

Proposed Changes to Chapter III (Engine department) & Chapter V (Special training requirements for certain types of ships)

M. A. Ganesen

Chief Executive Officer, Malaysian Maritime Academy (ALAM)

Introduction

The Committee discussed the current status of the work of the IMO's STW Committee in its comprehensive review of the STCW Convention and Code. ... The Committee agreed that given the fact that the majority of the world's seafarers are recruited and supplied from the region, ASF Associations and their Governments should be actively involved and contribute to the review by sharing their experiences of the implementation of STCW 95 so as to ensure the revision will be conducted in a systematic and organized manner and will best reflect the interests of shipping industry and governments in the region. [Extract from the 14th Interim Meeting of ASF Seafarers Committee, November 28th, 2008 in Kuala Lumpur. ASF - Asian Ship-owners Forum]

Let me start by quoting the sentiments expressed by the regional ship-owners' recently in Kuala Lumpur, which clearly ask for active participation of maritime stakeholders in shaping our next generations of seafarers from this region. You will agree that this current comprehensive review of IMO's STCW Convention is likely to have far reaching effects on regional maritime education and training (MET), and the maritime industry. The Conference/Workshop theme reflects the need for the regional MET and industry stakeholders to fully understand the proposed changes and chart the way ahead in consequence.

The scope of the paper is limited to the Chapter III (Engine department) & Chapter V (Special training requirements for certain types of ships). However, I shall cover this process of revision to put us in the proper perspective.

We are undertaking the continuation of the work that was initiated in 2006 with the aim of comprehensively reviewing the STCW Convention and the Code. The outcome should ensure that the changes we make meet today's challenges facing the shipping industry as well as get us ready for our foray

into the foreseeable future growth of the maritime industry in the region.

The scope of the review was agreed by IMO's Maritime Safety Committee to include issues such as

- maritime security;
- competence-based training programmes for personnel on board tankers, including LNG carriers;
- hours of work;
- training of ratings; and
- innovative training methodologies, including distance- and e-learning.

The resulting amendments to the convention and the code should enter into force sometimes in the 2010. The provisional road map for the comprehensive revision is shown in the Table 1 below.

<ul style="list-style-type: none"> • MSC 84 (7 - 16 May 2008) 	<ul style="list-style-type: none"> • Approval, in principle, to hold a Conference of STCW Parties to adopt amendments to the STCW Convention and the STCW Code emanating from the comprehensive review and to advise C 100 accordingly; and • Approval of the schedule of meetings relating to the comprehensive review to the STCW Convention and Code.
<ul style="list-style-type: none"> • C 100 (16 - 20 June 2008) 	<ul style="list-style-type: none"> • Endorsement of the decision of MSC 84.
<ul style="list-style-type: none"> • Intersessional working group (8 - 12 September 2008) 	<ul style="list-style-type: none"> • Preparation of draft text of amendments.
<ul style="list-style-type: none"> • STW 40 (2 - 6 February 2009) 	<ul style="list-style-type: none"> • Preparation of draft text of amendments.
<ul style="list-style-type: none"> • ALAM/ GlobalMET Mini-Conference & Workshop at ALAM, Melaka (28th April 2009) 	<ul style="list-style-type: none"> • The way ahead for the Regional MET & Maritime Industry.
<ul style="list-style-type: none"> • MSC 86 (6 - 15 May 2009) 	<ul style="list-style-type: none"> • Authorization for STW 41 to finalize the draft text of amendments for circulation.
<ul style="list-style-type: none"> • STW 41 (January 2010) 	<ul style="list-style-type: none"> • Finalization of the draft amendments to the STCW Convention and the STCW Code.
<ul style="list-style-type: none"> • February 2010 	<ul style="list-style-type: none"> • Circulation of draft amendments.
<ul style="list-style-type: none"> • Conference of STCW Parties (July 2010) 	<ul style="list-style-type: none"> • Adoption of the amendments to the Convention and the Code by a Diplomatic Conference in Philippines

Table 1. Road-map for Comprehensive Revision of STCW

Referring to our scope for this paper, during the comprehensive review, the following issues and relevant regulations will be considered:

- Chapter III - Engine department, to include
 - o relevant competences with regard to electrical engineering and electronics in the operation of ships
 - o any recent changes in equipment, technology and terminology
 - o familiarization training to understand the limitations of automatic systems
 - o emphasis on environmental awareness;
- Chapter V - Special training requirements for personnel on certain types of ships, to include review of the requirements leading to dangerous cargo endorsements (DCEs) for seafarers and provision of training standards for dynamic positioning ships;
- Regulation V/1 and section A/V-1 on minimum requirements for masters, officers and ratings on tankers, with a view to developing liquefied natural gas (LNG) training and competency standards as well as addressing steam turbine propulsion requirements for LNG tankers;
- Regulations V/2 and V/3, to combine requirements for "ro-ro passenger ships" and for "passenger ships other than ro-ro passenger ships";

Major areas of concern in Chapter III (Engine Department)

STW 38 has identified and MSC 83 has approved the list of areas in the STCW Convention and Code for the comprehensive review to be conducted in a systematic and organized manner and extended the target completion date to 2010.

The following are the major areas of concern:

[Note: the IMO documents referred to are provided for your reference in the hand-outs. They are either complete or when bulky, relevant extracts are attached]

1. Methods of demonstrating competence

STW 40/7/14 proposed "Approved ship's engine-room operational machinery and equipment laboratory ashore" as one of the means of imparting methods for demonstrating competence of various functions at the operational level and provided details of equipments and machineries required for that purpose. The Sub-Committee, noting that this proposal did not require any principle decision of the Sub-Committee, referred it to the relevant working group for consideration in detail.

The proposal refers to Ship-in-Campus, which means a replica of an actual engine-room ashore or shore-based engine-room. The facility of a ship in campus aims to equip students to work as marine engineers on seagoing ships using current in-service technology and time tested skills. It aims to provide a high level of work-based learning through training sessions within the campus in a shipboard environment including use of engine simulators.

During the afternoon session, the participants are encouraged to look through this document and give their views on this proposal.

2. Emerging and contemporary technologies

STW 40/7/18 proposed amendments to tables A-III/1 and A-III/2 of the STCW Code with a view to reorganizing the existing functions and to include a new function "Engineering watch" in order to meet the requirements of contemporary and emerging technologies.

During the sub-committee meeting, some delegates expressed the view that there was no need to change the existing requirements. Another group of delegates expressed the opinion that while they could support the proposal, in principle, it should be discussed further in the working group.

There were yet others who expressed the opinion that there was a need to exercise caution, as the proposed review would entail a very heavy workload. Furthermore, in case a new function was added, it would be necessary to reissue all engineers' certificates which would place a very heavy burden on Administrations.

After an in-depth discussion, the Sub-Committee agreed that some elements of the proposal could be included in the existing tables of competence but that it was not necessary to reorganize the tables as proposed. In this context, the Sub-Committee advised to identify only those elements which could be included in tables A-III/1 and III/2 (see Table 2 & Table 3).

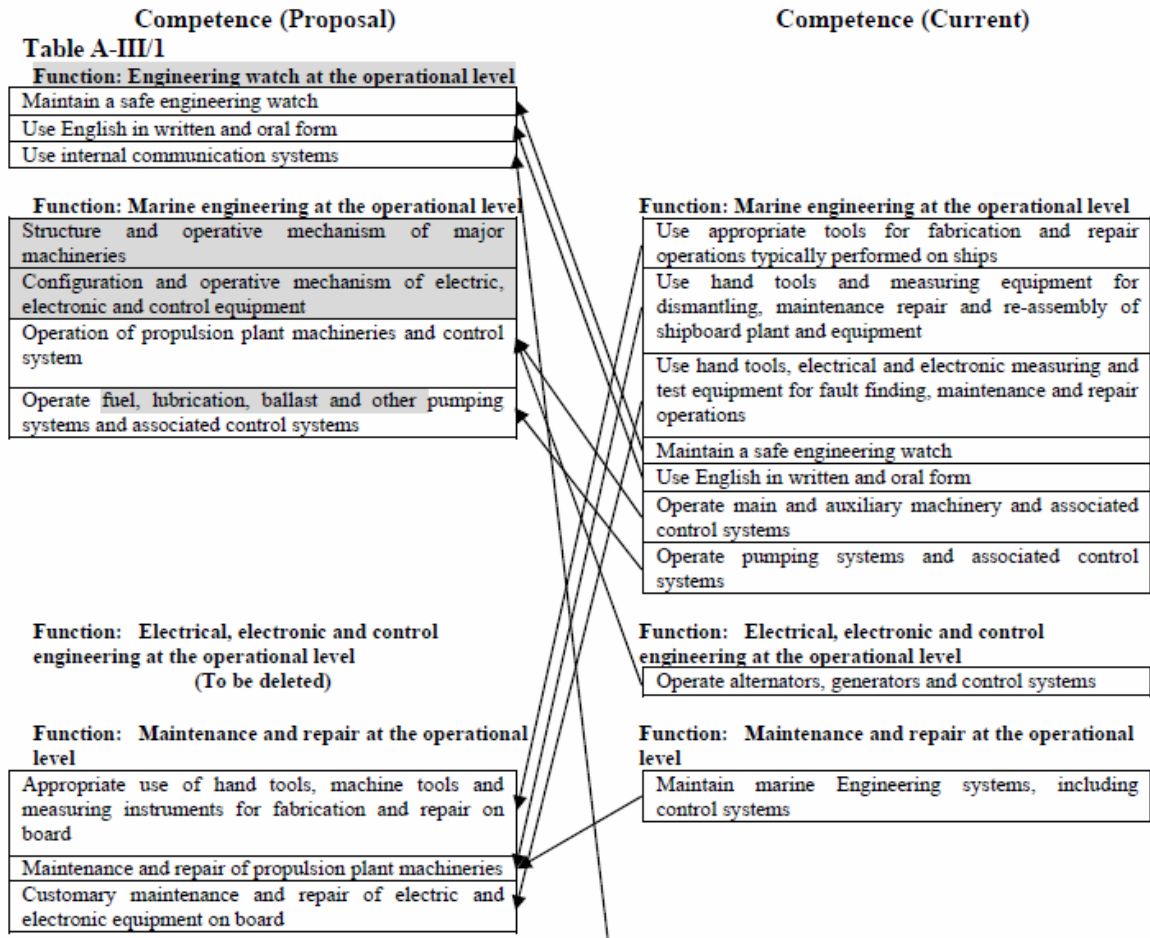


Table 2 Competence Table AIII/1 Proposed in STW 40/7/18

Competence (Proposed)

Competence (Current)

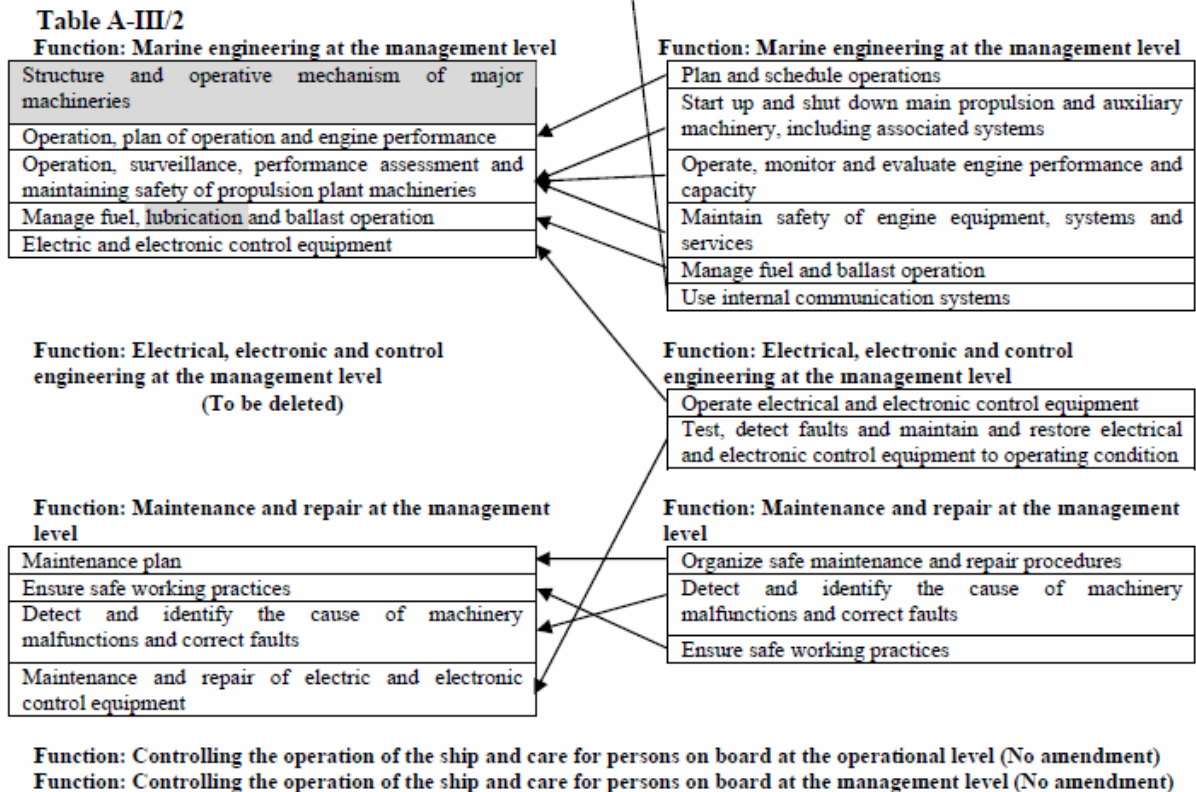


Table 3 Competence Table AIII/2 Proposed in STW 40/7/18

The workshop participants can review the issue in detail during afternoon session.

3. Deletion/reduction/amendment in the period of education and training for engineers

STW 40/7/13 proposed amendments to regulations III/1, III/2 and III/3 of the STCW Convention with a view to harmonize education and training requirements in regulation III/1 with similar requirements in other parts of the Convention which were based on meeting standards of competence, rather than serving a specific length of time. Furthermore, they also proposed to upgrade seagoing service requirements in regulation III/2 to ensure that a person, before being assigned duties as 2/E or C/E on increasingly sophisticated ships, had adequate experience to be able to perform his/her duties in a safe and efficient manner.

The document STW 40/7/16, commenting on paragraphs 4.15 to 4.21 of document STW 40/7/3, opposed the proposal by some countries for deleting and/or modifying the approved education and training of at least 30 months' engineering knowledge plus six months of watchkeeping under supervision, as presently required under regulation III/1, paragraph 2.3, unless a mechanism was put in place to ensure equity either at the entry level between graduates and nongraduates or increasing the sea service at the operational and management levels.

In this context, they also emphasized the key elements for marine engineers such as competency, alternate career options, upgrading of skills to match the advancement of technology and managing risks by higher operational efficiency.

Another document STW 40/7/49 expressed the view that the mandatory minimum requirement of "at least 30 months which includes onboard training documented in an approved training record book" in paragraph 2.3 of regulation III/1 was essential for ensuring the competency of engineer officers to perform their duties in a sophisticated engine-room on board modern ships and, therefore, could not be simply removed from this regulation. However, for those who had successfully completed college education or higher, as required, they suggested that a certain extent of flexibility could be allowed on the required minimum training duration. Accordingly, they proposed amendments to paragraph 2.3 of regulation III/1. Some delegates expressed the opinion that there was a need to retain approved education and training of at least 30 months, as required under regulation III/1, paragraph 2.3.

Another group expressed the opinion that as the STCW Convention was competence-based there was no need to retain approved education and training of at least 30 months just for the sake of keeping a specified time period.

Accordingly, they supported retaining the preliminary text developed at the ad hoc intersessional meeting of the STW Working Group as set out in document STW 40/7/6.

After some discussions, the Sub-Committee agreed to delete the requirement of approved education and training of at least 30 months, as required in paragraph 2.3 of regulation III/1. Furthermore, the Sub-Committee referred document STW

40/7/13 for detailed consideration to the relevant working group.

4. Upgrading seagoing service requirements

STW 40/7/13 proposed to upgrade seagoing service requirements in regulation III/2, noting that adequate experience in a position of responsibility was essential for a person to be able to perform assigned duties as 2/E or C/E on increasingly sophisticated ships in a safe and efficient manner.

Having briefly discussed the proposal, the Sub-Committee referred it for detailed consideration to the relevant working group.

As far as minimum seagoing service requirements are concerned a person can be qualified as 2/E (kW \geq 3,000) without having any approved seagoing service as officer in charge of an engineering watch. In other words, a person having 18 months approved seagoing service as trainee (Assistant engineer officer) does not require to have any approved seagoing service at the operational level for qualification as 2/E (regulation III/2, paragraph 2).

Similarly, a holder of a 2/E (kW \geq 3,000) certificate upon accumulating only 12 months approved seagoing service as an officer in charge of an engineering watch can be considered qualified for certification as C/E (kW \geq 3,000). In a hypothetical situation a person with 24 months approved seagoing service as an assistant engineer officer (trainee), obtains the required qualifications for certification as an engineer officer (III/1) and a 2/E (III/2), and with a further 12 months approved seagoing service as an officer in charge of an engineering watch would be qualified to receive a C/E certificate.

The issues brought out above may need further discussion and inputs from the workshop participants in the afternoon.

5. Electro-technical officers

The document STW 40/7/17, commenting on the proposals regarding minimum requirements for certification of the electro-technical officer (proposed regulation III/6) and of the senior electro-technical officer (proposed

regulation III/7) in document STW 40/7/6, recalled that they were in favour of one level of training. However, as a compromise, they could accept two levels of training, provided one of them was at support level. Accordingly, they proposed training and certification requirements for the electro-technical officer and the able seafarer electro-engineering.

In another document STW 40/7/54, it is expressed that it was not necessary to introduce mandatory training and certification requirements for the electrical officer and the electro-technical officer into the STCW Convention and Code, as long as the existing requirements and qualifications were appropriately implemented. In this context, a delegate proposed amendments to tables A-III/1 and A-III/2 (STW 40/7/18) to upgrade the requirement for engineers to meet emerging technology.

Additionally, STW 40/7/56 opposed the proposal to introduce new requirements and qualifications for the electric officer and the electronic-technical officer. Instead, it proposed to use an alternative model to regulate the skills and competences for electro-technical officers via certification in accordance with chapter VII of the STCW Convention and Code and based on tables A-III/1 and A-III/2 of the STCW Code. In their opinion, this approach would be more consistent with the principles of the 1995 revision of the STCW Convention and would ensure that all seafarers responsible for electrical, electronic and control engineering were duly qualified in accordance with the same set of competence requirements.

Another group supported the proposal and claimed that there was a considerable demand for such officers on board ships and in the light of the remarks of the Secretary-General, there was a need to make the profession attractive by providing a progressive career path. They also supported the proposal to provide training requirements for "able seafarer electro-engineering".

After an in-depth discussion, the Sub-Committee agreed that provisions for electro-technical competence were required; the training requirements developed by the ad hoc intersessional STW Working Group should be carried forward and the proposal to introduce training requirements for "able seafarer electro-engineering" should be considered by the relevant working group.

Again this is an emerging area as the maritime industry, just like all other sectors, are now being immersed with new technologies and the rate of changes in the areas of competencies could pose a problem for shipboard engineers. A case in point could be the use of 3.3 kV /6.6 kV power supply, which is becoming more common in many vessels now. When similar systems are routinely used in cruise ships, a group of electrical engineers (at least six in number) are available for the upkeep of the power plant. So, there could be a distinct need to provide competent personnel in-charge of such installations. The workshop participants can go through these documents and provide their comments in this area.

6. Training and certification requirements for personnel serving on steam-powered ships

STW 40/7/28 and STW 40/7/37 proposed mandatory minimum training and certification requirements for engineer officers serving on steam-powered ships for LNG carriers and maintaining a watch on board such a ship.

However, some delegates expressed the opinion that similar training provisions already exist in chapter III of the STCW Convention and Code, hence there was no need to provide for them separately and in case such new requirements were needed a separate module could be included in chapter V.

Some groups of delegates endorsed the proposal in principle and expressed the view that there was a need to clarify sea service requirements for specific types of ships.

After some discussions, the Sub-Committee agreed that, whilst there was no support for the proposal, the relevant work group should clarify the sea service requirements and examine the existing tables with a view to strengthening with some of the elements proposed.

Comments from the workshop participants would be welcome in this area.

7. Marine environment awareness training

STW 40/7/45 proposed amendments to amend table A-III/1 of the STCW Code to provide training in marine environment awareness. The Sub-Committee, noting that this proposal did not require any principle decision of the Sub-Committee, referred it to the relevant working group for consideration in detail.

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
<p>Ensure compliance with pollution-prevention requirements</p> <p>Take precautions to prevent pollution of the marine environment</p>	<p>Knowledge of MARPOL requirements to prevent pollution of the marine environment</p> <p>Knowledge of the precautions to be taken to prevent pollution of the marine environment</p> <p>Knowledge of anti-pollution procedures and all associated equipment</p> <p>Ability to have a pro-active attitude toward protection of the marine environment [and to motivate crew to comply with the requirements]</p>	<p>Examination and assessment of evidence obtained from</p> <p>1 an approved in-service training, or</p> <p>2 an approved course</p>	<p>Procedure for monitoring ship-board operations and ensuring compliance with MARPOL requirements are fully observed</p> <p>Understanding of the principles of sustainable shipping and the importance of a good reputation of shipping</p>

Table 4 Proposed changes to Table A-III/1

8. Able Seafarer (Engine)

Consequential to the proposed amendments relating to "able seafarer deck", the document STW 40/7/53 proposed similar amendments to the draft text related to training and certification of ratings as "able seafarer engine".

The Sub-Committee agreed that the discussions and decisions relating to "able seafarer deck" were also applicable for "able seafarer engine" and should not be considered further by the working group.

Major areas of concern in Chapter V (Special Training Requirements for Persons on Certain Types Of Ships)

The Chapter was originally designed to ensure that officers and ratings who are to have specific duties related to the cargo and cargo equipment of tankers shall have completed an appropriate shore-based fire-fighting course; and have completed either an appropriate period of shipboard service or an approved familiarization course. Requirements are more stringent for masters and senior officers. Attention is paid not only to safety aspects but also to pollution prevention. The Chapter contains three regulations dealing with:

- oil tankers,
- chemical tankers and
- liquefied gas tankers

I shall cover some aspects of tanker training, DP and OSV.

1. Tanker Training

STW 40/7/19 proposed consequential amendments to section B-V/1 of the STCW Code, guidance regarding the training and qualifications of tanker personnel, as a result of the proposed amendments to regulation V/1-1 (mandatory minimum requirements for the training and qualifications of masters, officers and ratings on oil, and chemical tankers) and V/1-2 (mandatory minimum requirements for the training and qualifications of masters, officers and ratings on liquefied gas tankers). Furthermore, they proposed amendments to section B-V/1 to provide guidance on the shore-based fire-fighting course in the proposed amendments to regulations V/1-1 and V/1-2.

The document STW 40/7/21 proposed new and amended tables in section A-V/1 on minimum standard of competence for seafarers' assigned duties or responsibilities related to cargo or cargo equipment on oil, chemical, or liquefied gas tankers.

After some discussions, the Sub-Committee referred documents STW 40/7/19 and STW 40/7/21 for detailed consideration to the relevant working group. Additionally, the Sub-Committee also referred the following to the working group:

- .1 document STW 40/7/32 for consideration with a view to provide the proposed clarification as guidance in part B of the STCW Code;
- .2 document STW 40/7/33 for inclusion of additional KUPs in table A-V/1-1-1 relating to tank cleaning and gas freeing; and
- .3 document STW 40/7/61 to consider provisions related to tanker endorsement and alternative sea service requirements.

In the workshop, the participants could review the relevant documents to get an overview of the proposed changes.

2. Dynamic Positioning (DP) Systems

STW 40/7/15 proposed competence requirements for personnel operating DP systems and maintaining a DP watch on board a ship which should lead to an appropriate endorsement. The Sub Committee advised India, IMCA and OCIMF to jointly develop revised and expanded guidance relating to personnel operating DP systems, taking into account the Sub Committee's discussion and submit further information to STW 41.

3. Training Associated With Offshore Supply Vessels (OSV)

This matter was discussed in detail by a working group which agreed that guidance for training and certification of Offshore Supply/Support Vessels (OSV) personnel should be included in section B of the STCW Code. This should include training for anchor handling. In the new revised text there will be two new sections in square brackets (one from India and one from Norway) for further consideration at STW41.

Conclusion

Given the fact that the majority of the world's seafarers are recruited and supplied from the region (Asia-Pacific & South Asia), the stakeholders (Maritime Administrators, Shipping Companies, Shipmanagement Companies, Maritime Education and Training Institutes, Ports and other Maritime industry partners) should be actively involved and contribute to the review of STCW (the international training convention of IMO - which is presently undergoing comprehensive revision) by sharing their experiences of the implementation of the convention . This will ensure that the revision will be conducted with inputs from all stakeholders reflecting the interests of shipping industry, training institutes and maritime administrations of this region.

This current comprehensive review of IMO's STCW Convention is likely to have far reaching effects on regional maritime education and training (MET), and the maritime industry.

The Conference/Workshop theme reflects the need for the regional MET and industry stakeholders to fully understand the proposed changes and chart the way ahead in consequence.

ALAM partnering with GlobalMET is trying to facilitate the revision process of the STCW Convention and its associated Codes.

References

1. Asian Seafarers Forum - The 14th Interim Meeting of ASF Seafarers Committee, Kuala Lumpur, 20-21 November 2008.
Retrieved from: <http://asianshipowners.org/2008/11/28/the-14th-interim-meeting-of-asf-seafarers-committee/>
2. STW documents: 40-14; 40-7-3; 40-7-6; 40-7-12; 40-7-13; 40-7-13; 40-7-14; 40-7-15; 40-7-16; 40-7-17; 40-7-18; 40-7-19; 40-7-21; 40-7-28; 40-7-32; 40-7-33; 40-7-37; 40-7-44; 40-7-45; 40-7-49; 40-7-53; 40-7-54; 40-7-56; 40-7-61;