

Management Systems of Gdynia Maritime University's the Training Ships Operation

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ABSTRACT: The aim of this elaboration is to present management systems working in Gdynia Maritime University. Compliance with the International Safety Management Code (ISM Code), the International Safety Ship and Port Facility Security Code (ISPS Code) and with the Quality Management System complies with ISO 9001 standard, allows to ensure safe operations of ships and to meet requirements of regulations. In the theoretical parts of this elaboration it has been described the definition of the quality, according to different authors, as well as Quality Management Systems. Whole activity of the Gdynia Maritime University's ships and Shipowner Branch is covered by ISM and ISPS Code. The International Safety Management, it is a system of the training ships' safe operation and prevention of pollution, elaborated by International Maritime Organization (IMO). ISPS system consists of detailed Ship Security Plan, is divided into unclassified part and the part which is classified and owned to shipowner. The Quality Management System refers to The University's activity, and only the part of the procedures, which covers student's trainings refers to the ships and Shipowner Branch. In view of very specific operational activity of the training ships: "Dar Młodzieży" and "Horyzont II", only the principle conventions, acts and regulations, which the Shipowner and the ships are obliged to obey, has been expressed.

1 INTRODUCTION

1.1 *Ruling of the quality concept*

The quality concept reaches for Antiquities. There exists many definitions interpreting this concept in literature. "The difficulty of determining of quality links, with very often repeated observation, that existing of product quality, has not been noticed as far as, it is concluded in it, but the lack of quality is felt severely." (Harmol A., 2012)

In terms Fiegenbaum A, E. J. Juran and Deming, the quality is primarily a customer's satisfaction. J. Juran understands quality as fulfillment, by product or service, reposed aims in it. According to E.

Deming, quality it is a step to the homogeneity and the reliability of the lowest possible cost and maximum adaptation to market requirements. P. Crosby considers, that quality, as the conformance to requirements. According to P. Crosby, the problem of quality is not what we do not know about it, the problem is, what we do think, what is it. (P.Crosby, 1979)

According with J. Bank the quality is: "fully meeting specific customer requirements with minimal costs". (Bank J.,1996).

At the turn of the fifties of the twentieth century, quality began to be considered as one of the main factors of competition in the United States.

"Figenbaum, as a first one, drew attention to the necessity of two ground-breaking changes in the perception of quality. He believed that, in the process of improving the quality should have been involved the whole organization, all its departments, structure, all employed peoples, and he also pointed to the need to shift the quality of the offices for the direct production activities." (Borys P.T, P. Rogala, 2002)

International Organization for Standardization, in accordance with standards ISO 9001:2000, defines the quality as: "the level in which a set of inherent features meets the requirements." (PN-EN 9001:2000, 2001). That means the level of natural, sets of permanent product or service's features, meet the requirements which have been established, by customs or have been mandatory.

1.2 Ruling of the quality concept

Similar to the concept of quality, which is variously defined, we can meet the number of Quality Management's definitions. There are many concepts of quality management in the literature, i.e.: TQM, Sigma, Six, Kaizen. "It can be said, that quality management, was some kind of state of consciousness. The state which revealed itself in enterprises, for the cause of Deming's, Juran's, and others researchers and practitioners of quality problems, works at the turn of the seventies and eighties of the twentieth century, when it was realized that the changes in the companies, they had implemented, should have served not only to increase in productivity, but also, and perhaps above all, to quality improvement. Quality factor became the most important condition for success, not only in local scale, but also in global one. In that case, the quality management could be considered as resources management, processes, and other factors aimed deliberately at the effects associated with quality." (Skrzypek E. 2002).

Quality management, according to L.Wasilewski, it is not an independent discipline of study or broader knowledge. What is more, as far as maturing increasingly engages with other disciplines, drawing from their achievements, but also introducing into their methodology certain rules or synthesis of experience". (Wasilewski L. 1998)

Quality management it is the performing of management's functions, in relation to the system of quality of managing and the quality of its components." (Hamrol A. Mantura W.,1998)

Company's success largely depends on the ability to adapt to the changing environmental conditions, and the most important factor to achieve a success, is a human being.

Another concept of management is Total Quality Management (TMQ), specified in Poland as "management by quality". It covers entire organization, all processes, functions and organizational processes. It is aimed at enhancing the ability to meet the quality requirements, in a "customer – supplier" system. It is a management philosophy, based on a system's approach. In accordance with standard ISO 8420:1994, TQM is a way of the organization management, focused on

quality, based on involvement of all members of organization and work for society. The success of the complex quality management is directed toward a strong and persistent leadership beginning from the highest level of supervision, as well as education and training of all members of the organization. Currently, due to the very high competition in the market, companies are forced to compete with each other, in terms of quality. Therefore it is extremely important to involve all employees of the organization and aiming them at achieving long-term success, through a customer satisfaction, from products or services offered by the company. From the company strategic point of view, customers are the most important, since they decide about a firm's success. The strategy of each company, operating at competitive market, bases on gaining, maintaining and possessing subsequent purchasers of its products or services. The concept of the company management, placed the client on the first position, subsequently subordinates, to meet his expectations, whole functional areas of the organization. The quality management is a set of coordinated activities, related to the management of the organization, with a view to ensure achievement of the quality objectives. It is also administrating of the resources, necessary to produce a product or service, that meets the requirements. Quality management closely relates to the definition of the organization's rules, affecting the quality of the product or service. It is necessary to ensure the implementation of tasks, in accordance with arrangements, as well as taking decisions related to improvement of products and services quality.

2 QUALITY SYSTEMS IN GDYNIA MARITIME UNIVERSITY'S SHIPS AND THE SHIPOWNERS OFFICE

The applicable regulations force the University to implement the quality systems, to meet requirements of the Convention and to receive appropriate certificates, entitling ships to sail. It is necessary to bring the profile of the Shipowners Office and ships "Dar Młodzieży" and "Horyzont II" to understand the functionality of the system management. Gdynia Maritime University is the owner and the shipowner of two training ships: "Dar Młodzieży" and "Horyzont II". The Shipowners Office is responsible for operating and maintenance of the ships, and it is a specialized cell in Deputy Rector for Maritime Affairs department in the University.

Primary task of the Shipowners Office is widely understood operation and maintenance of training ships "Dar Młodzieży" and "Horyzont II". Additionally, among the number of tasks of the office, should be mentioned the tasks associated with catering the ships, maintenances and surveys, overhauls, emergency repairs, insurance of ships, employing crews, as well as organization of arrivals and departures in/from harbors. The Shipowners Office operates based on the number of regulations, acts, ordinances which must be fulfilled by the shipowner and the ships.

Very important task of the office is to organize seamanship practices, for students of Gdynia

Maritime University, on board of the training ships, as well as operational practices in overseas shipowners.

The Shipowners Office deals also with formality related to the tutorial practices for students, both at sea and ashore.

The office supports students and graduates from Gdynia Maritime University, by close cooperation with crew agencies and shipowners, to allow them to perform operational practices.

The scheduling of the next seasons of trainings takes place also in the Shipowners Office. There are conducted negotiations with partners (towns/harbors/international associations), which organize rallies, sailing festivals, and tall ship races. As a result of the negotiations, there are planned routes and stages of "Dar Młodzieży" training journeys. The choice of optimum, in particular season, option of journey, is based on analysis of two basic factors – training's values and economic efficiency. Other element taken into account is the Polish flag's prestige, since "Dar Młodzieży", because of her unique character, acts as function of Polish ambassador.

The timeframe of the operational season depends mainly on requirement for trainings. In recent years, amounted to about 9-10 months (between February and November).

The crew of "Dar Młodzieży" consists of 31 people, when "Horyzont II" counts 15 crew members. The crews of both ships subordinate to the Head of Shipowners Office.

Primary function of a training ship is to provide platform for seamanship trainings, during which there are conducted trainings and drills in the field of ordinary seaman, as well as navigation, maneuvering and maintaining systems of the ship.

On board of "Dar Młodzieży" is implemented the seamanship practices' tutorial, of Gdynia Maritime University's faculties, in accordance with STCW. There are conducted also:

- seamanship practices for students of Szczecin maritime University;
- seamanship practices for pupils of secondary schools (Gdańsk, Świnoujście, Szczecin);
- practices for students of Antwerp Maritime Academy;
- annual races for sailors;
- individual seamanship trainings.

Gdynia Maritime University is also the shipowner and owner of the research – training ship "Horyzont II". She is a merchant ship, on board of her, are conducted seamanship practices as: sailors, radar & maneuver, as well as expeditionary voyages to polar areas, in order to supply the polar station and to conduct maritime research works. On board of "Horyzont II" are conducted the seamanship trainings as follows:

- practices for sailors in accordance with tutorials of Gdynia Maritime University, during journeys to Spitsbergen, organized together with Institute of Geophysics Polish Academy of Scientist;
- seamanship practices for students of Szczecin maritime University;

- seamanship practices for pupils of secondary schools (Gdańsk, Świnoujście, Szczecin);
- training – research voyages, organized for research offices from Poland and foreigner.

Activity of the Shipowners Office is based on various regulations, like conventions, acts, ordinances, and other rules which obeying is necessary to ensure proper operation of the ships and to perform tasks assigned to the ships.

Regulations, determine only the part of valid documents, on which activity of the office and the ships is based. The complexity of the ship's operation, requires implementation of conventions, acts and regulations jointly, and it is required in terms to ensure proper ship's operation.

The Shipowners Office and the training ships have developed and implemented three management systems:

- International Safety Management Code (ISM);
- International Ship and Port Facility Security Code (ISPS);
- Quality Management System complies with the requirements of ISO 9001, which covers all activities of Gdynia Maritime University.

Systems mentioned above, represent three different documents, which partially combine and penetrate the contents.

Compliance with standards of ISM Code and ISPS Code is directly related to activity of the Shipowners Office, in term of ship's operations.

2.1 *International Safety Management Code*

International Safety Management, is an international management system of safe ship's operation and prevention of sea pollution, adopted by International Maritime Organization (IMO) by resolution A.741 (18), which can be corrected by IMO, provided that such amendments shall enter into force, and apply, in accordance with the provisions of Article VIII of the Convention.

The idea of the ISM Code, in practice, comes down to the creation of the security system in the Shipowners Office on the ships, and in particular consists in development, implementation and application of procedures to help in the safe ships' operation.

The Code requires that every shipowner has developed, implemented and maintained Safety Management System, which includes the following functional requirements:

- shipowner's policy with regard to safety and the environmental protection;
- procedures and guidance to ensure safe ships' operation and protection of the environment, in accordance with relevant international and national legal requirements;
- defined levels of authority and ways of communication among the crew members of the ship, as well as between ashore and ship's personnel;
- procedures to ensure reporting of accidents, dangerous situations, as well as non-compliance with the requirements of the Code;

- procedures in regard to preparation and actions in emergency;
- procedures in regard to audits and surveys of the Safety Management System.

The procedures cover in particular: recruitment procedure, trainings of employees, On-Board complaint procedure, procedures of rooms inspection, ship's operational procedures, emergence readiness procedures, reporting and analyzing of dangerous situation, corrective and preventing actions, environmental protection procedure, procedure of maintaining ships' technical condition, overhauling and docking procedures, supervising documentations procedure, audits' procedures, surveys, managements and certifications procedures.

Development and implementation of the Code in the University, allows to focus on countermeasure in the operations of the training ships: "Dar Młodzieży" i "Horyzont II", as well as to maintain crew's readiness to the proper conduct in emergency.

Safety Management System has been implemented by documented management procedures, in order to ensure that duties are conducted and supervised, both ashore and on board, in accordance with legal and the University's requirements. The procedures consist of description of activities related to routine ship's operations and in emergency circumstances.

2.2 International Ship and Port Facility Security Code

The International Ship and Port Facility Security Code consist of documents for "Dar Młodzieży" and "Horyzont II". Both ships are bastards, since they do not carry cargo, they are visited by enormous number of visitors at harbors, and usually are moored outside of harbor's security zone. The training ships of the Gdynia Maritime University could be the target of any kind of attack, because their visits are usually trumpeted by the media.

Based on requirements, included in ISPS Code, it has been developed the Ship Security Plan (SSP) for ships: "Dar Młodzieży" and "Horyzont II". The plan is divided into two essential parts:

The unclassified one, which consist of security policy, main ship's technical data, contact data of: shipowner, Captain and Chief Security Officer (CSO). In this part of the plan have been presented Job Descriptions of the crew members - split into tasks, and block diagram of the security of the ship. There have been described levels of security, schedule of trainings, forms of records and templates for records.

- The classified part, which is separated, and determines emergency procedures - marked by "Shipowner Confidential" label. These include:
 - identification of areas with restricted access, together with security measures to deny admission for unauthorized people;
 - action procedures in case of emergency;
 - action procedures in case of change of security levels 2 or 3;
 - duties of crew members with assigned tasks in scope of security;
 - localization of the security alarm's activation points;

- procedures, guide's and guidance regarding The Ship Security Alert System.
- Assessment of the Ship security.

The purpose of the plan is to prevent and countermeasure any illegal act of harassment, targeted against ship, her crew, trainees and passengers.

The plan has been developed in accordance with requirements included in:

- International Convention for the Safety of Life at Sea (SOLAS), chapter XI-2;
- ISPS Code, chapter A and chapter B;
- Ordinances of the Head of Gdynia Marine Office.

The Security Policy of the shipowner is intended to provide safety of the crew, trainees and ship, by developing, keeping and improving taken security measures, essential to prevent lawless actions, which pose a threat or affect safety of the working environment on board the training ships "Dar Młodzieży" and "Horyzont II".

The Shipowner: Gdynia Maritime University provides the necessary assistance to the ship, to support the Port Facility Security Officer (PFSO), the Captain and the Ship Security Officer (SSO) in fulfilling their duties in according with requirements SOLAS 1974, chapter XI-2 (ISPS code) as amended. To this end, the Chief Security Officer (CSO) has been appointed, who is responsible for:

- providing information regarding level of threats which can be encountered by ship;
- ensuring and securing of performance of security assessment for every ship;
- keeping up to date the Ship Security Plans;
- representing shipowner in Maritime Administration of the flag State;
- organizing survey of actions in terms of security;
- improvement of education and organizing of trainings for people responsible for security;
- ensuring effective communication and cooperation between SSO and PFSO.

For safety on board, within the meaning of ISPS Code, is responsible the Ship Security Officer, who is one of the deck officers, and his tasks are as follows:

- reporting to the Captain, about general status and accomplishing the policy of security procedures, currently being in force on the ship;
- accomplishing regular inspections, in terms of ship security, to make sure the proper security level ;
- keeping and supervising to implement SSP;
- reporting to PFSO about all occurring security incidents;
- coordination of all security aspects, regarding ships stores and cargo, with crew members, PFSO and CSO;
- reporting to CSO about shortcomings and inconsistencies identified during internal audits, periodical surveys, e.t.c.;
- making sure trainings, and permanent improving crew's security awareness;
- filling in the Declaration of Security, establishing close cooperation with representative of the law, in all visited harbors.

A Captain who is responsible for a whole ship's activity, in close quarter situation, he is entitled to

take action against the procedures, based on his/her knowledge, experience and good seamanship.

2.3 Quality Management System

Gdynia Maritime University has developed and implemented also the management system complies with requirements of ISO 9001, covering the whole University's activity in terms of education on academic level, conducting R&D, in accordance with polish and international requirements.

They have been identified and described, within the system, processes applicable in the organization, defined the overall course, mutual interferences and connections, as well as process management. In presented process descriptions, have been taken into account and defined methods of their effective course, supervising, monitoring, measurements and analysis. It have been developed measurable aims and subjects for particular processes, adequate to quality policy and general goals of organization.

In the Shipowners Office has been implemented P1-4 procedure: Implementation of students' practices, which includes many actions assigned to defined workers. Within the procedure, the Shipowners Office members are responsible for following actions:

- the Shipowners Office member is responsible, together with suitable Deputy Dean and Practice Minder, for seeking companies where students can conduct practices;
- the Shipowners Office worker, based on provided by student relegation, prepares the Agreement for Practice, checks whether the student has proper insurance and transfers the signed agreement to the company which accepted student for practice;
- the Shipowners Office member uploads information, to the office's website, about shipowners cooperating with Gdynia Maritime University;
- the Shipowners Office worker prepares the agreement to take place a practice;
- the Deputy Rector for Maritime Affairs or the Head of the Shipowners Office signs the agreement to take place a practice;
- the Deputy Rector for Maritime Affairs, based on a relegation, is entitled to deploy a student to complete his/her practice on board of training ship, when a seamanship practice, in external shipowner, was shorter than required by study's tutorial;
- the Head of Shipowners Office schedules practices for students, of particular faculties, on board of University's training ships. The schedule for following year has to be finished by the end of December, taking into account applications from faculties with terms and numbers of students deployed to practices;
- the Deputy Rector for Maritime Affairs verifies the schedule of ships' journeys for current year;
- the Head of Shipowners Office notifies Deans about terms of seamanship practices for their students;
- the Shipowner Office worker checks validity of documents, required by separate regulations

(according with form F-I-PA/6/1-1-2 ISM KODU), essential to take place a seamanship practice;

- the Head of Shipowners Office appears to the Marine Office for issuing a Seaman's Book, if the student does not possess it;
- the Head of Shipowners Office passes, to the Captain, two copies of lists of embarked students, their seamen documents and trainee's equipment, according to form F-I-PA/6/1-1-2 ISM KODU;
- the Captain is obligated to record about embarkation/disembarkation in the seaman's books, and after that transfer those documents to the Shipowners Office;
- the Shipowners Office member returns the documents to students with acknowledge, after completing the practice;
- the Head of Shipowner Office verifies and approves the wages for Practice Minder, based on issued minutes from practice.

3 CONCLUSIONS

The training ship's operations management must meet legal requirements, which is directly related to necessity of quality system's implementation. Shipping companies operating in the global market, operates also based on implemented management systems ISM and ISPS, which allows them to keep the position on the market, as well as to meet requirements, imposed by SOLAS Convention.

The management systems, implemented in the Shipowners Office and in the training ships, complements one another and penetrate the contests. The management systems have been implemented by documented management procedures, which are evaluated by a certifying entity, in the form of audits and surveys. Any required changes are entered into the system, promptly, to ensure cohesion of the rules with ISM Code, ISPS and ISO, on the University. Any observation or incompatibility card are always acutely analyzed in the Shipowners Office and on the ships, to make sure, the implemented changes, meet requirements of the rules, and at the same time, are the best solution.

The necessity of the quality systems' implementation results from the specifics of the training ships' operations and their operational profile. The effect of the systems' work is a good organization of the office's work and completion of seamanship practices, achieved by safety of ships, trainees and crews.

The quality systems, in the Shipowner Office and on board of training ships, are particular important, since the crew and trainees, conducting a practice, are involved not only in meeting requirements, to ensure quality and safety, but they also learn about quality systems, which they will use during their next job, on board ships.

Due to the specificity of the seamen's education, systems have to be "alive", and vital. All updates have to be implemented immediately. It is also important a permanent accomplishment and improvement of the systems.

The correct obeying of requirements and procedures, contained in the systems, has a significant impact on proper ship's operations, quality of the practices, crews qualification, organization of work, and hence it shapes quality costs in terms of mitigations, assessments, as well as disadvantages and losses.

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