

Methods of updating GOC certificates

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Abstract

This paper presents methods of renewal the GOC certificates in Poland and other countries. Relevant provisions of the SOLAS Convention, the Radio Regulation and the STCW Conventions are discussed. Knowledge of candidates for renewal of the GOC certificates were analysed based on responses to questionnaires. The differences in the methods of training and examinations between selected European countries are presented. Noted the possibilities of GMDSS training at a distance recommended by the STCW Convention. The results and conclusions are presented in the summary arising the difference methods of renewal the GMDSS certificates.

Introduction

In Poland, the General Operator's Certificate (GOC) for the GMDSS (*Global Maritime Distress and Safety System*) are issued for five years by the Office of Electronic Communications (*pol. Urząd Komunikacji Elektronicznej – UKE*). The GOC certificates renewal are under condition to pass the state examination carried by the UKE. The methods of renewal the GOC certificates in EU countries are different. In some countries, the certificates are issued for an indefinite period without any additional requirements, while others require both course and exam and additionally the seamanship. Polish administration is planning to eliminate the current system based on mandatory examination and replace GOC statute renewal certificates based only on the seamanship. The aim of the article was to assess the state of knowledge of the operators after five years from the previous exam.

Requirements relating to certificates of GOC

The requirements for radio operators in the GMDSS are establishes in: the SOLAS Convention, the Radio Regulations and the STCW Convention. The vessel can not be used in shipping, unless manned by the right qualified seafarers. Radio personnel qualifications, must comply with the

requirements specified in international agreements and regulations of the Flag State. Radio personnel should be competent in the distress and safety communications for satisfaction of the Flag State. These persons should hold the appropriate certificates required by the Radio Regulations and the STCW Convention [1, 2].

The scope of the competence of the GMDSS operators is defined in resolution A.703 (17) in Annex 3, Recommendation on training of GOC operators and in the STCW Convention and the code, Chapter IV [3]. One of the radio operators should be designated as responsible for radio communications in distress situations. On passenger ships should be designated at least one radio operator exclusively for handling communications in distress situations [2].

Administration should ascertain that the ship, shore stations and satellite earth stations have qualified personnel capable to operate radio stations and maintain the technical readiness of radio equipment for distress and safety communications, according to international requirements.

The ships navigating only in the A1 area (in the range of VHF coast stations), radio personnel should hold:

- radio electronic certificate class I/II, or
- general operator certificate (GOC), or
- restricted operator certificate (ROC).

The ships navigating outside of the A1 area (beyond the reach of VHF coast stations) shall be controlled by an operator holding:

- radio electronic certificate class I /II, or
- general operator certificate (GOC).

The ships not subjected to the SOLAS Convention sailing in the area A1 shall be controlled by an operator holding the short-range operator certificate (SRC). Outside the A1 shall be controlled by an operator holding the long distance operator certificate (LRC).

Assessment of knowledge of radio operators

The state of knowledge of the radio operators was surveyed before the examination conducted by the Office of Electronic Communications in Szczecin by the questionnaire. The anonymous survey research was attended by 90 people. The age of respondents are presented in figure 1.

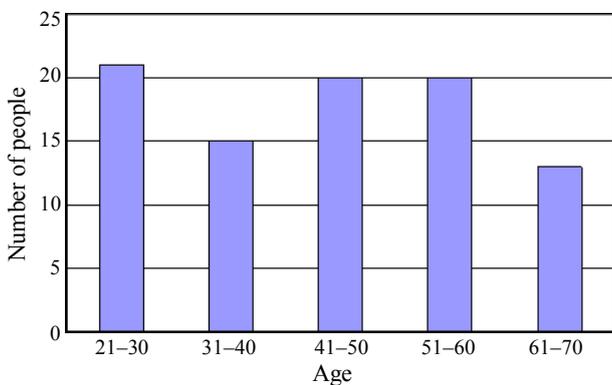


Fig. 1. The age of respondents

Figure 2 shows that the majority of GOC operators in the seagoing services never met a situation requiring the use of distress procedures.

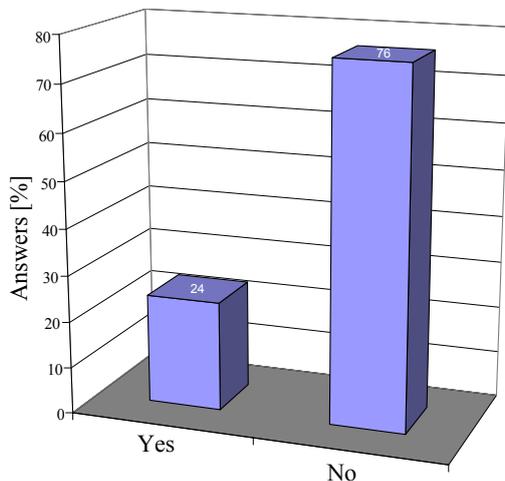


Fig. 2. Answers to the question: do you take a part in distress communication?

One of the most important elements of the safety of life at the sea is the ability to call in distress situations. Figure 3 shows that most navigators (74%) acceding to the renewal GOC certificate know the basic procedure of radiotelephony call in distress situation. The worrying matter is that as many as 26% of navigators do not know the most important formulas.

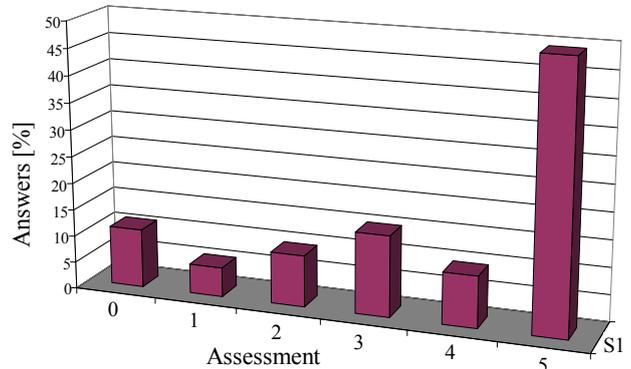


Fig. 3. Knowledge of the radiotelephony call formula in distress situations

The vast majority of navigators renewal certificate GOC and knows the formula for the telephone in distress, while know the calling formula in distress, while distress acknowledgment call do not know as many as 65%.

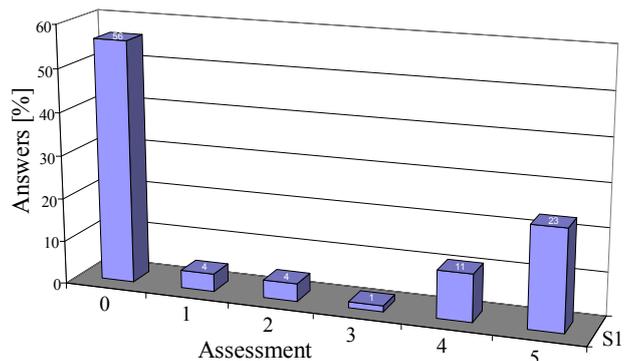


Fig. 4. Knowledge of the formula radiotelephony distress acknowledgment call

The international distress signals may be used only to call assistance when a ship, aircraft or person is in distress and require immediate assistance. There is forbidden to use any signal that could be taken as an international distress call. The GMDSS system lets very easy opportunity to send distress alarm. Currently, about 90% alarms are false. They are transmitted mainly by “mistake”. The broadcasting false alarms is easy due to the easy design of devices that allow to send an unintentionally alarm, and insufficient knowledge of radio operators. False alarms mask the true alarms and causing delay of the rescue operations helping the truly needy, and the consequences are tragic for

survivors. To avoid broadcasting false alarms, the International Maritime Organization (IMO) issued a recommendation and a resolution on the prevention and recall of false alarms (*Guidelines for Avoiding False Distress Alerts*) which has been adopted by the ITU by Resolution 349 (WARC-97). [3] Member States of the International Telecommunications Union should take appropriate measures to prevent a false alarms. Such activities should be conducted in relation to misleading signals, distress, urgency and safety. States should cooperate in the identification of stations sending the false signals according to they responsibilities. [4]

Each GMDSS operator except of knowledge about the rules of the distress communication given in the Radio Regulations, should know how to prevent a false alarms and procedures for the recall them.

Figure 5 shows that 90% respondent navigators did not participate in the recall of the false alarms. Figure 6 shows that only 34% of navigators know the procedure for the recall of the false alarm.

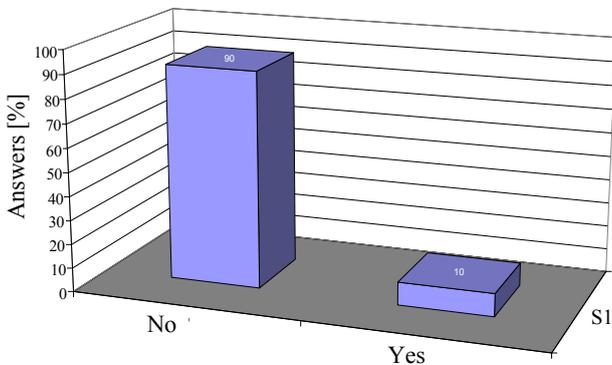


Fig. 5. Did you take a part in the recall of the false alarms?

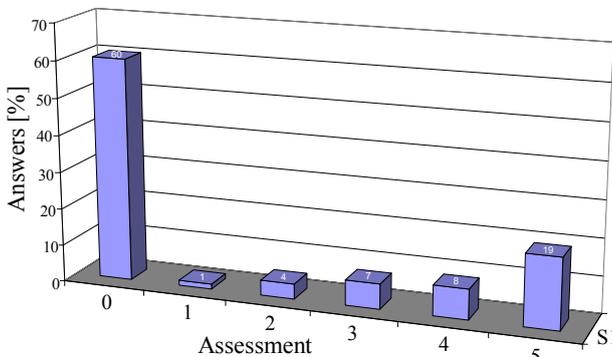


Fig. 6. Knowledge of the recall of the false alarms

It is very important for the survivors to know working time of the portable emergency radio equipment for a lifeboat and a raft. Figure 7 shows that respondents do not know how long they will be able to use portable radio equipment. Only 7% of the navigators knows the working time of the port-

able radio equipment, 4% knows working time of the emergency transponder (SART) and 29% are familiar with working time of the EPIRB.

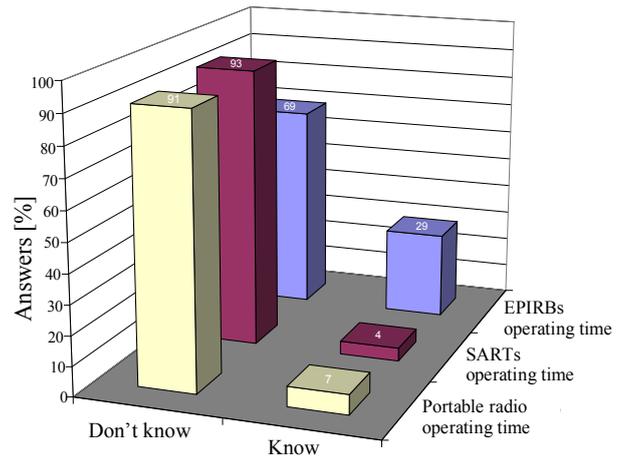


Fig. 7. Knowledge of working time emergency radio equipment for survival craft

Radio equipment for distress and safety communication should be tested whether they are in a constant state of a technical readiness to fulfill their assigned tasks. One of the most reliable and definitive method to ensure the operational readiness is external test.

Figure 7, shows that only half of the respondents know the SOLAS requirements for testing SART transponder, 42% know testing DSC-VHF, 22% know testing Inmarsat-C, 9% know testing DSC-MF and 7% know method of testing EPIRB.

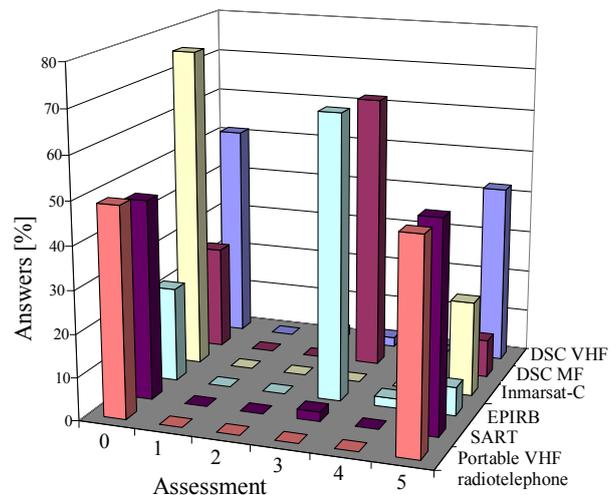


Fig. 8. Knowledge of testing the GMDSS equipment

The competence of the GOC operators includes theoretical and practical knowledge are arised in accordance to the Radio Regulations and the STCW Convention. After five years of the previous national study, knowledge navigators is not satis-

factory. Required competence hold down only 7% the GOC operators (Fig. 9).

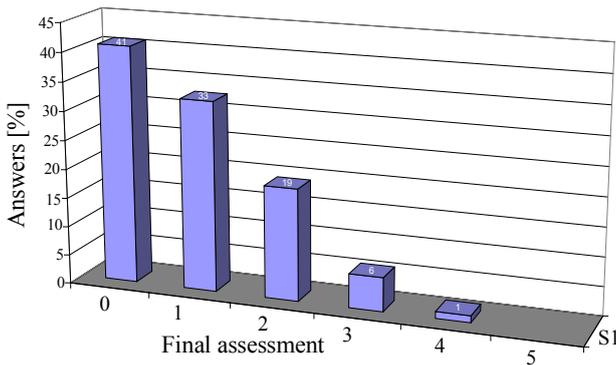


Fig. 9. The final assessment before refreshing GOC certificate exam

Especially feature of distress communication is not everyday operation. Most navigators do not have experience in that kind of communications throughout all his professional life at sea, as shown in figure 10. Knowledge about distress communication is gradually forgotten due to the lack practice and refreshing. Therefore, it could be periodically upgraded.

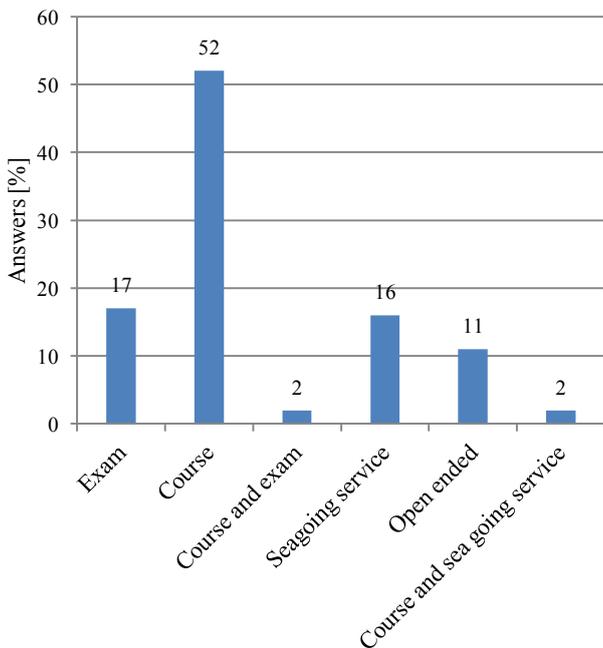


Fig. 10. Methods of renewal GOC certificate proposed by interviewed persons

Methods of the renewal the GOC certificates in selected European countries

The authors conducted a query on the randomly selected European countries about methods of the GOC certificate renewal. It turned out that there are

existing different ways of the renewal the GOC certificates in EU countries. The methods of the renewal the GOC certificate are presented in table 1.

Table 1. The GOC certificate renewal methods in the randomly selected countries

| The form of the renewal | Finland | France | Spain | Netherland | Lithuania | Norway | Poland | Slovenia |
|-------------------------|---------|--------|-------|------------|-----------|--------|--------|----------|
| Course | X | X | X | | X | | | X |
| Exam | X | X | | | X | | X | |
| Seagoing service | X | | X | | | X | | X |
| Not mandatory | | | | X | | | | |

The first issuing GOC certificate are similar in the EU countries. It is issued commonly according to the mandatory course and/or passed exam as obligatory and some of others countries require seagoing service.

The renewal GOC certificate methods are different in randomly selected EU countries. There are several methods of the renewal GOC certificates: course, exam, course and exam, seagoing service or renewal is not required. The national administration has in this respect full discretion to impose certificate renewal condition. The question is: which system is the best, good or sufficient?

Currently, the most common traditional method of training courses are conducted by authorized persons and institutions recognized by the administration of issuing the certificate. As a complement to traditional forms of training are used multimedia presentations. A new form of education can be a distance learning (d-learning). “Distance learning is a method of teaching process in an environment where teachers and trainees are distant from each other and not in the same location, using for the transmission of information very modern telecommunications technologies: voice, video, computer data and printed materials. Modern technologies enable direct real time contact between teacher and trainees using audio or videoconference, regardless of the distance which separates them” [5].

The newly inserted provisions of the STCW Convention (Chapter I, Section BI / 6 Guidance Regarding training and assessment) enable distance learning and self directed learning using multimedia (e-learning), in accordance with the standards of training and assessment contained in Section AI / 6. This is only recommendation which the national administrations may introduce into their education systems at the sea. The system of training and

obtaining certification should be conducted by qualified: teachers, inspectors, examiners and under the supervision of the government issuing certificate [2].

Conclusions

The paper presents the regulatory requirements for certification of GMDSS GOC. Conducted anonymous questionnaire to the trainees applied for renew GOC certificates. The operators knowledge was analysed before re-examination. The participants of the survey were mostly navigators with long-standing seagoing service.

The survey disclose not satisfactory knowledge about communications in distress situation. This is due to the lack of use of communication in distress at sea as usual and natural process of forgetting as a result of not using and not refreshing it. In addition, legislation and communication technologies are constantly changing. A sufficient level of knowledge reached 7% of respondents only. This result clearly demonstrates the necessity to refreshing the knowledge and skills of communication in order to saving life at the sea. Most respondents (52%) of their own free will wish a mandatory course without an exam, every 5 years, 17% of respondents indicate a mandatory exam. A small percentage of respondents are propose mandatory course and examination or a mandatory course and seagoing service. The respondents are aware of the importance of communication in distress and the frailty of human memory which decrease gradually the level of knowledge. As a result. more than 70% of respondents voluntarily and in their own affair accept a mandatory course or exam.

In European countries there are different methods of refreshing GOC certificates. Among the eight randomly selected countries, six one established obligatory a course or an exam or both. Only in Norway, the certificate is renewed on condition seagoing service. The Netherlands are issuing GOC certificate on indefinitely period. Several countries require that fulfill at least two conditions for refreshing of the GOC certificates. Some countries require both the course and exam. The Finland establish additional condition as seagoing service. As an average level of requirements for refreshing GOC certificate should be a mandatory course or exam. The Polish system of refreshing GOC certificates are comparable with other European countries and it is on average demanding for candidates. In conclusion, the Polish system of refreshing of GOC certificates is on the average European level and at least it should remain.

An open question arise the choice of the main methods of refreshing GOC certificates: whether a course or an exam, the traditional method or by remote multimedia training and testing? In the case of remote training, the question is how the Polish administration can control the training of Polish operators employed under foreign flag vessels, subject to the provisions of other administrations?

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