, meeting the standards of competency specified in section A-III/1 of the STCW Code and covered by passing the following examinations at an approved centre:

- IAMI EOW written examinations in the following subjects:
 - Engineering Knowledge, comprised of sections¹⁵:
 - General;
 - Motor;
 - Control Engineering; and
- General Engineering Science A&B set by IAMI or General Engineering Science papers I and II set by the SQA;

¹³ This can be issued at the same time as your EOW unlimited, III/1, Certificate of Competency. You will need to complete the combined oral covering the 'STCW Reg – III/1 Engineer Officer of the Watch motor' and the 'STCW Reg – III/3 Second Engineer less than 3000 kW' syllabi.

¹⁴ This can be issued at the same time as your EOW unlimited, III/1, Certificate of Competency. You will need to complete the combined oral covering the 'STCW Reg – III/1 Engineer Officer of the Watch motor' and 'STCW Reg – III/3 Chief Engineer less than 3000 kW' syllabi.

¹⁵ The General and Motor sections must be passed in a single attempt. If you fail one or both of the sections you will need to retake both sections again.



- (f) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;
- (g) Pass the MCA oral examination 'STCW Reg – III/1 Engineer Officer of the Watch motor' (for the syllabus see MGN 69 or any subsequent publication).

9.2 Holders of an Engineer Yacht Certificate of Competency

9.2.1 If you hold an Y4 Certificate of Competency, you must meet the following requirements to obtain an EOW unlimited, III/1, Certificate of Competency (motor ship only):

- (a) Be at least 18 years of age;
- (b) Have completed at least 33 months' seagoing service on yachts or merchant vessels. This must include a minimum of 6 months' actual seagoing service engaged in watchkeeping or UMS duties on ships of at least 750 kW;
- (c) Complete 3 months' approved workshop skills training;
- (d) Hold the applicable ancillary and safety course certificates listed in section 6;
- (e) Successfully complete approved education and training programme, meeting the standards of competency specified in section A-III/1 of the STCW Code and covered by passing the following EOW written examinations at an approved centre:

- IAMI Engineering Knowledge, comprised of sections¹⁶:
 - General;
 - Motor;
 - Control Engineering; **and**
- General Engineering Science A&B set by IAMI **or** General Engineering Science papers I and II set by the SQA;

- (f) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;
- (g) Pass the MCA oral examination 'STCW Reg – III/1 Engineer Officer of the Watch motor' (for the syllabus see MGN 69 or any subsequent publication).

9.2.2 If you hold a Y3 Certificate of Competency, you must meet the following requirements to obtain a Second Engineer, unlimited area, less than 3000 kW, III/3¹⁷, Certificate of Competency, with Second Engineer, near coastal, less than 9000 kW, III/2, endorsement (motor ship only):

- (a) Be at least 18 years of age;
- (b) Have completed at least 42 months' seagoing service on yachts or merchant vessels of 350 kW or more. This must include at least 9 months' actual seagoing service engaged in watchkeeping or UMS duties on ships of at least 750 kW;
- (c) Complete 3 months' workshop skills training;
- (d) Hold the applicable ancillary and safety course certificates listed in section 6;
- (e) Pass IAMI EOW written examinations at an approved centre in the following subjects:

- Engineering Knowledge, sections:
 - Motor;
 - Control Engineering;

¹⁶ The General and Motor sections must be passed in a single attempt. If you fail one or both of the sections you will need to retake both sections again.

¹⁷ This Certificate of Competency will permit you to work as an EOW unlimited, III/1.



(f) Successfully complete an approved education and training programme, meeting the standards of competency specified in section A-III/3 of the STCW Code and covered by passing the following SQA written examinations in:

- Applied Marine Engineering;
- Advanced Hotel Services;
- SQA General Engineering Science (GES) I and II;

(g) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;

(h) Pass the MCA oral examination: 'STCW Reg – III/3 Second Engineer less than 3000 kW' (for the syllabus see MGN 69 or any subsequent publication).

9.2.3 If you hold an Y1 or Y2 Certificate of Competency you must meet the following requirements to obtain a Second Engineer unlimited, III/2, Certificate of Competency (motor ship only):

(a) Be at least 18 years of age;

(b) Have completed 54 months' general service on yachts of which at least 18 months' seagoing service in charge of a watch or with designated UMS duties on vessels of at least 750 kW;

(c) Successfully complete an approved education and training meeting the standards of competency specified in section A-III/2 of the STCW Code as listed in section 7.4.2;

(d) Complete 3 months' workshop skills training;

(e) Hold the applicable ancillary and safety course certificates listed in section 6;

(f) Pass SQA Second Engineer or Management examination in:

- Engineering Knowledge sections¹⁸:

- General;
- Motor;

(g) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;

(h) Pass the MCA oral examination 'STCW Reg – III/2 Second Engineer' (for the syllabus see MGN 69 or any subsequent publication).

9.3 Holders of Certificates of Competency issued by non-UK administrations

If you hold a Certificate of Competency issued by a non-UK, you may be eligible to enter the UK education and training system.

9.3.1 Second Engineer unlimited, STCW Convention regulation III/2, Certificate of Competency

You must hold a valid EOOW unlimited, III/1 or Second Engineer unlimited, III/2, Certificate of Competency issued under the authority of an Administration included in the IMO list of STCW Parties ("White List") and complete all the requirements listed in section 3.5 'Second Engineer unlimited, III/2'. You will need to obtain a pass mark of at least 50% in all SQA Second Engineer Officer or Management level examinations.

If you do not hold a Certificate of Competency from a country we recognise for the issue of a CEC you must complete 3 months' workshop skills training meeting the MCA requirements*.

¹⁸ These sections must be passed in a single attempt. If you fail one or both of the sections you will need to retake all of the sections again.



9.3.2 Chief Engineer unlimited, STCW Convention regulation III/2, Certificate of Competency

You must hold a valid Second Engineer unlimited, III/2, Certificate of Competency or a Chief Engineer unlimited, III/2, Certificate of Competency issued under the authority of an Administration included in the IMO list of STCW Parties (“White List”) and complete all the requirements listed in section 3.6 ‘Chief Engineer unlimited, III/2’. You will need to obtain a pass mark obtain of at least 50% in all SQA Chief Engineer or Management level examinations.

If you do not hold a Certificate of Competency from a country we recognise for the issue of a Certificate of Equivalent Competency (CEC) you must also:

- Provide evidence of completing 3 months’ workshop skills training meeting the MCA requirements*;
- Pass the SQA Second Engineer Mathematics and Drawing Examinations.

* Documentary evidence of training in compliance with workshop syllabus must be submitted with your application.

10. Marine Engine Operator License (MEOL) and Senior Marine Operator Engine License (SMEOL)

10.1 These qualifications will allow you to serve as Marine Engine Operator on merchant vessels with a propulsion (registered) power of between 350 kW and 750 kW, where STCW requirements do not apply.

If you hold an MEOL you will be eligible to serve as a Chief Engineer Officer on vessels of less than 750 kW, operating within the UK near coastal area (150 miles from the safe haven).

If you hold an SMEOL you will be eligible to serve as a Chief Engineer Officer on vessels of less than 750 kW power without area restrictions. **You should always check with the relevant government administration that the SMEOL can be used within their trading areas.**

10.2 Marine Engine Operator Licence (MEOL)

To qualify for the issue of an MEOL, you must meet the following requirements:

- (a) Be at least 18 years of age;
- (b) Hold the applicable ancillary and safety course certificates listed in section 6;
- (c) Have successfully completed:
 - I. An apprenticeship in one of the following: Marine Engineering, Diesel Engine Maintenance, Heavy Vehicle Maintenance, Agriculture Machinery Maintenance or a relevant (marine and mechanical engineering) apprenticeship acceptable to the MCA and complete:
 - o Seagoing service, the amount specified by the MCA after an examiner assessment¹⁹, as a trainee marine engine operator on vessels of at least 200 kW; **and**

¹⁹ You will need to submit your engineering qualifications to the MCA who will assess them and specify a period of seagoing service that you must complete.



- Complete the Approved Engine Course (AEC); **or**
 - II. A Diploma (level 2) in Maritime Studies Able Seafarer Engine (for information please contact Merchant Navy Training Board, enquiry@mntb.org.uk) and 6 months' seagoing service as a trainee engine operator or as a rating forming part of the engineering watch while holding an ERWRC; **or**
 - III. Able Seafarer engine certification; **or**
 - IV. 24 months' shore employment in an engineering background acceptable to the MCA and 3 months' qualifying seagoing service as a trainee marine engine operator on a vessel of at least 200 kW and an Approved Engine Course (AEC);
- (d) Hold a valid ENG1 (medical fitness certificate) or accepted equivalent;
- (e) Pass the MCA oral examination for MEOL (as per Annex E).

10.3 Letter of Initial Assessment

You may apply to the MCA for a Letter of Initial Assessment (LIA) for an MEOL if you:

- Hold relevant engineering qualifications and experience and are not sure where you stand with your existing qualifications,
- Have Royal Navy engineering experience.

The LIA application form MSF 4352 can be downloaded from our website. Search www.gov.uk for "MSF 4352".

This letter will provide you with the appropriate guidance towards qualifying for this licence.

10.4 Senior Marine Engine Licence (SMEOL)

To qualify for the issue of an SMEOL, you must meet the following requirements:

- (a) Obtain 6 months' seagoing service as an MEOL on vessels of at least 200 kW, while holding an MEOL;
- (b) Pass the MCA oral examination for an SMEOL (Annex E).

Your MEOL and SMEOL will not require revalidation.

11. Application Procedure

- 11.1 The application form, MSF 4275, details the procedure and fee to obtain a Certificate of Competency. You must complete this and submit it to the MCA with the relevant fee and the documents listed on the form.
- 11.2 The application form is available to download from our website, go to www.gov.uk and search "MSF 4275".
- 11.3 If you are required to pass an MCA oral examination and meet the requirements specified on the application form, you will be issued with a Notice of Eligibility (NOE).



11.4 With the exception of passports, the supporting documents (evidence) must be original. Applicants for a UK Certificate of Competency should submit a photocopy of their passport attested by:

- A Notary Public (UK or Foreign);
- MCA-approved nautical colleges;
- Your maritime administration;
- Another MCA-approved organisation.

12. Notice of Eligibility (NOE)

12.1 You will be issued with an NOE once you have met the requirements specified below. The NOE will allow you to book an oral examination at an MCA Marine Office and provide you with a list of any outstanding documents that you will need to submit prior to the issue of your Certificate of Competency.

12.2 **Prior to the issue of your NOE you must submit:**

- The appropriate fee;
- An ENG1 (medical fitness certificate) or accepted equivalent²⁰;
- Passport (attested copy);
- 2 passport-size photos attested by a counter signatory;
- Proof of the required seagoing service applicable to the Certificate of Competency you are applying for.

12.3 **For the EOOW, unlimited, III/1 Certificate of Competency you must also submit:**

- STCW Basic safety training:
 - Personal Survival Techniques (STCW Code – Table A-VI/1-1);
 - Fire Prevention and Fire Fighting (STCW Code – Table A-VI/1-2);
 - Elementary First Aid (STCW Code – Table A-VI/1-3);
 - Personal Safety and Social Responsibilities (STCW Code - Table A-VI/1-4),
- A Completed Training Record Book;
- A letter from the college confirming your attendance on the program.

12.4 **NOEs are valid for 5 years from the date of issue.** The date of issue will be stamped on your NOE. Once this period has elapsed²¹ you must make a new application with the supporting documentation and the appropriate fee.

13. MCA Oral Examination

13.1 If you are undertaking the EOOW education and training programme, you must deposit your MNTB TRB at the Marine Office where you are scheduled to sit the examination at least 2 working days prior to your examination date.

²⁰ To go to sea you must have obtained a valid medical fitness certificate. While this may have expired when you apply for your NOE, it must be valid at the time when we issue your Certificate of Competency.

²¹ If you do not pass your oral examination within this timescale, your application will be rejected and the appropriate fee will be taken.



- 13.2 You must take your current passport (with visa if applicable) to the oral examination as a means of identification.
- 13.3 At least 6 months of the qualifying seagoing service must have been performed within the 5 years immediately preceding the issue of an NOE.
- 13.4 It is recommended that you complete all of the education and training before attempting the oral examination, as this will provide you with the knowledge on which the examination is based.

The examiner will record the result of your oral examination on your NOE.

- 13.5 **Your oral examination pass is valid for a period of 3 years.** This must be in date at the time of the issue of your Certificate of Competency. The NOE must be returned to the MCA with any outstanding documentary evidence.
- 13.6 If you fail your oral examination you will need to apply to the MCA for another NOE and pay an additional fee. Details of how to do this can be found on the NOE.
- 13.7 If a candidate fails an oral examination re-sits may be taken at the following intervals:
- Second attempt** - at least 2 weeks after the initial examination;
- Third attempt** - at least 2 weeks after the second attempt;
- Subsequent attempts** - at least 3 months after the previous attempt.
- 13.8 Time periods between examinations can be reduced at the discretion of the MCA examiner. Where a candidate exhibits a lack of basic competency across the syllabus or makes fundamental errors in areas of safety, the examiner may impose a seagoing service penalty which the candidate must complete before re-sitting the examination.
- 13.9 Further information about the NOE and oral examination syllabus can be found in MGN 69 or any subsequent publication.

14. The Issue of Your Certificate of Competency

- 14.1 At least 6 months of the qualifying seagoing service must have been performed within the 5 years immediately preceding the issue of your Certificate of Competency. A Certificate of Competency will not be issued until the MCA has received all the documentary evidence confirming you have met the required standard.
- 14.2 **The Engineering Knowledge written examination and MCA oral examination must be passed within 3 years prior to the date of the issue of your Certificate of Competency.**
- 14.3 The appropriate Certificate of Competency will be issued and is valid for a period of 5 years from the date that the qualifying conditions were met. Your ENG1 seafarer medical (or equivalent) must be valid at the time when we issue your Certificate of Competency. Any outstanding fees must be received by the MCA before an NOE or Certificate of Competency can be issued.
- 14.4 **You must check you meet the current regulatory requirements when you make an initial application AND at the time you submit your NOE pass for the issue of your Certificate of Competency.**



14.5 Further information and guidance is available from our website go to www.gov.uk and search “Engineer CoC”.

15. Fraudulent Certificates and Seagoing Service

15.1 The MCA checks that all of the information you submit in support of your application is accurate and true, we:

- Verify all Certificates of Competency and Watchkeeping certificates issued by foreign administrations;
- Check and verify ancillary and safety course certificates;
- Verify seagoing service testimonials and discharge book entries;
- Only accept original course completion certificates.

15.2 If you submit fraudulent seagoing service records or certificates we will not allow you to proceed with your application. We reserve the right not to let you apply again until after a period specified by the MCA’s Chief Examiner.

15.3 We may also refer your application to the MCA Enforcement Branch who may decide to proceed against you in court.



More Information

Seafarer Training and Certification
Maritime and Coastguard Agency
Bay 2/11
Spring Place
105 Commercial Road
Southampton
SO15 1EG

Tel : +44 (0) 23 8032 9 (please see our website or application form for number)
Fax : +44 (0) 23 8032 9N/A
e-mail: engineering@mcga.gov.uk

General Inquiries: infoline@mcga.gov.uk

MCA Website Address: www.dft.gov.uk/mca

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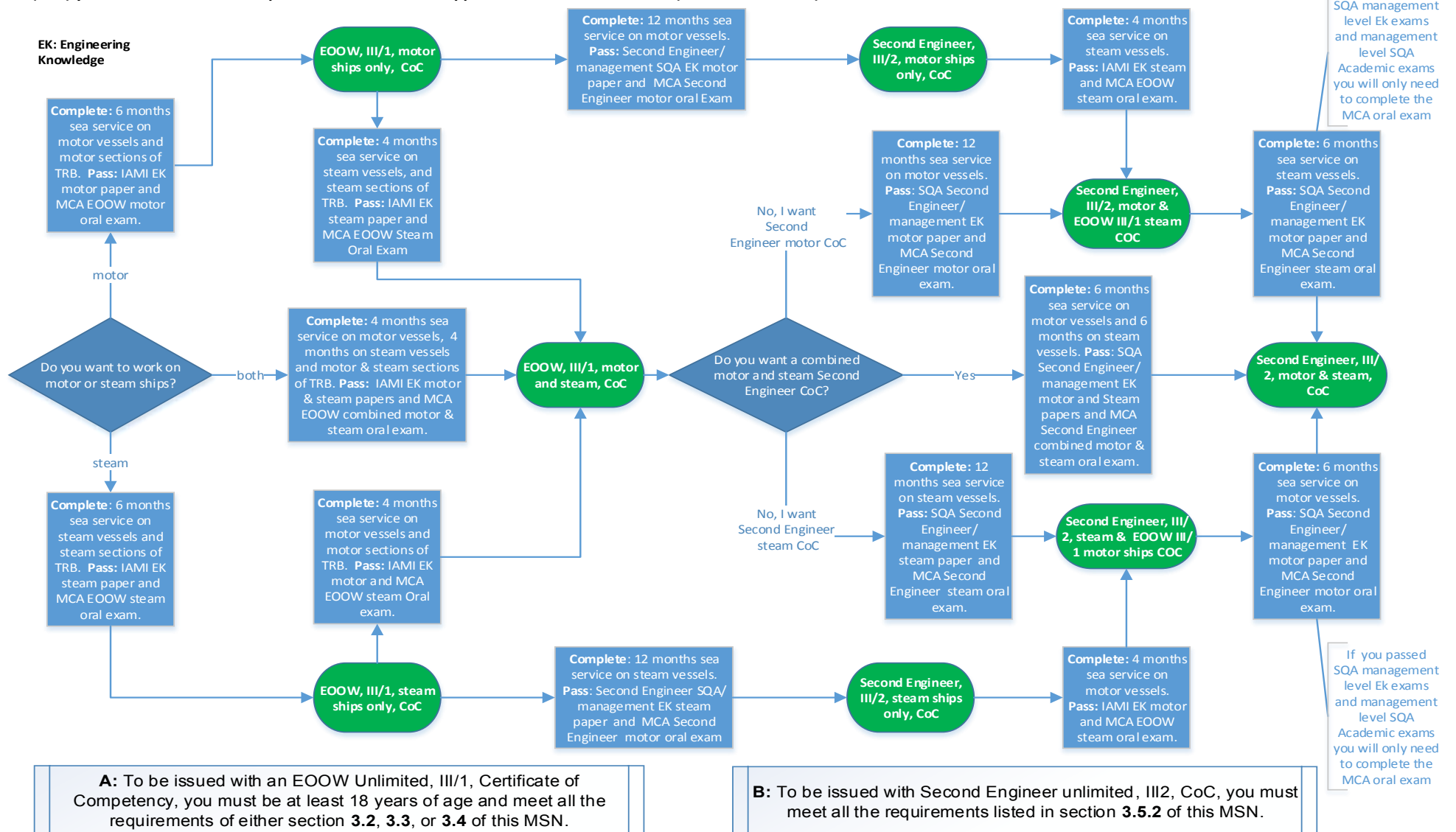
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Safer Lives, Safer Ships, Cleaner Seas

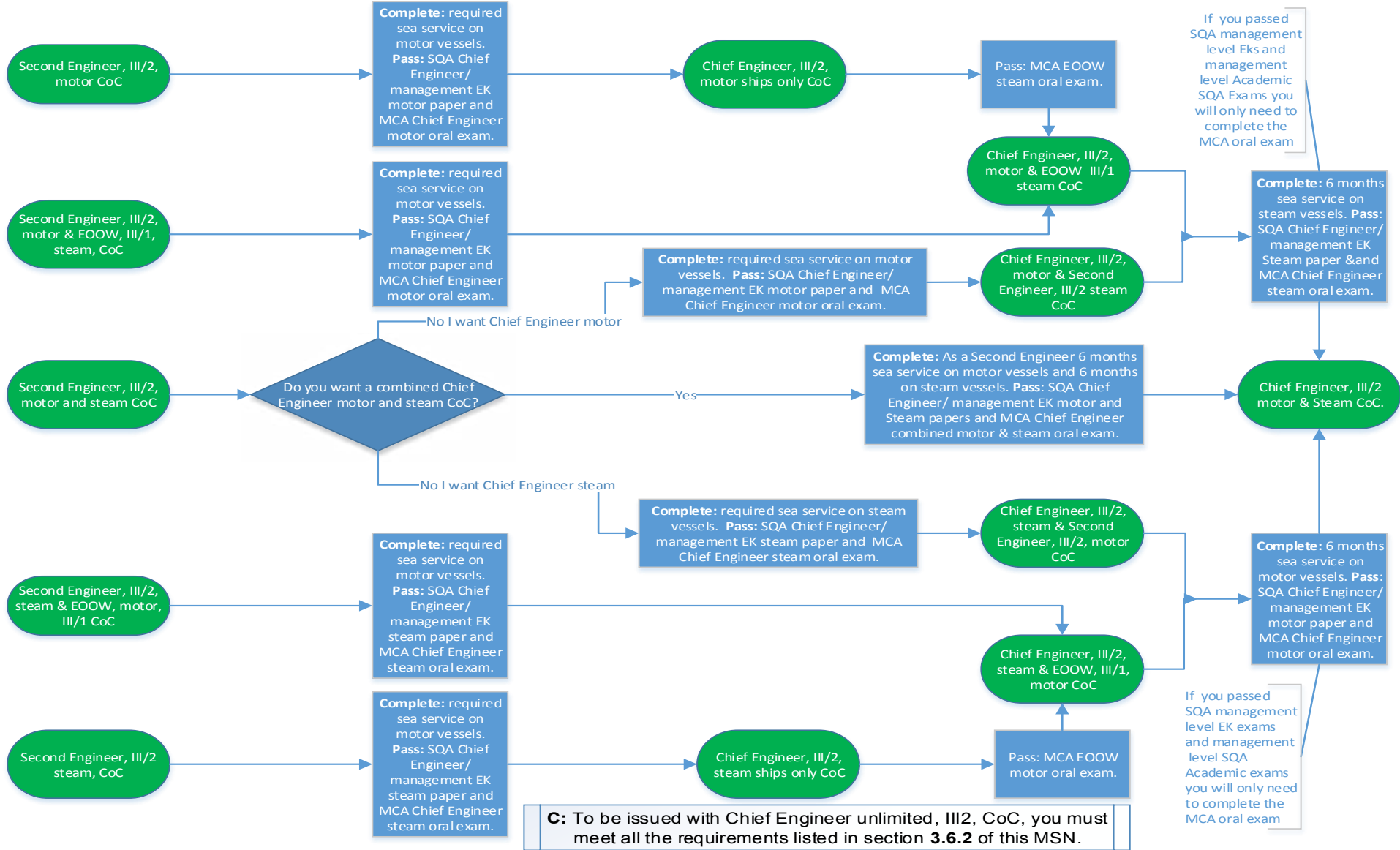


Annex A

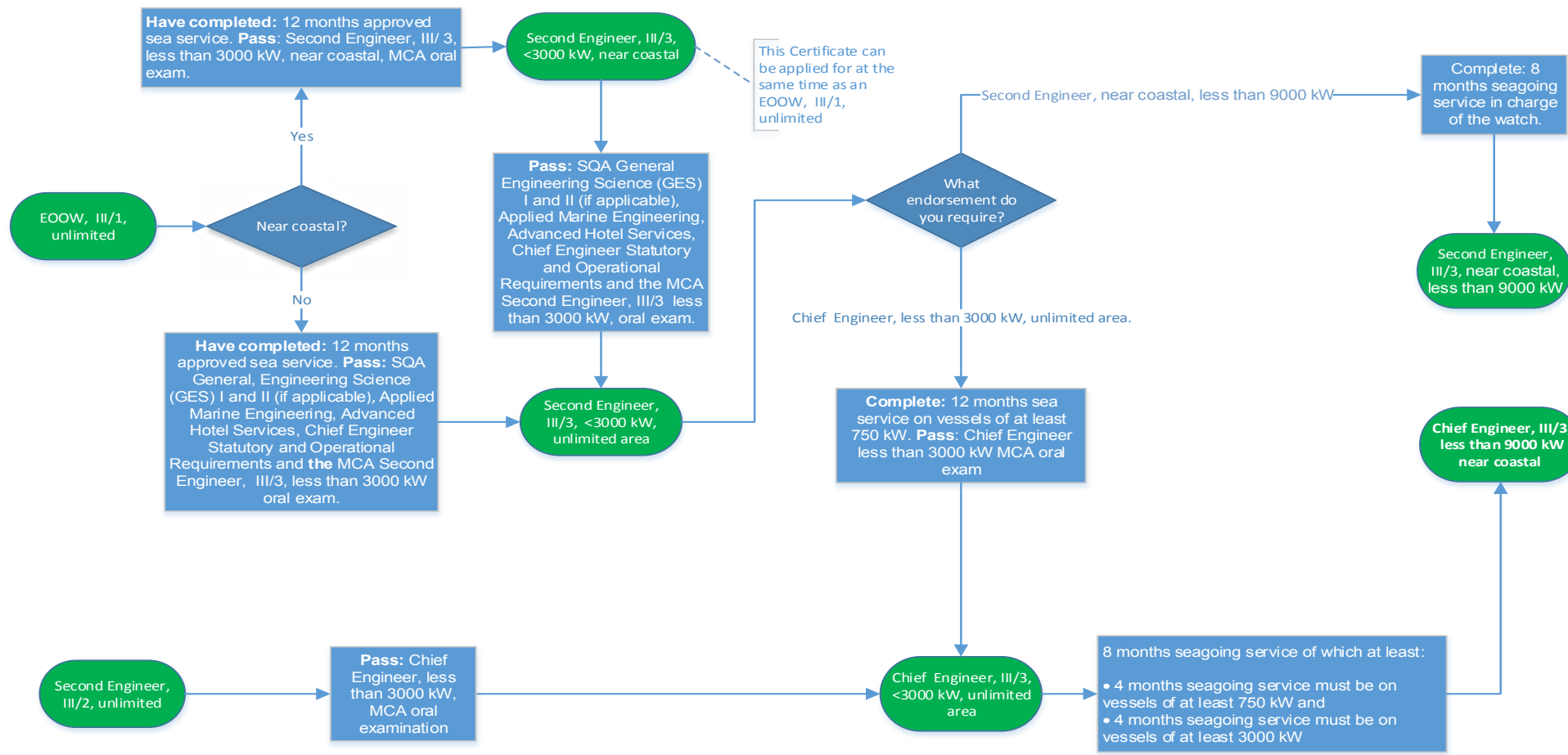
This flowchart is to summarise the routes to obtain motor and steam endorsements. To be issued with a Competency of Competency (CoC) you must meet the full requirements listed in the applicable section of this MSN (see boxes A and B).



This diagram is to summarise variations between the requirements for motor and steam endorsements. You must meet the full requirements of the unlimited Certificates of Competency to be issued with a CoC as shown in box 'C' at the bottom of this page.



This flow chart is to summarise the progression through the limited Certificate of Competency structure. To be issued with a Certificate of Competency (CoC) you must meet the full requirements listed in the applicable section of this MSN.



To be issued with a Certificate of Competency, you must meet all the requirements of the relevant section of this MSN; for CoCs less than 3000 kW, unlimited area, please refer to section 3.7 and for CoCs with a near coastal limitation please refer to section 3.8.



Engineer Cadet/Junior Engineer/ Rating Seagoing Service Testimonial for Maritime and Coastguard Agency

Company Address/Contact Details

Company Name:		
Address:		
Contact Details:	Tel:	
	E-mail:	

This is to certify that:	
Full name of Trainee/Rating:	
Date of Birth:	
Discharge Book or Passport Number:	

has served on:

Name of vessel:			
IMO number:		Type of vessel:	
Type/make of propelling machinery:		Type/make of auxiliary machinery:	
Power kW:		Type of boilers:	
Shaft power kW:		Vessel GT:	
Date of joining:		Date of discharge:	

Please record, below, the actual watchkeeping/ UMS time undertaken on this voyage:

During this period the above-named trainee/rating accrued the following engine room watchkeeping (under the supervision of a certificated engineer officer) for not less than 4 hours out of every 24 hours while the vessel was engaged on seagoing voyages:

_____ days

In addition the above-named trainee/rating:

- a) Regularly carried out other duties in connection with the routine and maintenance of the ship*
- b) Was granted no leave of absence*
- c) Was granted leave of absence as follows:

.....
 *Delete as appropriate



This section must be completed.

My report on the service of the above-named trainee/rating, during the period stated, is as follows:

Conduct:	
Ability:	
General comments:	

Type of Tanker:	
During this period the ship carried the following types of cargo(es) (the different types and grades of oil, gas and chemicals should be specified):	
I confirm the above-named trainee/rating has gained experience in carrying out regular cargo handling duties during the period stated:	

PART 4 – OFFICIAL ENDORSEMENT

Name of Chief Engineer**:		
Certificate Details:		
CoC Number:		
Issuing Administration:		
Signature Chief Engineer**:		
Date:		
Ship's/Company stamp:		** In exceptional circumstances this testimonial may be signed by a responsible official of the Company.



Engineer Officer Seagoing Service Testimonial for Maritime and Coastguard Agency

Company Address/Contact Details

Company Name:		
Address:		
Contact Details:	Tel:	
	E-mail:	

This is to certify that:	
Full name of Officer:	
Date of Birth:	
Discharge Book or Passport Number:	
Served in the capacity of:	

has served on:

Name of vessel:			
IMO number:		Type of vessel:	
Type/make of main propelling machinery:		Type/make of auxiliary machinery:	
Power kW:		Type of boilers:	
Shaft power kW:		Vessel GT:	
Date of joining:		Date of discharge:	

Please record, below, the actual watchkeeping/ UMS time undertaken on this voyage:

During this period the above-named Officer accrued the following engine room watchkeeping (under the supervision of a certificated engineer officer) for not less than 4 hours out of every 24 hours while the vessel was engaged on seagoing voyages:

_____ days

In addition the above-named Officer:

- a) Regularly carried out other duties in connection with the routine and maintenance of the ship*
- b) Was granted no leave of absence*
- c) Was granted leave of absence as follows:

.....
*Delete as appropriate



This section must be completed.

My report on the service of the above-named Officer, during the period stated, is as follows:

Conduct:	
Ability:	
General comments:	

Type of Tanker:	
During this period the ship carried the following types of cargo(es) (the different types and grades of oil, gas and chemicals should be specified):	
I confirm the above-named Officer has gained experience in carrying out regular cargo handling duties during the period stated:	

PART 4 – OFFICIAL ENDORSEMENT

Name of Master/Chief Engineer**:	
Certificate Details:	
Number	
Issuing Administration:	
Signature of Master/ Chief Engineer**:	
Date:	
Ship's/Company stamp:	

**** If you are the Chief Engineer you must get the Master sign this testimonial. The MCA will not accept self-certificated seagoing service. In exceptional circumstances this testimonial may be signed by a responsible official of the Company.**



Approval of education and training programmes

In accordance with STCW Convention regulation I/6, all nautical colleges planning to offer education and training leading to the issue of a Certificate of Competency will need to gain MCA approval.

All awards must be validated by the awarding body. The MCA and the MNTB will work together with awarding bodies to ensure that the award (currently HND/HNC, Foundation Degree or honours degree) is fit for purpose and covers all requirements of the underpinning knowledge applicable to the STCW Code.

Nautical colleges will need to gain approval from an awarding body to award their qualification (e.g. If the college wishes to use an SQA HND, then the college must seek approval from the SQA).

UK Cadet Training

All UK cadet training programmes are currently approved by the MNTB in consultation with the MCA. Nautical colleges will need to develop a programme of training that must be approved by the MNTB in accordance with their published guidelines.

Non-UK Cadet Training

To gain approval, nautical colleges will have to undergo assessment by the MCA to ensure their training standards meet the STCW requirements. Nautical colleges wishing to obtain approval should make a written application to the MCA outlining:

- Course title;
- Lesson plan;
- Course duration;
- Facilities, teaching aids, and equipment;
- Staff qualifications and experience;
- Examination and assessment procedures;
- Monitoring of entry requirements;
- Issue, control, authentication and recording of certification; **and**
- Quality management systems and procedures.

Nautical colleges will need to develop an education and training programme that incorporates an MCA-approved HND/HNC delivering the underpinning knowledge required for the training of deck officers.

Approval

When the MCA is satisfied that the education and training programme meets the requirements of the STCW Code, an approval letter will be issued by the MCA Seafarer Training and Certification Branch.



Ongoing Monitoring

Nautical College requirements: In accordance with STCW Convention regulation I/8, all nautical colleges that offer education and training leading to the issue of a Certificate of Competency will be periodically audited by the MCA in accordance with the following requirements:

- Course title;
- Lesson plan;
- Course duration;
- Facilities, teaching aids, and equipment;
- Staff qualifications and experience;
- Examination and assessment procedures;
- Monitoring of entry requirements;
- Issue, control, authentication and recording of certification; **and**
- Quality management systems and procedures.

Any changes to course structure or syllabus must be submitted in writing to the MCA and, if offering UK cadet training, the MNTB.

The introduction of a new course that is developed by an MCA-approved nautical college leading to the issue of a Certificate of Competency must be approved by the MCA and, if offering UK cadet training, the MNTB.

The MCA/MNTB will inform the nautical colleges of any changes to STCW regulations that will affect the education and training syllabus. When notified nautical colleges must provide details in writing of how they plan to incorporate such changes into their programmes. Once the MCA/MNTB are satisfied the new STCW regulatory requirements have been met they will re-issue an approval letter. Prior to approval the MCA/MNTB may carry out a site visit.

Blended Learning

Any nautical college planning to offer a blended learning package must present their proposal to the MCA for approval.



Marine Engineer Operators Licence (MEOL)

Engineering Knowledge – Oral Examination

- (1) Routine associated with taking over and accepting a watch or period of duty during UMS/Bridge Control operation.
- (2) Routine associated with handing over to the following watch or duty period during UMS/Bridge Control operation.
- (3) Routine associated with handing over to the following watch or duty engine operator.
- (4) Machinery space fire-fighting arrangements.
- (5) Safety precautions to be observed during a watch or period of duty and immediate actions in the event of a fire or accident.
- (6) Preparing main machinery, steering system and auxiliary equipment for sea. Testing plant and equipment.
- (7) Routine pumping operations of fuel oil and fresh water.
- (8) Bilge pumping operations.
- (9) Use of oily water separator and precautions to be observed to prevent environmental pollution.
- (10) Operation of auxiliary heating boilers including combustion system.
- (11) Preparing, starting, coupling and changing over alternators or generators.
- (12) Immediate actions necessary in cases of electric shock.
- (13) Location and rectification of common faults in main machinery, steering systems and auxiliary equipment.

Note: Candidates will be expected to demonstrate, in the oral examination, an adequate knowledge of and familiarity with the main machinery and auxiliary equipment normally found on vessels having registered powers up to 750 kilowatt.

Senior Marine Engineer Operators Licence (SMEOL)

Knowledge – Oral Examination

- (1) Understand the reason for determining voyage needs: bunkers, lubricants, water, expendables, etc.
- (2) Understand the necessity for routine maintenance.
- (3) Understand the reasons for maintaining records of machinery and performance and be able to interpret the information with regard to common defects.
- (4) Understand the reasons behind preparing the vessel for sea and testing plant and equipment.
- (5) Understand the consequences of sailing with certain items of machinery inoperative and the risks involved in doing so.
- (6) Understand the Chief Engineer's responsibilities and duties concerning bunkering operations.
- (7) Understand the principles of ensuring safe entry into tanks and other enclosed spaces and the safe systems of work which must be applied when occupying these spaces.
- (8) Understand the precautions to be taken to reduce the possibility of machinery space fires.

Note: The oral examination for the senior marine engine operator, will concentrate more on the duties and responsibilities of a Chief Engineer rather than on basic engineering knowledge. In addition to the general requirements listed, the emphasis will be mainly concerned with the operational and emergency procedures directly related to the safety of the ship and the protection of the environment.

