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Recent Changes to IMO STCW – Opportunity to revise MET Programmes

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1. Introduction

Shipping is perhaps the most international of the entire world's great industries and some of the most dangerous. Safety of life at sea and the marine environment as well as over 80% of the world's trade depends on the professionalism and competence of seafarers.

Recently, IMO's priority has been to revise the most important international treaty dealing with crew standards – the International Convention of Standards of Training, Certification and Watch-keeping for Seafarers (STCW). But IMO cannot work alone. According to Ziarati (2003), governments and the maritime industry should show the same determination to implement these standards. A close investigation of casualty analyses considered approved by IMO (sub-committee minutes, 12th session, 2004) particularly focusing on the causes of accidents clearly indicates that standards are not applied correctly and when human factor issues are studied carefully there are omissions in the education and training programmes received by the seafarers involved in accidents.

IMO has passed the responsibility for delivery and assessment of these programmes to member countries and does not take part, in any shape or form, in the inspection, evaluation or delivery of these programmes (Ziarati, ibid). It is a welcoming development that EMSA has been involved in visiting MET providers in many EU and candidate countries auditing the MET providers programmes and practices against STCW requirements (EMSA, 2009)

To identify the main problems and their causes and more importantly where these failures occur, it has been vital to look at some relevant and recent papers and reports. One interesting and informative paper is a recent study by Torkel (2004). He reports that 25% of the world fleet was responsible for more than 50% of shipping accidents around the world. The study notes that the top 25% of the safest ships were involved in just 7% of all accidents. The outcome of the study by NYNU (2005) published by the University of Technology and Science (NTNU) in Norway, reports that by improving the quality of the world fleet to the same level as those in the safest 25% category, there might be an overall reduction of 72% in shipping accidents. The paper states human error rather than technical matters are the most common cause of accidents. The study also reports that smaller ship owners have a poorer safety culture and they do not often have the resources to implement STCW or ILO requirements. These smaller companies could benefit

from the national and European funding to improve their management and operation of their shipping business.

There are also severe shortages of well qualified seafarers at different levels of seniority (Urkmez, 2005; Pourzanjani et al, 2002; Schroder et al, 2004 and IMO, ibid) and yet there are many young people unemployed in Europe (Ziarait, ibid). Since the young people do not find seafaring professions attractive there are arguments (Urkmez, 2005) for increasing the number of non-EU seafarers of different ranks in the European flag countries. There are attempts by major MET partnerships, institutions and organisations such as MarEdu (see for instance www.maredu.co.uk., www.egmdss.com) , Strathclyde University, ARKAS, Lloyd's Register of Shipping, TUDEV (Project ATRACT-ME, SOS, etc), C4FF (Projects SURPASS, M'AIDER – see www.c4ff.co.uk) and so forth to make the MET more accessible and/or seafaring more attractive to young people in Europe.

The Secretary-General of IMO proposed a "campaign for young man for seagoing profession" at the beginning of STW 40 in Jan. 2009. The BIMCO/ISF 2005 Manpower Updates estimates that "there could be a lack of 27,000 senior officers by 2015 worldwide". The study assessed the officer shortage in 2005 at 10,000. However, in a report on Manning 2008, Drewry Shipping Consultants indicates that the officer shortage may be as high as 34,000, a figure that could reach 83,900 officers by 2012. In the period 2008 to 2012, an extra 97,032 officers will be required.

Amendments to the International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW 78), adopted by the STCW 1995 Conference, have created new requirements for, and placed new demands on, administrations, ship-owners and maritime institutions. At the same time, new concepts in maritime training have seen a shift from a knowledge-based to competency-based orientation in the development of ship personnel.

Innovative concepts of marine education, a shift from a knowledge-based to a competency-based training, and the need for constant professional updating and recertification have brought maritime training institutions out from under the shadows of the maritime administration and industry; now they must assume an equal partnership rather than simply reacting to the others' demands. Maritime institutions must implement their programme content efficiently and effectively in accordance with the STCW's requirements and the contents of the IMO Model Courses; they must improve standards of teaching staff, facilities and equipment and proactively support the efforts by IMO and agencies such as the European Maritime Safety Agency (EMSA) to develop and implement STCW and have a feel for ILO, SOLAS and MARPOL requirements with clear understanding of importance of ISM, ISPS. Simulators used for training or assessing competence are required to comply with provisions contained in Section A-I/12 of the STCW Code, which is especially devoted to the use of simulators.

The reason for review of STCW Convention and its codes

STCW 78/95, is now almost 15 years old and since its introduction many practices in ship management and operations have changed and technology is now playing a major role in ship operations. Furthermore, there are now stricter standards in maritime safety and pollution preventions (SOLAS and MARPOL), more complex human operations, and equally important there is a need to remove the identified flaws and inconsistencies in the current version of the STCW convention. The changes to the ILO's Maritime Labour Convention 2006 which is

a major regulatory regime, has consolidated and updated more than 65 international labour standards related to seafarers adopted over the last 80 years.

The review commenced with several minor changes in 2003 reflects the trends in the need for more specialization to address the higher-level maritime operations onboard through a wider coverage of knowledge and skills and competency required as results of changes summarised mentioned earlier. The development of advanced navigational technologies, specialized and professional transportation technologies and pollution prevention technologies and regulations were considered important for inclusion into the seafarers' competency standards.

Agreement on STCW Changes

A recent review by Ziarati (2009) of the paper by Yongxing (2009) indicated that the STW Sub-Committee has agreed to:

retain the structure and goals of the 1995 revision;
address the inconsistencies, misleading interpretations, outdated provisions, MSC instructions,
address requirements for effective communication;
provide for flexibility in terms of compliance and for required levels of training and certification and watch-keeping arrangements due to innovation in technology;
address special character and circumstances of short sea shipping and offshore industry;
address the maritime security more effectively by inclusion of specific provisions in the convention; and not
not down scale existing standards;
amend the articles of the Convention;

Security training and related issues

IMO is determined to design a more systematic maritime security training scheme. This was agreed with a three-level security training and knowledge requirements for the Ship Security Officer, for shipboard personnel having specific security related duties and for all other shipboard personnel. It is stipulated that all shipboard personnel should be subject to the basic skill training and guidance for maritime security as required by the Regulations VI/1 and VII/1 of the code A; All shipboard personnel having specific security related duties shall receive professional training related to the Shipboard Security Plan and that when onboard, all employed personnel undergo a familiarization training to develop the required security skills. Authors of this paper argue that recently emerging piracy issues should seriously be also dealt with in this context in order to provide more assets for the ship crew for their own defence. Recent incidents have clearly shown that neither the naval operations nor the legal arrangements were sufficient to prevent piracy attempts which are not only hampering day to day maritime trade but also making the profession even less attractive to young people.

Simplifying navigation calculations

The competency standards relating to celestial navigation calculations has been reviewed and strengthened. The regulation B –IL/1 of the code will be amended. The application of computerized celestial navigation calculation method will be included in the relevant provision of code B. Use of computers and hand held calculators for celestial navigation calculations may yield substantial reduction for dedicated class hours which may be used for extended simulator practise.

Adding training requirements for VTS

This is primarily included to secure the understanding of the masters, chief officers and officer of watch on the types and the limitation of VTS, and prepare them so that they apply specific procedures for the VTS maritime safety with regard to table A-II/1, A-II/2 and A-II/l of the Convention, and 3-1 of A- VIII/2 and B-I/12 and their expected updates. This can be achieved in short courses on VTS applications designed both for VTS operators and ship officers in simulator environment. Also including pilot trainees in these courses may provide full training of all involved in entry/departure operations.

Introducing electrical-electronic officers

To respond to ever complexity of high voltage electricity, electrical operations, computer operations and electronic devices onboard, the competency standards for electrical and electronic officers will be set up. One important aspect of this issue is to be the clear definition of job description of these new officers. Are they going to be pure engineers dealing only with the maintenance of the shipboard systems or are they supposed to assume navigational watch responsibilities as well? This will be one of the main issues for developing/updating MET curricula in accordance with STCW amendments. For example if such officers are going to be responsible of all shipboard systems, then a single watch officer both for deck and engineering may become more feasible in the future which eventually will lead to a uniform/line OOW training curriculum.

Revising the Chapter V

This Chapter of the Convention deals with such Regulation as

V/1-1 which embraces the mandatory minimum requirements for the training and qualifications of masters, officers and ratings on oil, and chemical tankers";
V/1-2 which concerns the mandatory minimum requirements for the training and qualifications of masters, officers and ratings on liquefied gas tankers";
For the competence requirements for personnel operating Dynamic Positioning (DP) systems";
The training requirements for ships operating in ice-covered waters";
The training requirements for personnel in charge of-or involved in anchor-handling operations", and the Training requirements for personnel serving on board offshore supply vessels".

Making BRM and ERM training compulsory

The courses were developed and encouraged by shipping industry. Considering the similarities between
Bridge Resource Management and Engine-room Resource Management principles the two courses will be transferred from section B- V III /2 to A- VIII/2 and hence made compulsory.

Updating model courses

The IMO model course 1.34 on Automatic
Identification Systems, Familiarization Training for Liquefied
Natural Gas (LNG) tanker operations,
Basic training in marine environment awareness,
lBS,

Liquefied Petroleum Gas (LPG) Tanker Cargo and
Ballast Handling Simulator,
Liquefied Petroleum Gas (LPG) Tanker Cargo and
Ballast Handling Simulator.

The review of the STCW Convention is an opportunity for the international shipping industry to support the IMO and provide feedback with a view to ensure the industry and not just the administration in each member country contributes to changes needed in STCW.

According to Yongxing (2009) the new convention is expected to come into effect in the year 2012 and applicable in the next 8-10 year. It is expected the new revision would play an important role in improving the maritime safety and pollution prevention through its effective implementation world-wide. For MET institutions, Ziarati (2009) states that the revised Convention will require a revision of strategies for teaching, learning and assessment as there will be not only new content but greater and wider use of high technology navigation and hence computer simulations. The simulators will play a major role in learning and competence development and assessment. The need to develop transparent quality assurance and control as well as management becomes more urgent for reputable METs particularly considering the new and more determined role by authorities such as EMSA in externally verifying the implementation of STCW in member countries by visiting MET institutions.

ILO Maritime Labour Convention 2006

A summary of the ILO Maritime Labour Convention (2006) is given in a recent paper by Yongxing (2009). The Convention provides comprehensive right protection for more than 1.2 million seafarers in the world. The new labour standard consolidates and updates more than 65 international labour standards related to seafarers adopted over the last 80 years. The Convention sets out seafarers' rights to decent conditions of work on a wide range of subjects, and aims to be globally applicable, easily understandable, readily up-datable and uniformly enforceable. It has been designed to become a global instrument known as the "fourth pillar" of the international regulatory regime for quality shipping, complementing the key IMO conventions such as STCW, SOLAS and MARPOL. The Convention is expected to come into effect in 2011and fully implemented by 2013.

The new Convention is expected the industry to attract more young people to join the seafarer profession and will provide an opportunity for the MET institutions to attract more quality students and consequently the quality of MET will be improved. The improve quality could lead to a safer seas and ports and allow the mobility of seafarers (TRAIN 4Cs I and II, 2008 and 2010). However, there is still need to improve social security related issues of seafarers to attract young people to the profession. This must be dealt together with the revision of the ISM and new safety measures. One important aspect of this issue is the criminalization of seafarers for the accidents and incidents which was expressed as top issue by the cadets who participated in the young seafarer’s forum. As it is often difficult to find the owners of a vessel so arresting and charging the captain and officers on duty seems an easy way out. But it is often desperately unfair and could hamper the attemps to attract more young poeple to the profession. So what is the solution? Should the officers of ships be jailed for being on the bridge during an accident? Or are the owners liable? Or those who pay for the clean up – classification societies, insurers, owners? It is believed that both new convention and STCW ammendments should bring clear resolutions on these issues.

Conclusions

The revision of STCW in 2010 is as significant as the changes introduced in 1995 and the implementation of the new STCW will be the most challenging undertaking by MET institutions and for the national administrations. The new STCW is expected to create opportunities for progressive MET institutions to take a lead and offer leadership for development and transfer of innovation world-wide. In a recent report (Ziarati, 2010) states that there still deficiencies even if all expected changes to STCW are realised. The two major areas for improvement to MET programmes are stricter and tougher standards for Maritime English (MarTEL, 2007-09) and remedies to curb automation failures (SURPASS, 2009-11). Two major consortiums have been initiated by TUDEV to overcome specific failures concerning automation as welsls as communications at sea. A summary of these initiatives were published in DTO Magazine in January and March 2010. A copy will be sent by MariFuture secretariat to those requesting it.