

EXAMPLES OF NEEDED AMENDMENTS TO STCW CONVENTION AND CODE AIMING AT IMPROVEMENT OF THE SEAFARERS' TRAINING

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Abstract: The paper addresses the problem of improving the safety at sea through maritime education and training. It puts forward some proposals focused on four types of improvements to the STCW Convention and Code – one proposal for one type; namely: wording, harmonization with other IMO instruments, additional training emanating from existing regulations in other IMO instruments, additional training that may be foreseen with regard to current discussions at IMO.

Key words: STCW Convention, STCW Code, training of seafarers

Introduction

International Convention on Standards for Training, Certification and Watchkeeping for Seafarers 1995/98 (STCW Convention) [1] is the main international treaty that sets minimum standards of education and training for crew serving on different levels, functions and responsibilities on board seagoing ships. During the Diplomatic Conference organized by International Maritime Organization (IMO) in Manila on 25th of June, 2010 Contracting Governments adopted revisions to the existing at that time STCW Convention and Code, which entered into force on the 1st January 2012. It resulted in a number of changes in maritime training and certification, including: improvement of the measures to prevent fraudulent practices, new medical standards, revised requirement on hours of work and rest, new requirements related to training in modern technology such as electronic charts or training

and certification requirements for electro-technical officers [2].

Design and operational technology for modern ships as well as operational practices and procedures are still evolving. There are also new demands with regard to safety level – passenger ships are good example [3]. Therefore STCW Convention and Code should not remain static but should be re-evaluated and revised, as necessary.

The paper consists of three sections: 1) proposed examples of amendments to STCW Convention and Code, 2) an area of concern that the IMO's Sub-committee on Human Element, Training and Watchkeeping (HTW) should be (in the view of the Authors) focused on in the next future (namely standards for assessment of new entrants to seagoing industry), 3) annex containing a draft of IMO document that could be submitted by a Member State (for example Poland, possibly together with other co-sponsor) to HTW Sub-committee for their consideration with the view to

elaborate additional specific training for the personnel serving onboard passenger ships.

Possible improvements and amendments to STCW Convention and Code

Four types of improvements and amendments to STCW Convention and Code could be mentioned necessary and/or advisable:

1. Improvement of the wording.
2. Harmonization with other IMO instruments.
3. Additional training emanating from existing regulations.
4. Additional training that may be foreseen with regard to current discussions at IMO.

There are four examples of amendments presented below – one for each type of the improvement as stated above. In the Authors’ opinion there is a lot of other similar areas of concern that should be addressed and considered by HTW Sub-committee in future.

Improvement of the wording

The International Code on Intact Stability (2008 IS Code) [5] entered into force on 1th of July, 2010 via respective amendments to the

International Convention on the Safety of Life at Sea (SOLAS Convention) [6]. Before this date all stability criteria contained in 2008 IS Code were recommendatory. The 2008 IS Code has been divided into two parts:

1. Part A – Mandatory criteria.
2. Part B – Recommendations for certain types of ships and additional guidelines.

After this date some stability recommendations became regulations for all new ships. This should be highlighted in the text of the STCW Code. Proposal for new wording is presented in Figure 1. Respective text regarding the knowledge, understanding and proficiency in the relevant table in the existing STCW Code: *Knowledge of IMO recommendations concerning ship stability* shall be changed to *Knowledge of IMO regulations and recommendations concerning ship stability*. This change reflects also the fact that mandatory damage stability requirements (as part of stability requirements in general) are contained in SOLAS Convention Part B/II-1 [6] and intact stability requirements are contained in other mandatory IMO instruments (for example carriage of grain in bulk) [7].

Table A-II/2 (continued)

Function: Controlling the operation of the ship and care for persons on board at the management level

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Control trim, stability and stress	<p>Understanding of fundamental principles of ship construction and the theories and factors affecting trim and stability and measures necessary to preserve trim and stability</p> <p>Knowledge of the effect on trim and stability of a ship in the event of damage to and consequent flooding of a compartment and countermeasures to be taken</p> <p>Knowledge of IMO recommendations concerning ship stability</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> .1 approved in-service experience .2 approved training experience .3 approved simulation where appropriate 	<p>Stability and stress conditions maintained within safe limits at all times</p>
Monitor and control	Knowledge of international maritime law embodied in	Examination and assessment of evidence obtained from one or	Procedures for monitoring operations and maintenance

Should be:
Knowledge of IMO regulations
 and recommendations concerning ship stability

Figure 1. An example of an improvement in the wording in STCW Code

Harmonization with other IMO instruments

Different IMO conventions refer sometimes to the same objects. An example presented below concerns stability instrument – a measure (a

computer and a computer programme) used to assess ship’s stability before ship’s departure. The stability instrument shall be named in the same way in both conventions: SOLAS and STCW. In the opinion of the Authors the name used in SOLAS Convention is more

appropriate. Therefore respective table in STCW Code shall be amended as follows: “Use

of electronic loading and stability computer or equivalent means”. This is shown in Figure 2.

Function: Cargo handling and stowage at the management level;
Competence: Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes (page 118).

STCW:

- „Use of *stress calculating equipment, including automatic data based (ADB) equipment.....*”

SOLAS

- „electronic loading and stability computer or equivalent means”

Figure 2. An example of harmonization: STCW and SOLAS conventions

Additional training emanating from existing regulations

IMO’s Sub-committee on Stability and Load Lines and Fishing Vessels Safety (SLF) developed in 2012 amendments to SOLAS

Convention regarding safe return to port of a passenger ship after flooding casualty. The amendments were approved and adopted by the Maritime Safety Committee (MSC) at its 90th Session. The original proposal by SLF is presented in Figure 3.

SLF 53/19
Annex 4, page 1

ANNEX 4

DRAFT AMENDMENT TO SOLAS REGULATION II-1/8-1

Regulation 8-1 – System capabilities and operational information after a flooding casualty on passenger ships

A new paragraph 3 is added after the existing paragraph 2, as follows:

"3 Operational information after a flooding casualty

For the purpose of providing operational information to the Master for safe return to port after a flooding casualty, passenger ships constructed on or after [1 January 2014] shall have:

- .1 onboard stability computer; or
- .2 shore-based support,

in accordance with guidelines developed by the Organization^{*}."

(*) Refer to the Guidelines on operational information for the Masters of passenger ships for safe return to port by own power or under tow.

Figure 3. Proposal of the amendments to SOLAS Convention by SLF

The SLF Sub-committee requested the Sub-committee on Standards of Training and Watchkeeping¹² (STW) to consider whether

additional training of crew members assigned to duties with regard to this amendment was necessary. STW opinion was negative in this

¹² Due to the reorganization of the structure of International Maritime Organization in January 2014, STW Sub-committee was renamed to the Sub-

committee on Human Element, Training and Watchkeeping (HTW). The first session of his sub-committee is planned to be held in February 2014.

respect in 2011 [8]. The later facts show this decision was not appropriate – Costa Concordia accident did prove the necessity of this approach.

In the meantime the Authors of this paper prepared a proposal of amendments to STCW Convention and Code that is presented in the Annex to this paper. This proposal has not been published yet.

After Costa Concordia accident in January 2012 MSC 90 approved new unplanned output “Safety of passenger ships”. Subsequently the United States of America proposed at MSC 91 new unplanned output for HTW Sub-committee “Passenger Ship Training” [4]. That was approved by MSC 91 after modification of the name of the task. It opened the door for a discussion on additional training for those who will be assigned to new duties on a passenger ship – the duties that emanate from amendments to SOLAS Convention proposed by SLF (Figure 3) and further adopted by MSC. The text annexed to this paper was originally intended to be submitted to the 43rd Session of STW in 2012, but due to time constraints and organizational burdens it was not possible to do

so. The current possibility is to submit this document, after necessary alterations of wording, to HTW 2 scheduled for 2015 under new agenda item “Proposed review of STCW passenger ship specific safety training“ [4, 12].

Additional training that may be foreseen with regard to current discussions at IMO

Piracy and armed robbery against ships is one of the top agenda items of the International Maritime Organization. There are a lot of discussions in the frame of this agenda item. One interesting issue is use of Privately Contracted Armed Security Personnel (PCASP) onboard ships and different aspects of the matter. From the maritime education and training point of view a very important question is: who is in charge – who commands such armed personnel?

The master is supposed to command and have overriding authority and responsibility. Figures 4 and 5 present respective elements of documents submitted to MSC.

PIRACY AND ARMED ROBBERY AGAINST SHIPS

Safety issues related to the use of armed personnel on board ships in the high risk area

Submitted by Italy

SUMMARY	
<i>Executive summary:</i>	This document draws the Committee's attention to safety issues related to the use of armed personnel on board ships in high risk areas and describes the decisions taken by the Italian Administration in order to address such issues
<i>Strategic direction:</i>	6
<i>High-level action:</i>	6.2.1
<i>Planned output:</i>	6.2.1.2
<i>Action to be taken:</i>	Paragraph 10
<i>Related documents:</i>	MSC.1/Circ.1405/Rev.1, MSC.1/Circ.1406/Rev.1 and MSC.1/Circ.1408

Introduction

1 The series of countermeasures recently approved in order to reduce the risk of successful piracy attacks, includes the interim recommendations regarding the use of **Privately Contracted Armed Security Personnel (PCASP) on board ships** in the high risk area which address different aspects of the matter in relation to the parties concerned: shipowners, ship operators and shipmasters (MSC.1/Circ.1405/Rev.1); flag States (MSC.1/Circ.1406/Rev.1); and port and coastal States (MSC.1/Circ.1408).

Figure 4. Element of documents submitted to IMO with regard to PCASP [10]

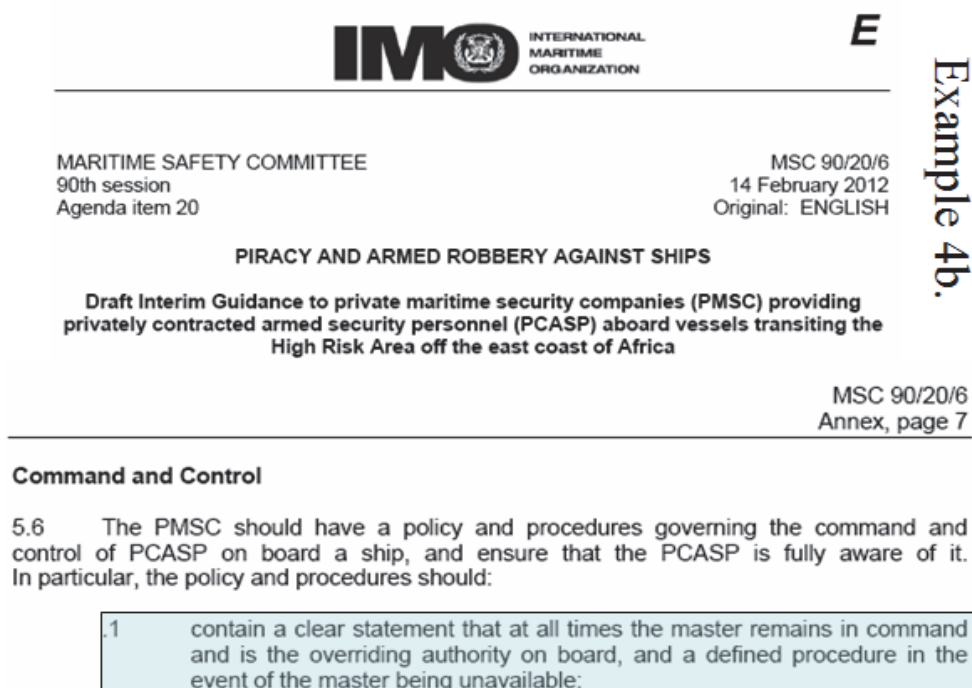


Figure 5. Element of documents submitted to IMO with regard to PCASP [11]

Current STCW Convention and Code do not cover this issue. Masters trained in accordance with STCW Convention not necessarily have proper knowledge and skills to manage this problem while sailing along pirates' affected areas. Therefore appropriate amendments to STCW Convention are needed. IMO should start the discussion in this respect in the next future. Training centers (especially maritime universities) should develop new programme to cover the issue of commanding armed personnel onboard ships.

An area of concern that HTW Subcommittee should be focused on

There are two main stages of seafarers' training leading to obtaining the certificate:

1. Education and training.
2. Assessment.

The purpose of the STCW Code is to facilitate "production" of good quality seafarers. Therefore examination (assessment) should be the barrier for avoiding poor quality seafarers. It is shown in Figure 6. Additionally Figure 7 shows examples of possible barriers for poor quality seafarers that are breached frequently.

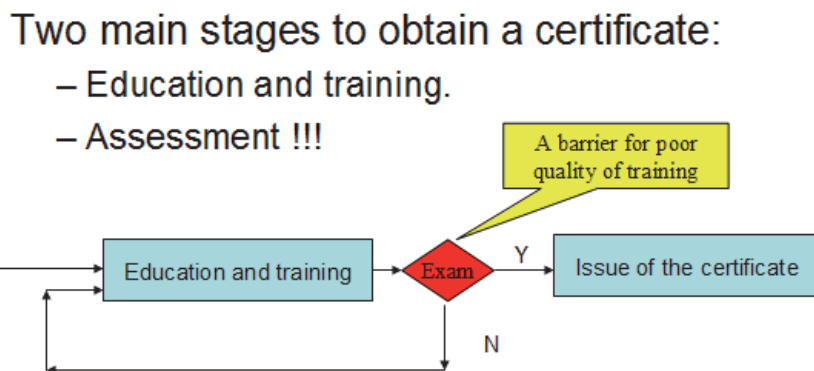


Figure 6. Exam as a barrier for poor quality seafarer

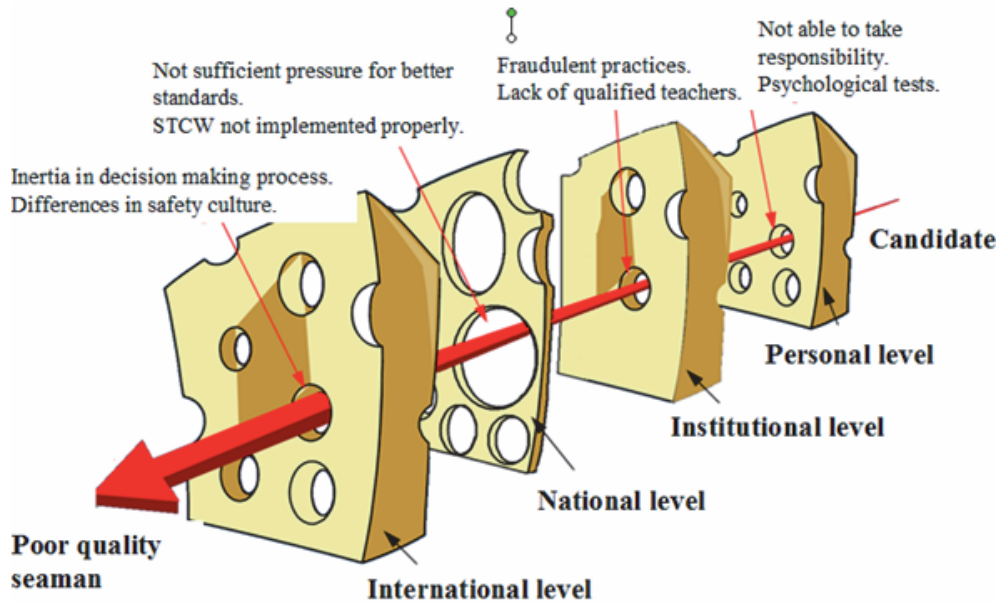


Figure 7. Examples of breached barriers that lead to poor quality seafarer

From this point of view the future aim for HTW Sub-committee should be development of an international standard for the seafarers assessment.

3. Conclusions

The paper presents four examples of proposals for amendments to STCW Convention and Code. Basing on this or similar approach the question may be raised:

- How many other examples may be addressed taking into account different points of view?
- One possible solution in considerably short time is to create a Task Force out the structure of HTW Sub-committee but dealing with issues under its purview. It could be an international project aiming at holistic approach to

amendments to STCW Convention and Code instead of „voluntary” submissions by Member States covering only particular part of the Code that the submitters are interested in. The Code could be amended after the „critical mass” of the amendments has been gathered.

Another important issue is seafarers assessment. International standard for seafarers assessment could be a barrier preventing poor quality seafarers from entering the sailing profession.

Draft document annexed to this paper, after necessary alterations of wording, could be submitted to HTW 2 in 2015 for their consideration under new agenda item “Proposed review of STCW passenger ship specific safety training”.

ANNEX

Guidelines on operational information for masters of passenger ships for safe return to port by own power or under tow

Submitted by Poland

SUMMARY

Executive summary:	This document contains a proposal for amendments to STCW Convention and STCW Code concerning additional training for masters and crew members assigned to operate stability computers and/or co-operate with shore-based support institutions for the purpose of safe return to port after flooding casualty on passenger ships.
Strategic direction:	No related provisions
High-level actions:	No related provisions
Planned output:	No related provisions
Action to be taken:	Paragraph 9.
Related documents:	MSC 89/25, paragraph 9.13; SLF 53/19, paragraph 7.

BACKGROUND

1. The Maritime Safety Committee at its 89 Session approved MSC.1/Circ.1400 on guidelines on operational information for masters of passenger ships for safe return to port by own power or under tow. At the same session the Committee approved the draft amendments to SOLAS regulation II-1/8-1, which introduces a mandatory requirement for either onboard stability computers or shore-based support for the purpose of providing operational information to the Master of a passenger ship for safe return to port after a flooding casualty.

2. The Sub-committee on Stability and Load Lines and on Fishing Vessels Safety at its 53 Session discussed the need of additional training for masters and crew members on passenger ships assigned to operate mandatory stability computers and decided to refer the issue to the STW Sub-Committee for further consideration.

DISCUSSION

3. After a passenger ship is fitted with stability computer complying with new SOLAS regulation II-1/8-1, that performs new tasks which are not met at present onboard passenger ships, the proper and efficient use of such computer and outputs will be crucial for the safety of the passengers, crew, ship and environment after flooding casualty.

4. **New skills and knowledge required** for effective use of the information provided by the onboard computers on passenger ships or shore-based support as well as co-operation and decision making after real flooding casualty **are different than those required for intact and damage stability assessment prior to departure** or use of onboard damage stability information required by SOLAS Convention so far.

5. Poland is of the opinion that necessary training for masters and crew members assigned to operate stability computers and/or co-operate with shore-based support institutions for the purpose of safe return to port after flooding casualty on passenger ships goes far beyond the standards of the STCW Convention and the STCW Code. Therefore amendments to Regulation V/2 of the STCW Convention (*Mandatory minimum requirements for the training and qualifications of masters, officers, ratings and other personnel on passenger ships*) and section A-V/2 of the STCW Code may be needed.

PROPOSAL

6. Poland proposes the establishment of the drafting group to prepare the justification for an unplanned output on *Amendments to STCW Convention and STCW Code concerning additional training on safe return to port after flooding casualty for personnel on passenger ships* for submission to MSC 90 for approval.

7. The second option is to take into account that the earliest date of entry into force of the amendments to SOLAS regulation II-1/8-1 may be 1th of January, 2014 and that the Council instructed all IMO subsidiary bodies to avoid the proposals of unplanned outputs due to burden of the work. In this context Member States may be encouraged to submit to MSC proposals for a planned output, as set out in paragraph 6, for the biennium 2015-2016 with target completion date 2015.

8. Draft scope of the amendments proposed by Poland is set out in the Annex.

9. The Sub-Committee is invited to consider the proposals in paragraphs 6, 7 and 8 and take action as appropriate.

ANNEX

Draft proposed Amendments to STCW Convention and STCW Code concerning additional training on safe return to port after flooding casualty for personnel on passenger ships

A. Amendments to STCW Convention

1. Insert new paragraph number 8 in Regulation V/2 - *Mandatory minimum requirements for the training and qualifications of masters, officers, ratings and other personnel on passenger ships*:

8. Masters and crew members assigned to operate stability computers and/or co-operate with shore based support institutions for the purpose of providing operational information for safe return to port after a flooding casualty shall have completed approved training in safe return to port after a flooding casualty as specified in section A-V/2, paragraph 5 of the STCW Code.

2. Existing paragraph 8 renumber to 9.

B. Amendment to STCW Code

1. At the end of Section A-V/2 add new text as follows:

Safe return to port after flooding casualty

5. The training in safe return to port after a flooding casualty required by regulation V/2, paragraph 8, for Masters and crew members assigned to operate stability computers and/or co-operate with shore based support institutions for the purpose of providing operational information for safe return to port after a flooding casualty shall include, but not necessarily be limited to:

- .1 understanding the difference between intact and damage stability assessment prior to departure and determination of the ship condition after flooding casualty;
- .2 knowledge and understanding of algorithms used in damage stability and strength modules for safe return to port after flooding casualty and other onboard computer software for stability calculations - its assumptions, simplifications, limitations etc;
- .3 interpretation of the output in order to provide required information;
- .4 ability to perform prompt and effective collaboration with shore-based institutions, especially classification societies' experts and ship designers;
- .5 ability to apply properly and immediately the results of damage stability and strength calculations in decision making process after flooding casualty.

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