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STCW AND SAFETY RECORDS

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Abstract

Chapter A has two parts: Part one (1) explains what exactly the STCW Convention is and which is its content, who establishes this content, under which circumstances it is legalized and submitted and why and how the amendments of this Convention are executed.

Part two(2) analyzes in details the most important of all amendment's procedure, taken place in Manila in 2010,mainly because it was introduced new stuffs on the Convention which had to adjust to the new reality.

Chapter B which consist of part three (3) describes all those certificates and procedures which ensure the safe operation on the vessel according to the Codes.

A) STCW

1.1 INTRODUCTION

According to Rothblum 2010, the maritime system is a people system, and human errors figure prominently in casualty situations. About 75-96% of marine casualties are caused, at least in part, by some form of human error.

Studies have shown that human error contributes to:

- 84-88% of tanker accidents
- 79% of towing vessel groundings
- 89-96% of collisions
- 75% of allisions
- 75% of fires and explosions

The effect of human actions is gaining awareness in relationship to safety of ships. The competence of seafarers is one of the most essential factors in the human element to ensure safety and of course an efficient ship operation .Also it is related with safety of life at sea and the protection of the marine environment. The STCW Convention constitutes a comprehensive set of regulations intended to maintain the highest standards of competence globally (ISF 2011).

What is the STCW Convention?

STCW is an international Convention on Standards of Training, Certifications and Watch keeping for Seafarers. The Convention was adopted by conference at the International Maritime Organization (IMO) in London on 7 July 1978 and it was entered into force on 28 April 1984. The main purpose of the Convention is to ensure and promote safety of life and property at sea and the protection of the Marine Environment by establishing in common agreement the minimum qualification standards for Masters, Officers and Watch Personnel on seagoing merchant ships and large yachts.

One especially significant feature of this Convention is that it implements to ships of non-party States when visiting ports of States which are parties of the Convention. Article X of the Convention requires all parties to apply the control measures to all

ships regardless of the flag they fly and that happens to ensure that no more favorable treatment is given to ships entitled to fly the flag of a State which is not a Party than is given to ships entitled to fly the flag of a State that is a Party. By 2018 the STCW Convention had 164 Parties, representing the 99.2 per cent of world shipping tonnage.

1.2 BACKGROUND OF STCW CONVENTION 1978

Previously, the minimum standards of training, certifications and watch keeping were established by individual governments without reference to practices in other countries and such a result all those standards and procedures were widely varied, although shipping is featured extremely international by its nature. It was noted that there were different levels of training, period of training and conditions of certification between seafarers and it was recognized that a common, international platform was required to unify all those standards for seafarers.

1.3 TORREY CANYON CASE

Meanwhile TORREY CANYON accident leads to international consent about standard seafarer training requirements (Stenman 2005). TORREY CANYON was one of the first generation of supertankers and it was nearing the end of a journey from Kuwait to a refinery at Milford Haven in Wales. The BP chartered vessel ran aground on a rock between the Isles of Scilly and Land's End in Cornwall, splitting several of the tanks holding its vast cargo of crude oil. What followed that night was an oil spill eight – miles long which grew to twenty miles long within twenty four hours and later hits hundreds of miles of coastline. Covering some 1.000 square kilometers, the TORREY CANYON oil spill caused massive coastal pollution around Cornwall, the Channel Islands and Brittany. The UK's biggest ever oil spill in 1967 taught invaluable lessons about the response to disasters toughened up shipping safety and stirred green activism.(Guardian 2017).

1.4 1995 REVISION OF STCW CONVENTION

On 7 July 1995 the IMO adopted a comprehensive revision of the Convention, including a proposal of the development of a new STCW code which would provide the technical details related to provisions of the Convention. The amendments entered into force on February 1997 and with the full implementation to be required up to February of 2002. The most significant amendments had to do with: improvement of port state control, communication of information to IMO to allow to mutual oversight and consistency in application of standards. This represented the first time that IMO had been called upon to act in relation to compliance and implementation - generally, implementation is down to the flag States, while port State control also acts to ensure compliance. Under Chapter I, regulation I/7 of the revised Convention, Parties are required to provide detailed information to IMO concerning administrative measures taken to ensure compliance with the Convention, education and training courses, certification procedures and other factors relevant to implementation. The information is reviewed by panels of competent persons, nominated by Parties to the STCW Convention, who report on their findings to the IMO Secretary-General, who, in turn, reports to the Maritime Safety Committee (MSC) on the Parties which fully comply. The MSC then produces a list of "confirmed Parties" in compliance with the STCW Convention.

1.5 STCW CONVENTION CHAPTERS

Chapter I: General provisions

Chapter II: Master and deck department

Chapter III: Engine department

Chapter IV: Radio communication and radio personnel

Chapter V: Special training requirements for personnel on certain types of ships

Chapter VI: Emergency, occupational safety, medical care and survival functions

Chapter VII: Alternative certification

Chapter VIII: Watch keeping

1.6 AMENDEMENT PROCEDURE

Amendments to the 1978 STCW Convention's technical annex may be adopted by a Conference of STCW Parties or by International Maritime Organization's Safety Committee, expanded to include all Contracting Parties, some of them may not be members of the Organization. All the amendments entered into force one and half years after being communicated to all Parties unless in that space of time they are rejected by the one third of the Parties or by Parties whose combined fleets that represent the fifty per cent of the world tonnage.

1.7 STCW CODE

The regulations contained in the Convention are supported by sections in the STCW Code. Generally speaking, the Convention contains basic requirements which are then enlarged upon and explained in the Code. Part A of the Code is mandatory. The minimum standards of competence required for seagoing personnel are given in detail in a series of tables. Part B of the Code contains recommended guidance which is intended to help Parties implement the Convention. The measures suggested are not mandatory and the examples given are only intended to illustrate how certain Convention requirements may be complied with. However, the recommendations in general represent an approach that has been harmonized by discussions within IMO and consultation with other international organizations.

It was noticed that the biggest part of responsibility in marine accidents derives from the human factor and based on that the International Maritime Organization had to take action so to stop or at least to decrease situations like that. As a result, the STCW Convention was established (1978) to secure the safe operation of the ship and to protect the marine environment.

During the years important modifications were held according to the environment each time but the most crucial of them was the Manila Amendments (2010), introducing new definitions and a new approach on safety because after all these years from the Convention's establishment, the marine environment and not only had completely changed and shipping operations must adjust to those changes to secure safety.

2.1 MANILA AMENDMENTS

The Conference took place in Manila the Philippines, from 21 to 25 June 2010 under the auspicious of the IMO and it has adopted important revisions to the STCW 1978, as amended the 1995 Convention, and its relative Code. Approximately 500 delegates from 85 IMO member states as well as observers from three associate members, the International Labor Organization (ILO), the European Commission (EC) plus one other intergovernmental organization and 17 non- governmental organizations attended the Conference (IMO, 2010).

The principle of the revision was to ensure international standards for training and certification of seafarers to operate technologically advanced ships. The **Manila amendments to the STCW Convention and Code** were adopted on 25 June 2010, marking a major revision of the STCW Convention and Code. The 2010 amendments entered into force on 1 January 2012 under the tacit acceptance procedure and are aimed at bringing the Convention and Code up to date with developments since they were initially adopted and to enable them to address issues that are anticipated to emerge in the foreseeable future. There are a number of essential modifications and changes to each chapter of the convention and Code, including:

- Improved measures to prevent deceptive practices related to certificates of competency and strengthen the evaluation process.
- Revised requirements on hours of work and rest and new requirements for the prevention of drug and alcohol abuse, as well as updated standards related to medical fitness standards for seafarers.
- New certification requirements for able seafarers
- New requirements related to training in modern technology such as electronic charts and information systems(ECDIS)
- New requirements for marine environment awareness training and training in leadership and teamwork
- New training and certification requirements for electro-technical officers
- Updating of competence requirements for personal serving on board all types of tankers, including new requirements of personnel serving on liquefied gas tankers

- New requirements for security training, as well as provisions to ensure that seafarers are properly trained to cope if their ship comes under attack by pirates.
- Introduction of modern training methodology including distance learning and web-based learning
- New training guidance for personnel serving on board ships, operating in polar waters
- New training guidance for personnel operating Dynamic Positioning Systems

Conference resolutions

In addition to two resolutions adopting the aforesaid amendments, the Conference also adopted resolutions on:

- Expression of appreciation to the host Government;
- Transitional provisions and early implementation;
- Verification of certificates of competency and endorsements contained;
- Standards of training and certification and ships' manning levels;
- Promotion of technical knowledge, skills and professionalism of seafarers;
- Development of guidelines to implement international standards on medical fitness for seafarers;
- Revision of existing model courses published by the International Maritime Organization and development of new model courses;
- Promotion of technical co-operation;
- Measures to ensure the competency of masters and officers of ships operating in polar waters;
- Attracting new entrants to, and retaining seafarers in, the maritime profession;
- Accommodation for trainees;
- Promotion of the participation of women in the maritime industry;
- Future amendments and review of the STCW Convention and Code;
- Contribution of the International Labor Organization;
- Role of the World Maritime University and IMO International Maritime Law Institute and International Maritime Safety, Security and Environment Academy (IMSSEA) in promoting enhanced maritime standards;
- Year of the Seafarer; and

- Day of the Seafarer.

Speaking at the close of the successful Conference, IMO Secretary-General Efthimios E. Mitropoulos said that the adoption of the revised STCW had brought to a successful conclusion the concerted effort undertaken by so many – Government and industry alike, dedicated seafarer representative bodies, maritime training institutions, and the many other interested organizations – over a four-year period.

“The immediate task at hand is to promulgate the standards of maritime excellence we have just come to adopt amongst those working at the sharp end of the industry and to promote their proper implementation and enforcement through the usual means of enacting legislation and introducing enabling measures in maritime administrations and training establishments,” Mr. Mitropoulos said.

“I would suggest that the successful closure of the Conference should be seen as marking the beginning of strenuous efforts at three levels: first, to commence, at the earliest possible opportunity, work to translate the revised STCW requirements into national regulations – with the aim of expediting their implementation; second, to deliver, as appropriate, technical assistance through IMO’s Integrated Technical Co-operation Programme – with the aim of familiarizing STCW Parties with the revised requirements, and to provide useful technical advice on the STCW Convention and the STCW Code as a whole; and third, to initiate action, as may be necessary, to ensure the full and effective implementation and rigorous enforcement of the revised STCW Convention and Code when the amendments come into force on the agreed date of 1 January 2012,” Mr. Mitropoulos added.

The Conference has been a key highlight in the IMO-designated “Year of the Seafarer”, which aims to provide the maritime community with an opportunity to pay tribute to seafarers from all over the world for their unique contribution to society and in recognition of the vital part they play in the facilitation of global trade in a hazardous environment.

2.2 DETAILED APPROACH OF MANILA AMENDMENTS

Regulation I/1 “Definitions and clarifications”

Many key words meanings have been updated. The previous term "appropriate certification" left to be interpreted by administrations has now been specifically defined in the "STCW Manila Amendments" as Certification of Competency (CoC), Certificate of Proficiency (CoP) and documentary evidence as necessary to prevent fraudulent CoC and CoP activities. New criteria were also created to determine the qualifications required for Electro-Technical Officers (ETO) and Electro-Technical Ratings (ETR), which had not been previously defined in STCW 78 as amended 95. There are no requirements for proof of skill for deck and engine ratings under STCW 95. In the STCW Manila amendments, however, the ratings representing seagoing 9ships of 500 G / T or more will have to receive certification demonstrating their expertise in areas such as navigation, cargo handling and processing, vessel operation command and people care, maintenance and repair at support level.

New definitions have been added for the ISPS Code, Ship Security Officer (SSO) and Security duties to reflect the latest developments resulting from ISPS Code implementation.

Therefore, for administrations that are parties to the STCW Convention, it is of utmost importance to properly understand these new definitions to ensure that certificates are issued in a proper manner.

Regulation I/2 “Certificates and Endorsements”

The increasing fraudulent practices associated with CoC and approvals have resulted in the addition of I/2 regulation. According to the study conducted by the Seafarers International Research Center on "fraudulent practices associated with competency and endorsement certificates", 9 percent of the seafarers surveyed have fake certifications. He study concluded that approximately 40,500 seafarers are likely to hold fraudulent certificates based on deriving methodology. (Seafarers International Research Centre (SIRC), 2001)

The STCW Manila amendments identified "who" may issue a CoC to eliminate fraudulent practices associated with CoC and" when" a CoC or an approval certifying

acceptance can be given in Chapter I of Regulation I/2. In particular, some additional sections clarified the obligation to search for credential verification prior to the acceptance of such credentials from other countries.⁸ Legal powers were also included in Regulation I/5 for parties to the Convention to comply against illegal approval or endorsement activities. According to Article II(c) of the Manila amendments to the STCW, 'Certificate'¹⁰ may be issued ' by the Administration or authorized by the Administration or recognized by the Administration. However, more stringent requirements for issuing CoC and tanker operation certificates were imposed. It was specifically stated that these certificates should only be issued by an Administration.

Regulations I/3 “Principles governing near- coastal voyages”

The amendments to the STCW Manila have facilitated the adoption of near-coastal travel limits. Prior to the adoption of the near-coastal travel limits, parties are required to have an "agreement" that is binding on both countries. Prior to the adoption of the near-coastal travel limits, parties are required to have an "agreement" that is binding on both countries.

Nevertheless, it will still be necessary for the parties to keep the Secretary-General informed of such bilateral or multilateral arrangements¹³ so that the information can be circulated to all parties.

Regulations I/6 “Training and assessment”

Remote learning and e-learning are gaining popularity due to the development of technology and the demand for more convenient training programs. Guidance on distance learning and e-learning has been added in Section B-I/6 to ensure the quality and methodology of such programs. It sets out the criteria for parties to ensure the quality and method of delivering distance learning and e-learning, and also sets out the obligation for organizations to provide sufficient time for trainees to study.¹⁴ Section B-I/6 further sets out the assessment procedures on the performance and successes of the trainee under the system of distance learning and e-learning. At present, the distance education and e-learning program is already being run by many MET institutes and universities around the world.

Many MET institutes, however, face challenges in coping with these systems, particularly those in Far East countries where internet and computer technologies are not at an advanced stage.

Regulation I/7 “Communication of Information”

The "information exchange" has now been split into four sections in the STCW Manila amendments, namely Part 1 which covers the initial communication of general information such as contact details, explicit declaration of learning, preparation, review, qualification policies and a succinct description of procedures and overview of procedures; Part 2 which covers the amendments. This paragraph addresses the credentials and backgrounds of those who performed the independent e assessment and findings. Part 3 deals with the requirement to maintain a panel of competent persons who may be called upon to evaluate the submitted reports and to assist in preparing the report required by Regulation I/7, paragraph 2. It also allows parties to develop protocols for communicating information to IMO and, at the same time, to designate the person responsible for this mission; and Part 4 addresses the Secretary-General's reporting role to the Committee on Maritime Safety and the guiding principle of that document. The STCW reforms explain and coordinate the exchange of information protocols.

Regulation I/9 “Medical Standards”

The medical standards act as guidelines only in STCW 95. However, with these new medical standards, it has become mandatory in STCW Manila amendments, when working in different countries, seafarers will not be required to perform additional medical examination. The validity of the medical certificate has also been extended for 2 years, except for seafarers under the age of 18, in this situation the validity of the credential is limited to 1 year. The medical certificate may have been extended 3 months after the validity period.

As it stands at present, while defined in Section A-I/9, only physical and health activity requirements with limitations on minimum eyesight levels have been made compulsory.

Section B-I/9 also provides guidance on the requirements for minimum entry level and in-service physical capabilities for seafarers. To order to be in accordance with the criteria set out in Section A-I/9, section 2, the required entry level and functional in-service capability should be considered. Apart from defining the physical and health fitness of seafarers, Section A-I/9 also specifies that qualified medical professionals approved by the parties must carry out professional fitness tests for seafarers. When applicable, the registry of these medical practitioners should be made available to other groups, enterprises and seafarers.

Although improvements have been made to standardize some of the health harmon criteria in the current Convention, the specifications for seafarers ' medical fitness tests also fall on the guidelines of the Convention's members. As a result, the International Labor Organization (ILO) has launched a joint ILO, IMO, and World Health Organization (WHO) working gro(ILO, IMO, 2010) After the STCW diplomatic meeting, a joint working group was formed around ILO-IMO on 4 October 2010 in Geneva. Up to create medical standards. WHO has not responded to the request, however?

Regulation I/11 “Revalidation of Certificates”

New requirements for ship masters and officers working on board tankers to establish ongoing professional competence for tankers are Regulation I/11, paragraph 3 and Section A-I/11, paragraph 3. Continued technical skills have been described as a licensed seagoing service as provided under the certification for a term of at least:

- A total of twelve months in the previous five years or
- In fact, three months immediately prior to revalidation during the previous six months or
- Having performed in the capacity deemed equal to the required seagoing service or
- Going through an accepted test or
- Completing an approved course(s) of training or
- Having performed as prescribed by the certification as a supernumerary for a period of not less than three months

It is important to ensure that officers working on board tankers have professional competence. As tankers engage in bulk liquid carriage, which is believed to be of higher risk and may cause substantial environmental pollution. Therefore, to ensure navigational safety, it is essential to ascertain the quality of ship masters and officers.

The variations in design between tankers and general ships:

Tankers: conducting duties appropriate to the certification or authorization of the tanker.

General vessels: (container, bulk carrier, etc.): executing certificate-appropriate tasks.

Therefore, to revalidate the licenses, the group, shipping company or seafarer must ensure that these requirements are met. However, if an application for revalidation was made within six months of expiry, the certification may be revalidated until the fifth anniversary of the validity date.

Regulation I/12 “Use of simulators”

This legislation is evidence of new and innovative advances in the learning technique. For example, during the comprehensive review of the STCW Convention in STW sub-committee 41 sessions on January 2010 (IMO, 2010), it was decided that simulator devices could be used for VTS learning. Section B-I/12 also included specifications for training and analysis in the organizational use of Electronic Chart Display and Information Systems (ECDIS). A total of 84 new areas of expertise have been added, including, where appropriate, methods to demonstrate competence in approved simulator training (DNV, 2010). Such new regulations show the increase in value of simulator learning for seafarers, making it necessary to control the operation of MET institutes or universities.

Regulation I/14 “Responsibilities of Companies”

In this regulation, two new provisions were inserted under the responsibilities of the companies. These include refresher and update training requirements, and ensuring effective oral communication on board.

As mentioned in Chapter I, the human element is a very important factor in maintaining the safety of the ship. The skill of seafarers by education and training is one of the most important components to ensure the proper preservation of the human element.

A well-trained seafarer is going to be the ship owner’s valuable asset. Getting well-trained seafarers shows clearly the commitment of the business for health, while at the same time being seen by the public as getting value and profitable service. (Surugiu and Nistor, 2010, p 62)

Effective communication on board is also an essential ingredient in the safe and efficient running of vessels. "In an operating situation such as berthing a boat or battling a fire, it is important that those involved are able to communicate effectively" (Istanbul University of Technology, 2002).

Regulation I/15 “Transitional Provisions”

Figure 1 briefly describes transitional provisions. STCW Manila's deployment dates are as follows:

- 1 January 2012: Implementation of STCW Manila Amendments
- 1 January 2013: Governments must report to the IMO in order to give full effect to the STCW Manila amendments
- 1 July 2013: Seafarers starting training after that date must comply with the STCW Manila amendments to the training requirements.
- 1 January 2014: Safety training standards must be fulfilled for seafarers who started service before 1 January 2012.

- 1 January 2017: Governments may continue to renew and revalidate existing certificates and approvals in accordance with the provisions of the STCW immediately before 1 January 2012.

Chapter ii –Regulation ii , Section Aii and Bii

The amendments to this chapter include demonstration of additional competence by operational officers and senior managers in sections A / II and B / II respectively. Areas defined for these criteria for competence are roles including navigation and managing the ship's operation and caring for people on board. The operational level is applicable on ships of 500 G / T or more¹⁸ for officers in charge of a navigational watch. They will need to demonstrate competence in the use of advanced technology such as ECDIS, the use of effective communication, and the ability to transmit and receive visual signals such as the Morse code for navigation safety in the area. While it has been decided in the STW sub-committee that the use of the Morse code has been gradually reduced, it is important to continue such learning as navigation aids such as buoys and lighthouses still use the Morse signals. Under the task of monitoring the ship's service, officers will have to show their ability to ensure compliance with pollution reduction standards and apply management and teamwork skills such as Bridge Resources Management (BRM).

The level of management is applicable on ships of 500 G / T or more for masters and chief mates. The Vessel Traffic Service (VTS) areas are described as a specific field where additional abilities need to be practiced while planning a trip and navigating. The ability to use Decca and Loran was also replaced by the ability to use terrestrial electronic position-fixing systems. Additional competency standards have also been included in areas such as operating processes control, system records and documentation to aid in navigation command decision making. Students will also be required to demonstrate additional practical abilities in the use of management and leadership skills.

The STCW Manila amendments note that, as specified in the old STCW Convention, irreducible minimum approved seagoing facilities require at least 12 months including 6 months supervised bridge 21 watch-keeping duration as

part of an approved training program for each nominee. The different thing is that the trainees have to follow a ' structured in-service training ' program approved by the government issuing their certificate. “Structured in-service training means a program approved by a government to ensure that trainees actually practice and demonstrate their competence to perform the particular tasks and duties that will be required of them when they are qualified”. (ISF, 2011, p 36)

One of the key changes in this section is the addition as qualified seafarer deck¹⁹ of minimum certification requirements for ratings. The new requirement leads to the standardization of the skill level of the competent seafarers, particularly in the knowledge and skills of deck and mooring equipment handling.

“The STCW qualification of Able Seafarer Deck is intended to reflect the wide range of tasks undertaken by more experienced deck ratings and should serve as an incentive for training and career progression”. (ISF, 2011, p 60)

They should contribute to safe navigational surveillance, handling of cargo and stores, operation of deck equipment and machinery, pollution prevention, operation of survival craft and rescue boats, and maintenance and repair of shipboards, according to the new competencies for capable seafarer deck (BIMCO, 2010).

The STCW Manila amendments provided for continuous renewal and revalidation until 1 January 2017 for existing capable seafarer deck certificates issued pursuant to ILO No 74. However, as of 1 January 2012, some administrations may require new candidates to be certified in accordance with the competence standards of STCW Manila Amendments for capable seafarer deck.

Chapter iii-Regulation iii , Section A/iii , B/iii

Chapter III of the STCW Manila Amendment prescribes standards for mariners working in the engine department. This outlines the minimum requirements in the engine room for officer certifications and ratings at various operational grades. This chapter presents major amendments. The on-board training requirements for officers in charge of an engineering watch or

designated duty engineer on seagoing vessels powered by 750 kW or more main propulsion machines have been increased from 6 months to no less than 12 months as part of an approved training program including on-board training with a documented training record. Alternatively, the candidate could choose to complete a combined workshop skills training and an approved seagoing service of not less than 36 months, not less than 30 months of which must be engine seagoing service²⁰. With this change, junior engineers' on-board training period is synchronized with junior deck officers.

Similar to the new minimum certification requirements in Regulation II/5 for capable seafarers deck, the duly certified capable seafarers engine is required or the capable seafarers engine, there are two certification categories, namely those Forming Part of an Engineering Watch (RFPEW), and those acting in the engine room as capable seafarers. As of 2010, there are approximately 747,000 ratings engaged in the maritime industry, according to the BIMCO manpower 2010 update.

his new amendment will therefore have a significant impact on the industry, especially in countries such as China, Indonesia, Malaysia and the Philippines, which are the major supply ratings countries (BIMCO / ISF, 2010).

Another major change in this section is the implementation for Electro-Technical Officers and Ratings²¹ of a new minimum credential class. The aim of this class is to meet the increasing demand for such skills on board the ships as the ship's main propulsion and equipment is the electronic control unit.

In addition, certain special competences have been added for all levels of engineers and ratings in Section A-III in connection with Chapter III — Regulation III/1 ~ III/7.

Management of Engine-Room Resource (ERM) and training in teamwork and leadership are now mandatory at both operational and management levels.

Because of the numerous changes in knowledge, understanding and skills (KUP), all MET institutes or universities must consider changing their educational and training curriculum in order to comply with the STCW Manila amendments within the time limits of their implementation.

Chapter V-Regulation V, Section A/V, B/V

STCW Chapter V is the standard for special training requirements for staff on certain ship types. It covers tankers and passenger ships (oil, petroleum and liquefied gas tankers). The mandatory training and qualification requirements for masters, officers and tanker ratings were divided into two parts as follows:

- Tankers for oil and chemicals;
- Tankers with liquefied gas

There are two levels of certification requirements for oil and chemical tankers, i.e. basic and advanced training, as well as liquefied gas tankers.

To order to receive a certification to advanced training for oil tanker cargo operations, officers and engineers with "immediate responsibility" for boarding, discharging, transit treatment, cargo handling, tank cleaning or other cargo-related operations on oil tankers will be required.

Chapter VI, Regulation VI

Chapter VI of the STCW Manila amendments incorporates emergency, occupational safety, medical care, and survival skills. The term "Certificate of Proficiency" has replaced, as appropriate, the phrase "special certificate" or documentary evidence to ensure consistency of interpretation between administrations.

As specified in the amendments, the forms of new safety training are as follows:

- Education for familiarization with safety
- Education in safety sensitivity
- Seafarers ' education for assigned safety obligations
- CoP requirements for Ship Security Officers (ISPS Code)

Chapter VI, as part of basic safety training, addressed maritime environmental awareness issues, effective communications on board ship, active human relationships on board ship and fatigue management. Such new conditions can result in additional days of education. For example, it usually takes 5 days to complete a basic safety training course. It may be necessary to extend the duration of the course to 5.5 or 6 days in order to meet the additional requirements.

The criteria for refresher training are unclear in Section A of Chapter VI. It was left for others to define differently before the deadline of "within five years" of basic safety training and other skill training. (Belokas, 2011).

The new section A-VI/1, 2 and 3 has been included to ensure that qualifications are retained for such training. In the type of e-learning, shipboard exercises and testing and shore-based training, refresher training may be conducted. However, additional shore-based training may be required, such as actions to be taken in water, fire fighting, and free fall life boat drilling. As discussed in each specification of minimum standards of competence tables, new shore-based training items may therefore need to be established.

Chapter VIII , Regulation VII, Section A,B/ VIII

Chapter VIII's most important reforms are hours of sleep regulations. The changes will be highlighted as follow :

- A minimum of 10 hours of rest during any time of 24 hours
- 77 Hours in a period of 7 days

The hours of rest shall not exceed two days, one of which shall be at least six hours in duration, and the gaps between successive rest periods shall not exceed fourteen hours.

Condition clause was included as well, mentioning that parties may allow derogations from the hours of rest required provided that the rest period is not less than 70 hours in any seven-day period and under certain conditions, in particular

- Exceptions from the weekly rest period may not exceed two weeks in a row

- The cycles on deck for two extraordinary times shall not be less than twice the length of the exception
- The remaining hours can be broken into no more than three cycles
- In six hours length , one at least
- None of the other two cycles are less than an hour long
- he cycles shall not exceed 14 hours between successive rest periods;
- Exceptions shall not apply in any 7-day cycle to two 24-hour cycles.
- Exceptions shall take into account, as far as possible, the guidance in section B-VIII/1 on fatigue prevention.

The STCW Manila Amendments Section A-VIII/1 was harmonized with the 2006 Maritime Labor Convention (MLC 2006) Standard A2. The goal to change these regulations is to reduce tiredness. However, consideration should be taken in the STCW Manila Amendments, Section A / VIII, paragraph 9, prior to the initiation of the exception clause.

Additionally, new mandatory regulations are added as follows to prevent alcohol abuse:

- Not higher than 0.05% blood alcohol
- 0.25 mg / l breathable alcohol, or
- A quantity of alcohol resulting in such a concentration of alcohol for masters, officers and other seafarers while performing designated environmental, safety and marine duties.

In order to comply with these laws on alcohol abuse, administrators will need to review and set up a monitoring system.

In this chapter A / VIII, new watch keeping procedures and basic requirements were included.

2.3 SUMMARY

Chapter I

The following regulations were included or modified in the STCW Manila amendments to cover this chapter:

- Definitions of the ISPS Code, Ship Safety Officer, Security Officer, CoC, CoP, Documentary Evidence, Electrotechnical Officer, Able Seafarer Deck, Electrotechnical Rating (Reg. I/1)
- The CoC issuing rules for administration, the issuing of certificates to masters or tanker training officers, the rules for administrations accepting certificates prior to approval, endorsement and issuance of certificates must provide details to other administrations and companies and a registry of certificates or certificates.
- Seafarers ' certificate rules for near-coastal travel (Reg. I/3)
- Online education and e-learning support (Section B-I/6.6 – 6.10)
- IMO MSC requirements for government information communication to IMO (Reg. I/7)
- Requirements for medical certification and medical fitness (Reg. I/8 and I/9)
- The requirement to keep competence every 5 years for tanker training certificate holders (Reg. I/11)
- Use of seafarer training simulators (Section B-I/12)
- Company responsibilities (Reg. I/14)
- Provisions for transition (Reg. I/15)

Chapter II

- New skills required such as ECDIS, BRM, the use of added leadership and managerial skills (Section A-II/1)
- Certification requirements for officers and masters on non-committed ships and altered ships on near-coastal travel (Reg. II/3)
- Introduced certification of marine deck ratings (Reg. II/5)

Chapter III

- Modified on requirements for board training (Section A-III/1.2)
- New skills required such as ERM, internal communication systems are used, electrical, electronic and control systems are operated, electrical equipment is used safely. The officers responsible for the engineering watch were added. (Table A-III/1 of Section A)
- Manage the process at management level of propulsion plant machinery applied to maritime engineering (Section A table A-III/2)
- Marine engine certification and introduction (Reg. III/5, A-III/5, B-III/5)
- Introduced Electrical Officer Certification (Reg. III/6, A-III/6, B-III/6)
- Added electrical-technical score qualification (Reg. III/7, A-III/7)

Chapter IV

- Modified and strengthened legislation on board oil and chemical tankers for seafarers and basic and advanced training requirements (Reg. V/1-1)
- Passed maritime rules on deck liquefied gas tankers (Reg. V/1-2)
- Amended to provide instructions on board passenger ships for seafarers and Ro-ro passenger ships (Reg. V/2)

Chapter V

- Implemented CoP requirement (Reg. VI/1.2)
- Implemented new refresher training requirements (Section A-VI/2)
- Regulation established for ship security officers (Reg VI/5)
- Added safety education and guidance control for all seafarers (Reg. VI/6)

Chapter VI

- Implementation of the amended fatigue prevention requirements (Reg. VIII/1.1)
- Modified minimum sleep and work exercise hours (Section A-VIII/1)
- Added Drug and Alcohol Control Legislation (Reg. VIII/1.2)
- The introduction of new watchkeeping principles (Section A-VIII/2.8)
- Watch modifications to ECDIS (Section A-VIII/2.18)

Conventions are changed from time to time in order to cope with new technologies, strict environmental and security policies and improve the current system. In the same vein, the STCW 95 convention was amended in Manila on 2010 in the presence of IMO members, ensuring that the global security and environmental policy needs and training and certification standards for the operation of advanced technology are achieved in the future.

Major changes and adjustments to the engine department were made, followed by other device configuration. Significant changes to every STCW Convention and Code chapter include:

1. Revalidation for certificate of competency (COC) issued by any governing authority for intermediate and administrative level officer.
2. Revised and improved preparation instructions for aboard crews and serving officers.
3. New MARPOL awareness requirements which include leadership and teamwork training.
4. Strict measures to prevent the flow of fraudulent competency certificates (COCs) into the international market.
5. Rest hour on board has been expanded from 70 hours per week to 77 hours for adequate maritime jobs on board.
6. Electrical-technical officer introduction with approved training and COC.
7. Further equipment and better training for junior engineers and cadets to address the problem of officer shortage.
8. Updated drugs and alcohol policy, and rigorous medical review.
9. New requirement for Able seaman to have a boarding vessel certification credential.
10. New training methods in modern technology such as the display of electronic chart and the information system (ECDIS).
11. Strict competency level for ship's crew operating on tanker, gas and chemical vessel.
12. New and improved ISPS training requirement and also training to address the piracy attack situation.
13. Inclusion of modern training approaches including distance learning and web-based instruction.

14. New training guidelines for ship workers in polar water and complex positioning system operating staff.

Chapter B defines all those certificates and procedures that ensure safe operation on the vessel under the codes. Safety records are used to support a safety claim and demonstrate the degree of acceptability of the safety performance of the services provided.

B)SAFETY RECORDS

Motivated by a number of major maritime accidents suffered during the 1980s and subsequently, the IMO drafted the ISM Code understanding that professionally coordinated and reported shipping activities combining shore-based management and ships were necessary for the safe operation of ships and the safety of the marine environment. The ISM Code was adopted on 4 November 1993 as IMO Resolution A.741 (18) and became a standard code for certain types of ships as of 1 July 1998 and for all types of ships as of 1 July 2002 as per SOLAS Chapter IX.

Any ship management company is required to design an SMS that satisfies the ISM Code requirements and should be registered, enforced and managed. The firm should then receive a DOC for the main office and SMC(s) for its ship(s) if the inspections performed by the Flag Administration are done satisfactorily, otherwise the company will not be lawfully able to engage in any international shipping activity.

3.1 SHIP FORM AND ISM IMPLEMENTATION:

1. Regulation 2, Chapter IX of the SOLAS Convention specifies the date of compulsory implementation of the ISM Code for each ship category. Vessel categories for which the ISM Code entered into force on 1 July 1998 : Customer ships, high-speed customer vessels, 500 gross tonnage high-speed cargo vessels and over, 500 gross tonnage bulk carriers and over, 500 gross tonnage oil tankers and over, 500 gross tonnage chemical tankers and over, 500 gross tonnage gas carriers and over.

2. Vessel forms for which the ISM Code entered into force on 1 July 2002:

Mobile offshore drilling units of 500 gross tonnage and above, Other cargo vessels 500 gross tonnage and above Cargo vessels other than those mentioned in (1) above).

- *Reference only:* the rules of the SOLAS Convention on its operation are as follows; (Annex to the Convention)
- Regulations only apply to ships engaging in international travel. (Reg. 1(a), Chapter I).
- A passenger ship is a ship carrying more than twelve people. (Reg.2(f), Chapter I)
- Every vessel that is not a passenger ship shall be a cargo ship. (Reg.2(g), Section I)
- Not available to cargo ships under 500 gross tonnage.(Article 3(a), Book I)

3. Definitions for Bulk Carrier Vessel types shall be those specified in SOLAS Chapter IX in terms of the ISM Code, so some of the "Bulk Carriers" described in SOLAS Chapter XII may be "Other cargo ships" in terms of the ISM Code. ' Bulk carriers ' under the ISM Code shall be stated in compliance with the concept of bulk carriers defined in SOLAS IX/1.6, i.e. ships equipped with single deck, top-side tanks and hopper side tanks in storage spaces and intended primarily for carrying dry bulk freight; or ore carrier; or mixture carrier. Generally speaking, vessels assigned to "ESP" under the Class Notation are "Bulk carrier" under the ISM Code and "Any cargo ship" under the ISM Code. Nevertheless, it must be checked that, on a case-by-case basis, the instruction from a flag state on the implementation of Resolution MSC.277(85) ' Clarification of the word ' Bulk Carrier ' and clarification on the application of SOLAS legislation for ships sometimes transporting dry bulk freight ' has been implemented. In fact, at the option of the operator, any "Another cargo ship" is transferred to "ESP.

3.2 CERTIFICATES

Certificates given to an Organization: Certificates that may be given to a Company are as follows; (1) Interim DOC: an interim DOC issued to a Company that has no technical SMS operating experience. 2) DOC: a full-time certification issued by the Flag Administration authority. (3) Short-term DOC: short-term certification issued for the period up to the issuance of a full-term DOC. (When a full-term DOC is provided by the flag administration)

Interim DOC.: In the following cases, an interim DOC may be given. (1) In the case of a newly established Company (2) In the case of the Addition of a Ship Type(s) In the case of a Company in possession of a DOC issued by Class, its SMS shall be applied to new ship types not defined in the current DOC.

The interim DOC is provided by a Class department. The Interim DOC's validity period is twelve months. In the case of a newly established Company, the Company shall undergo an initial audit and undergo an external audit in the case of Addition of Ship Form to acquire a DOC within the scope of the Interim DOC.

Note: More Record Analysis for the Manual and Procedures should be conducted prior to the on-site inspection in the case of a newly established organization. In this respect, the preliminary audit report should be submitted one month prior to the date planned.

DOC: Upon successful completion of a preliminary inspection, DOC(s) shall be provided to a client by the Flag Administration or the Class Office under the jurisdiction of the Flag Administration. For at least three months, the company's SMS and at least one ship of each ship type protected by the SMS should be in service at the review. And they should also have carried out the compliance inspections. Therefore, a plural number of DOCs will be given when a company manages a plural flag ship. A DOC's validity period, issued after initial inspection, is five years from the last audit date subject to annual review conducted annually. As for Renewal Review, the validity period of the new DOC shall be five years from the expiry date of the original DOC if the same is done within three months before the expiry date of

an existing DOC. The new DOC shall be valid for a term of five years from the date of completion of the Renewal Audit if the Renewal Audit is completed more than three months before the expiry of a current DOC. Upon completion of an annual review, DOCs shall be approved. The original of DOCs shall be held at the Company and a copy of the DOC shall be put on board each ship protected by the SMS with approval for the Annual Audit.

DOC's short term. When a full-term DOC is issued by the Flag Administration, a short-term DOC(s) valid for five months shall be issued by the Class Office to a corporation on the last day of the audit as evidence of the original audit and replacement audit being done satisfactorily.

Certificates issued to a ship: certificate that can be issued to a vessel are as follows; (1) Interim SMC: an interim SMC shall be issued to a ship that has no functional SMS operational experience. (2) SMC: a full-time certification issued by the Government of the Flag Country. (3) Short-term SMC: short-term certification issued for the period up to the issuance of a full-term SMC. (When a full-term SMC is given by the flag administration) .

Interim SMC: In the following cases, a temporary SMC may be issued; (1) a newly built ship; (2) a ship for which the management company has modified; (3) a ship to which SOLAS IX applies as necessary conditions for relocation, navigation zone adjustment, etc; or (4) a ship for which the flag has been adjusted. A temporary SMC's validity period is six months. For special cases, the duration of a temporary SMC may be extended for a further total of six months, provided that this is allowed by the Flag. The vessel shall undergo preliminary inspection in order to obtain an SMC within the provisional SMC's validity.

SMC: A SMC shall be issued to a vessel operated by a company owned by the DOC (not the Interim DOC), the Flag Administration or the Class Office under the jurisdiction of the Flag Administration upon completion of a preliminary inspection successfully. The company's SMS at the audit should have been in service in the shipboard for at least three months. And the compliance reviews should also have been done. A SMC's validity period, issued after initial inspection, is five years from

the last audit date, subject to an intermediate audit performed between the second and third anniversary date. As for Renewal Review, if the same is done within three months of the original SMC's expiry date, the current SMC's validity period is five years from the existing SMC's expiry date. The proposed SMC shall be effective for a term of five years from the date of completion of the Renewal Audit if the Renewal Audit is completed more than three months before the expiry date of the current SMC. Upon conclusion of an intermediate examination, a SMC shall be approved. The SMC's original will be put on board and the company will keep a copy of the SMC.

Short term SMC: Short-term SMC When a full-term SMC is issued by the Flag Administration, a five-month shorter-term SMC shall be given to a vessel by the Class Office on the last day of the inspection as evidence of a successful execution of an original audit and replacement audit.

Certain Certificates: An NKSMC shall be issued by the Office of Class for a ship flying the flag of a State which has not approved Class for ISM registration, or the flag of a State which is not a Contracting Government of the SOLAS Convention, or by a ship(s) which is not a SOLAS Convention requirement. For the company that manages the vessels, a CLASS DOC shall be given.

Certificate expansion: For special cases, the duration of the Interim SMC may be extended for a further total of six months, provided that the flag is allowed to do so. If a vessel is not in a port where it is to be checked at the time a SMC expires, the SMC's validity period may be extended with Flag approval for no more than three months.

Revision of a Certificate Entry: If changes are made to the data, such as the name of the ship listed in the SMC, an external inspection is required to update the SMC. Should also be aware that if the title and/or address of the organization are changed, an extra review is needed to update the DOC . In fact, it is appropriate to rewrite the SMC given by Class.

Invalidation of a DOC.: A DOC shall become void if; (1) the Company has not conducted an annual review within the specified period of time; (2) there is proof of an outstanding MNC; (3) corrective action of NCs is not taken within the specified

schedule; (4) the Company does not accept changes to the ISM Code; (5) the Company has not paid audit fees and expenses.

Invalidation of a SMC: A SMC shall become void if; (1) the Company has not conducted an intermediate inspection of the vessel within the specified period of time; (2) there is proof of an outstanding MNC; (3) the corrective action plan (CAP) for NCs has not been issued or executed within the specified schedule; (4) the Company does not take into account any changes to the ISM Code; (5) the Company's DOC is invalidated; (6) the ship does not have the requisite trade licenses for its operation; (7) the ship does not hold the Class classification; (8) the Company does not charge inspection fees and expenses.

Returning of Certificates: A Company is required to return a Certificate if; (1) a new Certification has been released due to Renewal, revised registration, and so on; (2) a Certificate has become null or expired; (3) a Company has terminated ship(s) management due to the sale or scraping of the ship .

3.3 AUDIT

Proposes of audit

The aim of the inspections is to confirm compliance with the specifications of the ISM Code and, by inspection, to support and encourage businesses in achieving security management goals, which are: (1) ensuring secure ship operating practices and a safe working environment; (2) developing protections against all defined risks on the basis of the assessment; and (3) continuous improvement.

Type of Company Audit and its Timing: Company audits shall consist of the following; (1) Interim DOC audit: to be performed for a newly established Company or to be added to the ship form (2) Original audit: to be carried out for the first time in order to produce a DOC for a Company. (3) Annual audit: between three months before and after each anniversary date shall be carried out each year. (4) Renewal Audit: to be carried out within three months*1 of the date of expiry of the current DOC. (5) External audit: Effective actions of MNC shall be checked as required (see point 6.2) and whenever needed.

Shipboard inspections shall consist of: (1) Inspection for the issue of an interim SMC: Issue of an interim SMC for a ship that has not worked or for a ship that has changed its flag (2) Original inspection: Issue of a SMC for the first time (3) Interim audit: Issue between the second and third anniversary (within twelve months) (4) Renewal Audit: Valid within three months*1 of the current SMC's expiry date (5) Additional Audit: To verify that effective actions are taken as necessary for MNC and whenever necessary.

Application for Company Audit

A Business Audit Application Form can be accessed from the Class website. "SMS Company Audit Request" (Form APPLI-C) The Company is requested to send the Company Audit Report to a Class Office with jurisdiction over the Company's region, adding the following papers. You can also register on the web site through e-Application, Web Service Portal. Please refer to website's e-Application. Any new entry request, i.e. Problem of the Interim DOC from another IACS Society for a newly established business and transition of DOC is to be assessed at Head Office.

Documents to be attached to the Company Audit Application

(1) Provisional DOC audit

(1-i) For a newly founded company

The relevant reports will be added to the application's original.

(I) Manual of SMS (Safety Management Manual); 2 copies (Electric format available)

(ii) SMS procedures (including checklist and forms); 1 copy¹

(iii) List² of each type of vessel³ protected by an SMS; 2 copies;

(iv) Business summary and operations⁴; 2 versions

¹ 2 copies if the process is not different from the SMS Manual

² Ship(s) list shall include ' Ship Number, ' ' Class Name, ' ' Class No, ' ' Year Completed, ' ' Flag, ' ' IMO No, ' and ' High Tonnage. "Purpose" is added to the list in the case of "Another Cargo Ship."

³ the boat form is in compliance with ' 1. Ship Description and Use of ISM Code

⁴ The Company's summary shall include a description of the Company's identity, structure, position of all offices and number of employees (shore persons and seafarers) as well as a description of the Company's forms, flag state(s) and number of ships under the Company's

(v) SMS Implementation Plan⁵ 1 copy

(1-ii) In the case of the introduction of Ship Type(s) to DOC issued by Class
Where a Company in possession of DOC issued by Class extends its SMS to a new ship type(s) not specified in the current DOC, the Company is asked to apply ' revised SMS Manual, Procedures, ' ' Ship List(s) ' and ' SMS Implementation Plan ' pertaining to the ship type(s) concerned.

(2) Original review The reports related to in (1) Interim audit shall be added to the software initial excluding the ' SMS Implementation Plan. '

(3) Annual and Renewal Inspection The Company shall submit a list of ships in possession of a SMC provided by the Company other than Class with its particulars, i.e. the name of the ship, type of vessel, flag, IMO number, classification company and SMC issuer, handled by the Agency under the DOC issued by Class, as well as the updated parts of the SMS Manual, if any change is made to the SMS Manual.

(4) Further audit The Company shall, where appropriate, apply reports detailing the reasons and explanations of further auditing and additional information.

Application for Shipboard Audit

The Company is required to apply the Shipboard Audit Report in compliance with the ISM / ISPS Code along with the documentation mentioned below to a Class Office of port authority where the Company plans to conduct the Audit. You can also register on web site through e-Application, Web Service Portal. A Shipboard Audit Application Form in compliance with ISM / ISPS can be found on the Society's Home Page "Download." Any application for a ship

management. Brief explanations of the Company's business operations may include at least a review of the ships under its control's major freight and trade routes and may be described in the Company's outline.

⁵ The following items are included in the "SMS Implementation Plan." I Date of delivery of SMS reports (shore and boat) (ii) Date of implementation of SMS (shore and boat) (iii) Date of planned internal audit (shore and boat) (iv) Date of original inspection by Class (shore and boat)

classified with an IACS company other than specific class shall be assessed at the Head Office at the time of the first application by the company of the ship.

Documents to be attached to the Application for Shipboard Audit

(1) Audit for issuing Interim SMC, Initial, Intermediate or Renewal Audit

(i) A copy of a valid DOC*1 (In the case of DOC issued by other than Class. Interim DOC is valid only for Audit to issue Interim SMC)

(ii) A copy of "Ship Inspection Certificate" in the case of Japanese flag ship

(iii) A copy of (Provisional) Certificate of Registry in case of Audit to issue a Short-term or an Interim SMC to a ship classed with a Society other than specific class society

*1: A valid DOC means to satisfy all items listed below;

- (a) Name of applicant coincides with the name of Company shown on DOC;
- (b) Administration issuing DOC coincides with the ship's Flag;
- (c) Ship type indicated on DOC coincides with the ship;
- (d) DOC is valid in terms of period; and
- (e) DOC is endorsed for necessary Annual Audit.

(2) Additional Audit In addition to those above, submission of documents describing the reason is requested.

Request to receive DOC / SMC issued by another IACS Society

When a Company requests that Class hand over the validity date of DOC / SMC issued by another IACS Society (hereinafter referred to as the "Losing Society"), the request shall be forwarded to Class Ship Management Systems Department (SMD) at least one week in advance, adding the documents listed below.

In the case of Transfer of DOC

(1) Copies of all DOC issued by Losing Society.

(2) A copy of the last Audit Report issued by the Losing Society, including NC, if any, their status and time period(s) for implementation and verification of agreed corrective actions.

In the case of Transfer of SMC

(1) A copy of each of the SMC and the latest DOC issued by the Losing Society.

(2) A copy of the last Audit Report issued by the Losing Society, including NC, if any, their status and time period(s) for implementation and verification of agreed corrective actions.

(3) In the case of a first Application from the Company to Class, a copy of the SMS Manual and List of Procedures related to the SMS.

Procedures for Transfer of DOC/SMC

(1) SMD will inform the Company, in writing, of the conditions for proceeding with the Audit.

(2) SMD shall notify the Losing Society, and request relevant information from the same.

(3) The Audit for Transfer shall be carried out as an Additional Audit corresponding to the Annual or Intermediate Audit. However in cases where the Audit is to be carried out within the due date window of the Periodical Audit, such a Periodical Audit shall be carried out.

(4) The new full term DOC/SMC issued by Class will be valid for the same period as the previous one.

4. Company Audit for issuing Interim DOC

In the case of a newly established Company

An Audit for issuing Interim DOC for a newly established Company shall be conducted according to the following steps.

(1) An interim document review shall be conducted at the Head Office of Class. An Auditor of an Office having jurisdiction over the area of the Company may visit the Company, and may ask some questions before conducting document review. In addition, the Auditor will confirm the contents of the “SMS Implementation Plan”. (2) Interim DOC shall be issued

by the auditor of the office, upon completion of the interim audit after the document review by SMD.

In this case, the Organization must undergo Initial Audit and receive DOC within the span of duration (12 months) of the Interim DOC. In this situation, more Process and Procedures Document Analysis should be performed on site prior to the Initial Audit. The preliminary audit report should be submitted one month prior to the date in this respect.

In the case of Addition of Ship Type

An inspection for issuing an interim DOC for a corporation in possession of a DOC issued by Class and applying its SMS to a new ship type(s) not specified in the current DOC shall be carried out in compliance with the following steps.

(1) The updated sections of the SMS Manual, Procedures (cargo management, emergency response and ship type repairs to be added) and the SMS Implementation Plan for the vessel type(s) involved shall be reviewed by the Office Auditor.

(2) The Office's auditor shall issue an interim DOC listing the new ship type(s) only upon completion of the above review. In this situation, the Company must conduct an external inspection to acquire a DOC within the span of duration (12 months) of the Interim DOC. The Company's SMS and at least one vessel of each type affected by the SMS should have been in service for at least three months at the time of the on-site review. The compliance reviews should also have been done with them.

Initial Audit of Company

With respect to a company's preliminary audit, a thorough initial report analysis to confirm that the company's SMS complies with the ISM Code shall be carried out as a first step at the Head Office of Class. On conclusion of the document review, auditors of an Office with authority over the Company's region shall perform a Company Audit.

Document Review

Record Analysis for the issuance of interim DOC and preliminary inspection will be performed prior to the audit. A Head Office Auditor shall check the details provided by the Organization in the SMS Manual and SMS-related Procedures (including forms and checklist) and ensure that they meet the requirements of the ISM Code. The results of the document review will be described in a "Preliminary * Document Review Report" and forwarded to the Company asking for correction of inadequate descriptions, if any.

The auditor must check the company's response to record correction. He should prepare a final "Report of Document Review" and send it to the Company and the Office when he finds that the response is in order. Please note that the on-site inspection of the company will not be begun unless the review of the report is done. When record correction cannot be done online, it should be accomplished through a consultation with the company's employees at the Head Office for Class or at the company premises.

Company Initial Audit on site

(1) At the time of on-site Audit, the SMS of the Company and at least one ship of each ship type covered by the SMS should have been in operation for at least three months. Also the internal Audits for them should have been carried out.

(2) Auditor(s) of the Office shall visit the Company and shall hold meetings with the Designated Person(s), managers and/or staff of the ashore organization, according to the Audit Program submitted beforehand. The member(s) of top management are kindly requested to attend the Opening and Closing meetings.

The standard duration for Company Initial, Intermediate and Renewal Audits shall be as follows :

COMPANY	MINIMUM AUDIT DURATION
Small - up to 20 employees	1 man days
Medium- between 21 and 50	2 man days

employees	
Large – 50 employees and above	3 man days

Note: one man-day is 8 hours.

(3) The following items shall be verified through the meetings and interviews. (a) The SMS has been in operation satisfactorily for three months and more at the shore organization and at least one ship of each ship type covered by the SMS, verifying the controlled records and the results of internal Audits performed by the Company. (b) Statutory and Class Certificate, and the statutory and survey records of at least one ship of each ship type covered by the SMS. (c) Activities related to SMS have been operated in conformity with the Company SMS, as well as the requirements of conventions such as the ISM Code, SOLAS, STCW and Flag requirements, through examination of the controlled records. (d) In the case of a Company, which manages ship(s) manned with multi-national crew, how the Company is checking the language skills of the crew and their communication abilities. (e) Understanding and implementation of the Company's SMS by Designated Person(s) and the Manager of each Department/Section related to the SMS shall be verified through interview. (4) In cases of Company Audits including Annual and Renewal Audits, the Company shall provide the statutory and classification survey records as well as ISM Audit records relevant to all ships concerned including those which are in possession of SMC issued by other organizations than Class, for Auditors' scrutiny.

Annual Audit of Company

(1) An annual review shall be performed within three months of the anniversary date or after that date.

(2) Auditor(s) shall visit the Company, and shall conduct the Audit in the same way as corresponding to paragraph . The scope of the Audit is to cover all areas of the SMS, and principally is to verify if the SMS is being properly implemented or not. In addition the Auditor(s) shall verify the Company's activity relating to verification and review of any DNC and NC pointed out by the Class Auditors during the previous Company and Shipboard Audits*, PSC detention, and marine casualty. This

verification shall consist of the Company's examination, analysis and resolution, including the root causes of them, and if the SMS has been improved in relation to these points, when necessary to prevent recurrence, and if these improvements have been brought to the attention of all personnel concerned. In case a Company has sustained a number of PSC detention and/or marine casualty, the duration may be increased.

In the case of a ship run by a company carrying DOC given by another group, the validity of the company's corrective actions will be checked at the next Shipboard Inspection.

Renewal Audit of Company

(1) Renewal Audit is to be carried out within three months before expiry date of the DOC. (2) The Audit shall be conducted and verified in same way corresponding to paragraph "Annual Audit of Company". In principle, the verifications shall be done for the past five years.

Additional Audit of Company

An additional Audit for a Company is to be carried out in the following cases.

- (1) When substantial modifications have been made to the SMS of the Company or major organizational changes are made within the Company.
- (2) When Class or the Government of the Flag Administration considers it is necessary to request an Additional Audit in view of the nature of the NC with regards to the SMS of the Company or Ship(s).
- (3) When an Interim DOC related to addition of ship type is changed to DOC.
- (4) When a new Flag State DOC is issued in addition to the DOC in possession.
- (5) When the Company requests reinstatement of an invalidated DOC.
- (6) When name and/or address of a Company is changed.
- (7) Additional Audit for DNC" . Regarding the detail of procedures, please contact with an Office or the Head Office of Class.

Handling Procedures for Revision of the SMS Manual

(1) In situations where there is a substantial change in the SMS (including an overall review, administrative change, etc.), the Organization is kindly asked to ask for an Additional Review of the "Update of the SMS Manual" to the Business Area Manual (APPLI-C), adding one copy of the update details, two copies of the updated parts of the SMS Manual and one copy of the modified parts of the SMS Manual. Please be advised that an on-site business inspection may be needed if Class finds it appropriate depending on the results of Head Office's document review.

(2) Where a revision of the SMS Manual is not significant, such as a change of president, modifications of vocabulary, revision of words or phrases, etc., the Company is kindly requested to send two copies of the updated sections of the SMS Manual (excluding Procedures) to the Company's competent office. After confirming that this is not a substantial change, the revised parts will be changed in the files held by the Class Office and Head Office.

Procedures to issue DOC for a new Flag State in addition to existing DOC

(1) When a Company commences management of a ship under a new Flag State, if the Company is not in possession of DOC issued under the authority of the new Flag State, while the Company manages that ship type, the Company should apply an Additional Audit to the Office having jurisdiction over the area of the Company, attaching following documents.

(a) A copy of (Provisional) Registry Certificate of new Flag State or evidence to show concrete plan to obtain registry of that State.

(b) A copy of document has been submitted to the new Flag State in compliance with the ISM Code 3.1, when the ship's registered owner is not same as the Company.

(c) Any evidence to show that the Company is in possession of necessary national regulations of that new State.

(2) DOC shall be issued from the Office upon verification of the requirements of the new Flag State.

Handling Procedures when the Company's Name/Address changes

(1) The Company shall, in the case of companies whose DOC or Interim DOC is provided by Class, submit an application to the Class Office with jurisdiction over the Company's region. The Auditor shall perform an Additional Review at the Company's premises and issue a DOC or Interim DOC. In this situation, a demand letter (free form) for the revision of the SMC and/or Interim SMC shall be sent to the Auditor, adding a list of ships for which rewrite is required. Class SMD will issue SMC and/or Interim SMC and will immediately send the same to the Organization. (Except in situations where the Flag State does not allow the Class to do so)

(2) In the case of companies whose DOC or Interim DOC is provided by the Flag Administration or the other Category IACS Society, the Company is required to send a letter (free form) to SMD of Class, clearly indicating the exact name / address of the Company to be shown on SMC / Interim SMC, adding a copy of the new DOC or Interim DOC and a list of ships for which SMC or Interim SMC is requested to be reprinted. The SMC and/or Interim SMC will be issued by the Head Office of Class and the same will be sent to the company at once. (Except in situations where the Flag State does not allow the Class to do so)

Shipboard Audit Initial, Intermediate and Renewal Audit of a Ship

(1) The Company's SMS shall have been in service on board for at least three months at the time of the preliminary review. And the Company's internal review of this vessel will also have been conducted.

(2) The vessel shall be inspected by an inspector of the Department with authority over the port where the review is sought. The Auditor shall meet with the Director, senior officers and accountable staff member(s)⁶ named by the Company and conduct a shipboard tour, according to the previously submitted audit plan. Next, the Auditor shall verify the authenticity of a DOC copy put on board. The Shipboard Inspection should not be performed if a copy of the relevant DOC is not put on board.

⁶ Every person familiar with Company SMS on or off the shore is appropriate.

The normal period for original, intermediate and reconstruction audits for SMC shall be as follows:

Ship Type	Initial and Renewal Audit	Intermediate Audit
Passenger ship carrying 1500 passengers and above	2 man days	
Passenger ship, and High-speed Craft carrying 300 passengers and above less than 1500 passengers	2 man days	1 man day
Offshore drilling unit	1.5 man days	
Other types	1.5 man days	

(3) The following items shall be verified through meetings, interviews and ship's tour.

(a) A current latest SMS manual and ship-related protocols are properly placed on deck.

(b) The accuracy of both legal and class certificates and questionnaire documents.

(c) The boat is fully manned with crew hold certificates approved by STCW meeting the Flag Administration's Secure Manning Certification.

(d) SMS-related activities were conducted in accordance with the company's SMS, as well as the requirements of conventions such as the requirements of the ISM Code, SOLAS, STCW and Flag, by examining the controlled records.

(e) The ship's internal audit was properly conducted and its findings were brought to the attention of all personnel involved by reviewing the monitored documents.

(f) How the Master checks the crew's language skills and communication skills in cases of a ship manned with multi-national crew.

(G) The Master and senior officers shall check the comprehension and application of the Company's SMS, including the operation of shipboards, drills and so on, by interviews. The Auditor will also interview senior personnel on the shipboard walk.

(h) In the case of a ship operated by a company holding DOC issued by non-Class, the validity of the corrective actions taken by DNC and NC during the previous Shipboard Audit shall be checked below.

(4) In the case of shipboard inspections, legal and identification survey reports and ISM audit documents applicable to the ship shall be available for inspection

Audit for issuing an Interim SMC

(1) If the vessel is fully manned in compliance with its Secure Manning Certification, the Auditor of the Office having authority over the port at which the Audit is sought shall inspect the ship and check the following items.

(a) DOC is appropriate for that vessel, including Interim

(b) The vessel is issued with the ship's manual and processes that have been updated for the Company's Initial Inspection or an Interim DOC issuance.

(c) SMS and the intended structure for its execution is common to Master and appropriate senior officers.

(d) Instructions⁷ defined as necessary to be issued before sailing have been given; including lifeboat station and responsibilities, fire station responsibilities, and the SOLAS training manual contains detailed additional safety-related reference material.

⁷ Essential instructions are two types of instructions. One is the "personal orders to the Director" to be given in compliance with STCW 95's Section A-I/14 "Business Responsibilities." Another is the ' Essential Instructions for newly joined crew and/or crew moved to new SMS-related assignments ' set out in 6.3 of the ISM Code, which shall be provided for each crew level in compliance with Section A-VI/1 ' Mandatory minimum standards for familiarization and basic safety preparation and guidance for all seafarers ' of STCW 95; Taking into account STCW 95's supplementary details in (d) and Section B-I/14's

- (e). There are plans for the ship's internal audit within three months
- (f) The relevant information on the SMS is written by the ship's staff in the working language or languages.
- (2) Validity of both legal and class certificates and questionnaire document. The boat is fully manned with crew hold certificates approved by STCW meeting the Flag Administration's Secure Manning Certification. Please be advised that no Certification shall be issued in the case of an Audit for the issuing of an Interim SMC if any non-compliance is detected.

Additional Audit of a Ship

An Additional Audit for a Ship is to be carried out in the following cases.

- (1) If substantial changes to the Shipboard SMS have been made.
- (2) In consideration of the essence of the non-conformity with respect to the Company's or Ship(s) SMS and demanded by PSCO, if Class or the Flag Administration finds it appropriate to order an Additional Audit.
- (3) When the specifics of a ship, such as the name of the ship, are changed.
- (4) When the Company demands that an invalidated SMC be restored.
- (5) When the Interim SMC is extended (Application must be followed by a letter of authorisation provided by the Flag Administration)
- (6) "Extra DNC review". For administrative information, please contact an Office or the Class Head Office.

Audit when the same has been suspended due to a ship's schedule

If a Shipboard Inspection could not be done due to a difference in the departure time of the ship, etc., the Corporation should either choose to pursue two choices.

Guidance on Corporate Responsibilities and Required Responsibilities for Masters and Crew Members.

(1) If a Shipboard Inspection could not be done due to a difference in the departure time of the ship, etc., the Corporation should either choose to pursue two choices.

(2) The review is halted and a new request is sent to another Class Office. The remaining parts of the review are to be performed at another port by an inspector from another state. In this case, the second Auditor should receive a copy of the Audit Report made by the first Auditor, but please bear in mind that a little duplication in confirmation may be necessary.

Procedures for a Shipboard Audit when a ship's Flag is changed

When a ship's flag has been changed without the company being changed, an auditor will visit the ship and conduct an audit to issue an interim SMC. The auditor will issue an interim SMC once the items below have been verified.

- (a) A copy of the new Flag State's valid DOC⁸ (Interim DOC is not acceptable).
- (b) A copy of the document was sent in compliance with ISM Code 3.1 to the new Flag State when the registered owner of the vessel is not the same as the agency.
- (c) The required legal qualifications are available on board for the new Flag Country.
- (d) Data on the new Flag's national legislation was received on board and is known to them by the Master.
- (e) The boat is manned with crew keep certificates approved by the new Flag Administration in compliance with STCW meeting the Secure Manning Certification.
- (f) Other Flag Administration requirements are met.

Pointing out of deficiency and its Corrective Action (common for Company and Shipboard Audits)

(1) Where the objective evidence suggests that the stated condition has not been met, non-compliance (NC) shall be imposed. The Auditor demonstrates NC to the members of the shipmaster, DPA and/or other organization and identifies NC on the

⁸ If the Company does not have a valid DOC in the new Flag State, the Company must demand an Additional Review for the issuing of the correct DOC in the new Flag State, in addition to the DOC in its custody, to the Company's area of authority in advance.

audit report with objective evidence. Where the identified non-compliance poses a serious threat to the safety of personnel or the ship or a serious risk to the environment that requires immediate corrective action including the lack of effective and systematic implementation of an ISM Code requirement, Major Non-compliance (MNC) is distinguished from other NCs.

(2) The notice of NCs found by the Audit should be used as an opportunity to improve the SMS. The identification of NCs in the SMS and the execution of effective corrective actions would help to prevent the problems listed below and the recurrence of the same type of non-conformity. (A) Casualties stemming from unrevealed and unresolved NCs (B) Ships being seized as a result of PSC inspections.

(3) ' Corrective action ' under the ISM Code In practice, shortcomings found as objective evidence of failure to implement SMS shall be immediately corrected (Tentative Measure). Nevertheless, in terms of the ISM Code, the immediate correction(Tentative Measure) itself does not (is not the same as) entail the completion of "Corrective Action." ' Corrective action ' shall cover all things 1 to 5 and the ' Corrective action ' plan shall be CAP(Corrective action plan).

1 Tentative Method Immediate adjustment as objective evidence of defects.

-2 Root Cause Assessment Inquiry and Source Detection Reason the existing SMS vulnerabilities occurred.

-3 Corrective recurrence action (Preventive Measures) Prepare for corrective measures to prevent recurrence by evaluating and revising the insufficient / defective parts of the SMS found as a result of the investigation in Step 2 above. (Risk to be measured, if necessary)

-4 Introduction of measures of prevention Implementation of anticipated measures of prevention.

Verification of the implementation of preventive measures

Determining the effectiveness of preventive measures

-5a: preventive measures considered to be effective —continuous implementation

—5b: effectiveness determined to be insufficient or recurrent.

Rethink the corrective measure (Step 3 above) and rethink the review of the root cause (Step 2 above)

BASIC FLOW OF CORRECTIVE ACTION

0. Deficiency found



1. Immediate Correction



2. Identify Root Cause



3. Preventive Measure based on root cause



4. Implement the improved SMS

5. Verification of the effectiveness of the improved SMS implementation

Handling of a Certificate when a Non-conformity is found

Follow up action for MNCs

(1) Determination of MNCs

(A) When an MNC is established, the Auditor shall submit Form MNC as an intermediary document with objective evidence to the representative(s) of the Group. The auditor discusses the policies for the MNC and follow-up.

(B) The Company shall immediately take corrective action for defects, such as replacements to damaged equipment, on the grounds of the MNC. The Company shall recommend to the Auditor the urgent remedial action to assign it to DNC. When deemed necessary, the Auditor updates the proposal and recommends adjustments. For downgrade for DNC, at least the serious threats to staff and/or vessel health and/or serious environmental concerns need to be eliminated.

(C) Upon approval of the effective corrective action, the Auditor shall define and apply to the representative of the Company the actions taken and the DNC(s) on the MNC Form. The statement will be signed by the Auditor and the lawyer of the company.

(D) In the event that MNC is found, an Additional Audit to confirm that appropriate action is required (hereinafter referred to as ' Additional Audit of DNC ') within 3 months of the date of the audit. If the additional audit has not been conducted within the negotiated time (max. 3 months), the DOC / SMC shall be withheld from the flag

administration with documentation. In fact, if an MNC is raised during the shipboard audit due to the company's SMS error, additional company audit may be needed if the auditor finds it necessary.

(E) The Auditor shall prepare Form MNC as shown in Appendix 1 detailing the MNC and DNC (Downgraded Non-Conformity) and its supporting objective evidence, and shall apply it together with Form CAP to the Company's delegate (or Master) at the pre-closure conference.

(2) Follow-up DNCs

(a) The Corporation is asked to execute a DNC Corrective Action Plan with a timeline not approaching 3 months from the last audit date and to send Form CAP to the Auditor within 2 weeks of the last audit date. If it is satisfactory or not, the Auditor reviews the revised CAP and advises the Corporation to amend it if it is deemed necessary. The Auditor states in this context that the plan includes the evaluation of the root cause and the execution of corrective actions and measures to prevent recurrence. The Auditor gives the invoice to the Company where the CAP is considered to be satisfactory.

(B) Application for an ' Extra Audit of DNC ' shall be forwarded to the Office in the case of a Business Audit or to any Office with authority over the port at which the Company wishes to conduct the Audit in the case of a Shipboard Audit. The Request shall be followed by a copy of each Form MNC. The object of the follow-up Audit shall be to confirm that the corrective action taken to prevent an Audit is to be carried out by the Company.

If successful corrective action is not taken, DOC / SMC shall be invalidated

Follow-up action for NCs

(1) Determination of NCs If NCs are established, the Auditor shall prepare the Form NCN as shown in Appendix 2 detailing the NCs and their supporting objective evidence and shall send it to the member (or master) of the Group at the pre-closure meeting together with the Form CAP.

(2) NCs follow-up The Company is asked to execute a DNC Corrective Action Plan with a timeline not approaching 3 months from the last audit date and to send Form CAP to the Auditor within 2 weeks of the last audit date. If it is satisfactory or not, the Auditor reviews the revised CAP and advises the Corporation to amend it if it is

deemed necessary The Auditor states in this respect that the program includes the analysis of the root cause and the implementation of corrective actions and measures to prevent recurrence. The Auditor will send the receipt to the Company where the CAP is agreed to be satisfactory. The effectiveness of the corrective actions for NCs, including those raised at Shipboard Audit, shall be verified by the Auditor at the next Company Audit. However in the case of a ship managed by a Company to who holds DOC issued by other than ClassNK, the verification of the effectiveness of corrective actions shall be verified at the next Shipboard Audit.

Entry onto the Form CAP

(1) The following is the CAP (Corrective Action Plan) form as shown in Appendix 3. Since this form can be used as a common form of DNC / NC, please prepare the CAP separately for NC and DNC if there are NC or DNC.

- 1 Investigation of DNC/NC Investigation of objective evidence of DNC/NC
- 2 Identification of Root Cause of DNC/NC Identifying the Root Cause
- 3 Tentative measures for DNC/NC Immediate correction / repair of defected installation or machinery Tentative measure for lack of crew familiarity etc.
- 4 Preventive measures for recurrence of DNC/NC Based on the identified Root Cause (above -2), the company examines the necessity of revising and improving the SMS, if necessary.
- 5 Verification of effectiveness of preventive measures How to verify the planned preventive measures (above -4) are effective or not.

(2) Concrete example of CAP a) Investigation of DNC/NC

- ✓ Crew were not familiar with the procedure of ~
- ✓ Document control was insufficient/inadequate b) Identification of Root Cause of DNC/NC
- ✓ There is no practical Procedure / Instruction in SMS, depending only on the crew's skill / knowledge
- ✓ Procedure / Instruction for ~ was missing / not defined / not sufficient. c) Tentative measures for DNC/NC

- ✓ Repaired defective installation / machinery
- ✓ Provided crew education / training by the company's staff. d) Preventive measure for recurrence of DNC/NC
- ✓ Procedure / Checklist will be revised e) Verification of effectiveness of preventive measures
- ✓ Additional internal audit by the shore staff will be carried out by dd mm yy.
- ✓ Verification of photos / reports from the vessel will be carried out by dd mm yy.

NCs Follow-up (In the case of Japanese ships and/or their managing Companies)

In the case of NCs raised against Japanese ships and/or their operating firms, the Auditor shall submit Form CAP-J to the DPA or the Manager instead of, or in addition to, Form CAP. Form CAP-J shall be sent to the Auditor in charge via fax or e-mail within two weeks of reaching the upper part of the Corrective Action Plan. The same shall be forwarded to the Auditor in charge within 3 months of completion, namely as a request for follow-up inspection, entering the corrective actions taken on the lower part of the document. The Office shall send a "Receipt" to the Company at the first delivery of Form CAP-J via fax or e-mail.

The Agency will submit the same as the "Follow-up Report" report at the second delivery of Form CAP-J, and the Company will receive an Audit History of Follow-up.

Actions for ISM Deficiencies Raised in PSC Inspections

Where deficiencies relating to the specifications of the ISM Code (ISM deficiencies) were posed in PSC audits, the protocols listed below should be observed and checked with the PSC Officer (PSCO) on a case-by-case basis.

ISM Deficiencies which are Ground for Detention

In the case of MNCs and ship detention failures, the PSCO may normally require independent auditing by the flag administration or a recognised agency.

PROCEDURES

(1) A petition for further review should be forwarded by the Company to the relevant Class office together with:

- (a) a copy of the PSC inspection report
- (b) PSCO's detailed clarification as to why the ISM deficiencies were identified and the views of the Company in any situation.

(2) The Organization must prepare for the resolution of the structural and functional defects on which the ISM deficiencies are based, e.g. hull building and machinery replacements, providing the necessary documentation.

(3) The auditor shall categorize the defects found by PSCO as part of the ISM Code and shall assess the extent of the audit. During the audit, the auditor defines MNC, NC or OBS based on the evidences of the corrected item, including the shortcomings, and releases an audit report.

(4) The Corporation will report to the PSCO with a copy of the vessel launch audit documents.

(5) The Organization must examine the root causes of ISM failures and draw up a recurrence avoidance corrective action plan. The Organization must conduct further review to check the efficacy of corrective actions if MNC is lifted.

The aim of the SMS documents is to record the organization's safety management system (SMS) and communicate it internally to staff and externally, for example to the regulator, to the organizations involved. This requires the correct implementation of safety procedures and therefore the accomplishment of the safety objectives of the company.

Security records are kept to ensure recorded security for all connected, accountable or reliant on the services provided by the company and the regulator Safety records are required to prove that the SMS works as intended.

Conclusion:

Why STCW Convention is so important and how the Manila Amendments affected to maritime industry?

Before 1978, when the initial standards were accepted by the IMO, different countries had different rules on the minimum level of preparation a seafarer had to undergo before being employed on a merchant ship. Given the multinational complexity of merchant ship operations, this was inefficient and contributed to problems due to the inconsistency- officers from different countries had difficulty working with each other and with the ports they were docking due to the varying levels of training.

With proven and effective mandatory training standards, maritime officers are now healthier because they know themselves at sea and their peers are qualified in at least basic, if not better, safety procedures. It reduced the risk of injuries on the ship significantly, which increases efficiency in reacting to any event that should occur- every person on board the ship is healthier under these regulations.

The recent 2010 Convention changes now clarify that the STCW specifications are revised every five years so that the IMO can help officers stay up-to-date with the rapidly improving technology available for commercial vessel use. This is important because it ensures that an officer will be competent in his or her position even when faced with new equipment that they may have never seen before. All the above proves that STCW Convention follows and serves faithfully its intention : to ensure and promote safety of life and property at sea and the protection of the Marine Environment.

SOURCES

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