

Application of the STCW Convention for Seafarers Training at the Polytechnic of Dubrovnik, Croatia

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Abstract: This paper is about training courses for seafarers organized under standards of the International Maritime Organization (IMO) at the Polytechnic of Dubrovnik, Croatia. Last amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) from 1995, propose very strict new regulations for all members of IMO. According to the STCW Convention, all standards of training, certification and watchkeeping must be in compliance with new regulations until year 2002. After that time seamen without valid certificates will be disembarked from the ships and ships will not be allowed to leave the port without a competent crew. All country members of IMO are obliged to send reports about implementation of new regulations in order to appear on the list of acceptable flags, which will be formed in the year 2000. The Republic of Croatia, as a member of IMO, prepare new rules for all mentioned issues and follow their implementation. The Polytechnic of Dubrovnik is very advanced in organizing training courses for seafarers. With a new school ship, several computer simulators for the bridge and engine room operation and control, the Polytechnic of Dubrovnik offers quality and variety of the courses. Over 2400 seafarers attended some of the 37 offered courses in last 2 years. Some of the participants have the highest positions (Masters and Chief Engineers) on board of the worlds famous shipping companies.

Keywords: Seafarers Training, Dubrovnik, STCW Convention

1. Introduction

Regulations in maritime transport are today internationalized, because of necessity of setting the worldwide standards for all-important issues. Development of naval architecture and marine technology caused orientation for seafaring only on special types of ships. Operations on liquid cargo carriers are much different then those on bulk carriers or ferryboats. Then, liquid cargo handling diverse from crude oil, oil products, chemicals and liquefied gasses. In this simple example it is evident that process for education and training of the seafarers is a very complex and specific issue.

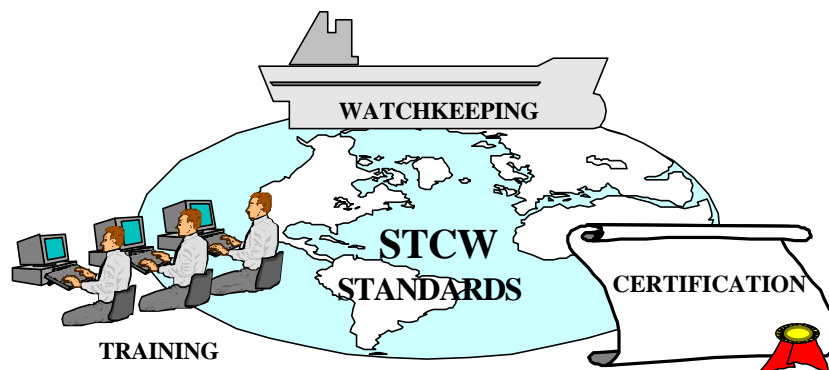


Fig. 1. Factors of the STCW Convention

The roof organization, which is creating international maritime rules and regulations, is the International Maritime Organization (IMO), with the head office in London. One of the most important IMO conventions is the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) from 1978. Worldwide standardization of such items contributed in more efficient training, uniform certification and safer seafaring (figure 1.). Modifications of the STCW Convention from 1995 and 1997 were other steps forward in globalization and easier implementation of the proposed requirements. The final goals of STCW proposals are the increase of safety and prevention of the pollution from the ships. Modifications from 1995 opened completely new page in IMO history, because for the first time they were allowed to control implementation of STCW Convention. As a result of such controls in the year 2000 *IMO White List* will be created (list of the countries which are fully in compliance with STCW requirements). Further more, after year 2002 seafarers without valid certificates will not be allowed to sail on the ships and such ships will be stopped in the ports.

2. Maritime Education System in the Republic of Croatia

The Republic of Croatia joined the STCW Convention in 1991. Application of the convention is provided through the Regulations proposed by the Ministry of Maritime Affairs, Transport and Communication. With this Regulations all requirements for education and training of seafarers are accepted, respecting Croatian educational and training specifics, which are often above STCW requirements. Croatian maritime qualification is based on interaction of education (graduation from the Maritime Secondary School or College), training (periodical attendance of several training courses) and seafaring (working onboard ships).

In the Republic of Croatia, there are two academic models of seafarers development (figure 2.) which are also provided at the Polytechnic of Dubrovnik – Collegium Ragusinum. Both models are based on interaction and turns of education on management level, training courses and seafaring experience. The difference of the models is in the time for education on management level (symbol of the college building in the figure). Students can attend two years of higher education at the beginning of the process or after some seafaring experience and completing of necessary training courses. The other steps in the process consist of exchange of seafaring (symbol of the ship) and attending of the training courses (symbol of the computer training). That period is individual for every seafarer and depends on orientation for working on special kinds of ships (tankers, bulk carriers, Ro-Ro, etc.) and professional skills and ambitions. At the end of the process is Master or Chief Engineer as the highest positions on the ship. The most important factor in the career of every seafarer is training courses. Frequent short and substantive courses are helping in fast accepting of all necessary requirements proposed by IMO or other authorities. By periodical turns of training and navigation seafarers can professionally develop very fast and reach the highest positions on the types of ships that they choose. Importance of attendance at the courses is proved by fact that more than 80% of all marine accidents are caused by human error. Most of the errors occurred because of a lack of knowledge in using modern equipment and computer aided facilities.

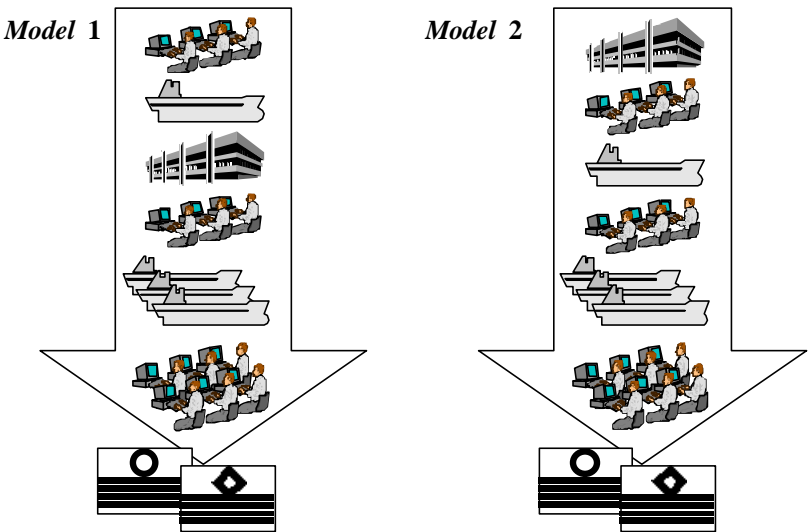


Fig. 2. Two Academic Models of Seafarers Development in the Republic of Croatia

The Polytechnic of Dubrovnik is offering three Maritime programs: Nautical, Marine Engineering and Ship Electrical Engineering and Electronics, where college education for the students and training courses for the seafarers are organized according to the last STCW requirements. Periodical training courses are very important for the implementation of new technologies and regulations concerning ship handling, safety and pollution prevention. With these courses seafarers can efficiently and quickly meet requirements that are dynamically changing and penetrating in marine transport and technology. Such courses are organized on two levels: operational and management, and for all three studies, that are shown on figure 3. Management level for education and training is required for Master, Chief engineer, Chief Mate and Second Engineer. Other deck, engine and electric officers need operational level for education and training courses.

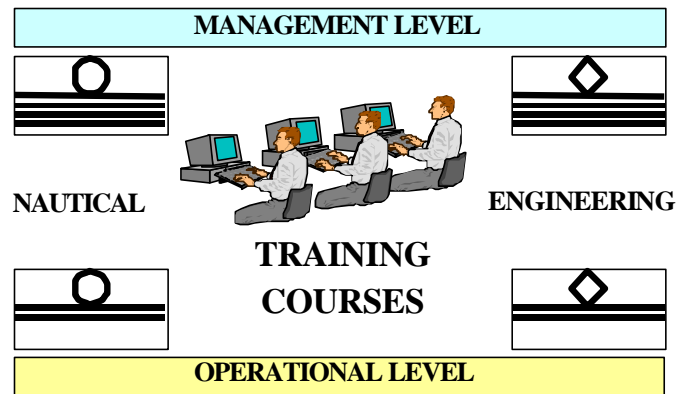


Fig. 3. Levels and Application Fields of STCW Training Courses in the Republic of Croatia

3. Seafarers Training at the Polytechnic of Dubrovnik

The Polytechnic of Dubrovnik – Collegium Ragusinum, with its long maritime tradition, has continuously been providing maritime training courses as required by national and international regulations. Noting that the Croatian regulations for training of seafarers, reflecting the requirements of the STCW Convention, were brought in July 1998 and amended in November 1998, the Polytechnic of Dubrovnik started implementing new approved courses from December 1998 and can now offer a choice of 37 STCW training courses approved by the Ministry of Maritime Affairs, Transport and Communications, and consequently internationally recognised. All courses are regularly run in the Croatian language, but arrangements can be made for running the courses in English upon specific requests at short notice.

The Polytechnic of Dubrovnik is allowed to organize 37 different training courses (table 1.). Over 2400 seafarers have attended some of 37 offered courses in last two years.

After successfully completed training course, seafarers take an exam in order to acquire a certificate of ability or additional ability in front an exam committee. Exam committees for all or individual profession are founded in Ministry of Maritime Affairs, Transport and Communications, and Harbour Master's offices, in those places that have maritime training facilities. Members of the Committee and examiners are appointed by the Minister. Regular time limits are given by the Ministry, in advance, for each calendar year. The Ministry can give special time limits. In the second case they are given on insisting of the shipping company or five applicators.

After passing the exam the seafarer is given the Certification of ability, or Certification of profession, valid in the whole world. The Certificate is given by the Ministry or Harbour Master's office. Some certificates do not have time limitations, while others stay valid for two to five years. Certifications of ability that have time limits are restored after the renewal of the training program.

Besides equipment and simulators, the most important requirement of international and domestic regulations that must be satisfied by the maritime studies is the ISO quality management system. As the first academic educational institution in the Republic of Croatia, the Polytechnic of Dubrovnik – Collegium Ragusinum started its 40th academic anniversary year in 1999/2000 with valid certificates, that show the Polytechnic fully in compliance with the ISO 9002 academic education and training norm, given by the Bureau Veritas Quality International (BVQI) and Croatian Register of Shipping (CRS).

Table 1. Currently Run Training Courses

Code	Training Course Title	STCW Ref.	Hrs.
B1	Familiarisation training - Special program for procedures in emergency situations on ships	VI/1	9
B2	Basic safety training - Special programs for basic safety on ships	VI/1	46
D0	Master of ship up to 200 GT in navigation area 5, except passenger ships	N/A	60
D1	Rating forming a part of a navigational watch	II/4	12
D3	Radar observation and plotting and use of automatic radar plotting aids (ARPA)	II/1	72
D3A	Radar observation and plotting	II/1	20,5
D5	Rating forming a part of a watch in a manned engine-room	III/4	16
D8	Restricted radio operator	IV/2	24
D9	General radio operator	IV/2	108
D10	Advanced fire-fighting	VI/3	36
D11	Oil tanker familiarisation	V/1	30
D12	Chemical tanker familiarisation	V/1	30
D13	Liquefied gas tanker familiarisation	V/1	30
D14	Advanced oil tanker operations	V/1	66
D15	Advanced chemical tanker operations	V/1	72
D16	Advanced liquefied gas tanker operations	V/1	60
D19	Medical first aid	VI/4	21
D20	Advanced medical care	VI/4	40
D21	Crowd management	V/2, V/3	5
D22	Familiarisation with passenger and Ro-Ro passenger ships	V/2, V/3	17
D23	Safety training on communication in emergency situations and life saving appliances	V/2, V/3	7
D24	Passenger safety, cargo safety and hull integrity of Ro-Ro passenger ships	V/2	18,5
D25	Passenger safety, cargo safety and hull integrity of passenger ships	V/3	17
D26	Crisis management and human behaviour	V/2, V/3	9
D27	Dangerous cargo handling	V/4, V/5	50
D29	Radio-electronic officer second-class	IV/2	158
D30	Refreshment course - Master of a ship of 3000 GT or more and chief mate on a ship of 3000 GT or more	I/11	36
D31	Refreshment course - Ch./second engineer officer on a ship ..3000 kW propulsion power or more	I/11	36
D32	Refreshment course - Officer ..on ships of 500 GT or more, master/ch.mate on ships of up to 3000 GT	I/11	28
D33	Refreshment course - Ch.eng. officer on a ship ..up to 3000 kW, officer on a ship ..750 kW or more	I/11	32
D34	Refreshment course - Radio-electronic officer first- and second-class	I/11	20
D35	Refreshment course - Master/officer ..on a ship up to 500 GT in nav. area 3	I/11	20
D36	Refreshment course - Engineer officer on ships ..up to 750 kW on national voyages	N/A	20
D37	Refreshment course - General radio operator	I/11	6
D37A	Refreshment course - General radio operator	I/11	4
D40	Yacht master	N/A	50
D40A	Prequalification of radiotelegraph operators I and II class to officers (nav.) on ships of 500 GT or more	N/A	310

4. Conclusions

Long tradition of maritime education and seafarers training on the Croatian coast, with a starting point in 1557, when the Republic of Dubrovnik (Republica Ragusii, 1358 – 1816) started a practice of sending Ratings to its ships, on one hand, and our people's long connection with the sea as the only source of existence, on the other hand, bind the Polytechnic of Dubrovnik to permanently follow world trends in the seafarers training, and with that allow our seafarers to acquire Certificates of ability. Besides the specialization and scientific advanced training of the teaching cadre, this also mean large investments in the modernization of existing equipment and simulators, without which seafarers education and training is not even imaginable under the STCW Convention.

Seafarers education and training at the Polytechnic of Dubrovnik – Collegium Ragusinum, organized in compliance with world standards is a guarantee for our students and seafarers, as always, to be well respected and wanted aboard all ships no matter which flag they have. The qualities of Croatian seafarers have come to full expression, mainly because human factor became the most important part of the chain that makes the seafaring safer and prevents sea pollution. Beside that, application of new knowledge in the protection of human lives, material goods and sea ecosystem is of an extreme importance for the Republic of Croatia, as a maritime country with over 30.000 seafarers.

5. References

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