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THE INTERNATIONAL SAFETY MANAGEMENT CODE REQUIREMENTS AND RESPONSIBILITIES

MEĐUNARODNI PRAVILNIK O UPRAVLJANJU SIGURNOŠĆU: ZAHTJEVI I ODGOVORNOSTI

Summary

This paper has defined the functions of a safety system and requirements by which they are realized. IMO's ISM Code has been presented as a basic internationally recognised standard for the Safe Management and Operation of Ships. It has been concluded that the Code aims at the prevention of pollution and is to become mandatory for most ships by the st July 1998. Since the structure of ISM Code is based upon the Quality Management System ISO 9002, these two systems are compared. Although quality and safety have different meanings, these two nations are closely inter-related so that Safety Management System is 75% of a Quality Management System. It has been pointed out that the system of maintenance and constant safety improvement should be carried out to perform good financial results. There have been quoted all elements of the system that should be documented and applied in practice. They are listed below: Establishing safety and environmental policy; Defining responsibility and authority ashore and of loat; Appointing a "designated person" for Safety System; Defining clearly Master's responsibility; Ensuring adequate resources including personnel to support Safety Management System; Developing plans for shipboard operations; Creating preventive actions for maintenance; Controlling all documentation and data necessary; Verifying, reviewing and evaluating Safety Management System.

The significance of internal and external audits for early detection of minor or greater faults has been stressed. The governments of the flag states are the most responsible ones for the enforcement and implementation of the system. It will be crucial to the success of the ISM Code that a unified interpretation of the ISM Code is adopted by all flag states for the benefit of seafarers, shipping companies and the economy related to shipping industry. It has been concluded that the cost for implementation of Safety management Code will be quickly covered through lower premiums (about 10%) of insurance. That is a good reason enough besides statutory requirements for a shipping companies to comply with ISM Code.

Sažetak

U radu su definirane funkcije sustava sigurnosti i zahtjevi uz pomoć kojih se te funkcije ostvaruju. U glavnim crtama je opisan IMO-ov ISM Pravilnik, temeljni međunarodno priznati dokument za razvoj, provedbu i praćenje sustava sigurnosti.

Konstatira se da je pravilnik o upravljanju sigurnošću usmjeren i na sprječavanje onečišćenja te da za većinu brodova stupa na snagu 1. srpnja 1998. Budući da je struktura ISM Pravilnika proizašla iz norme ISO 9002 o sustavima upravljanja kakvoćom daje se usporedba tih sustava. Iako kakvoća i sigurnost imaju različita značenja ovi pojmovi su usko povezani tako da sustav upravljanja sigurnošću čini oko 75% sustava upravljanja kakvoćom. Naglašen je značaj praćenja sustava za održavanje i stalno unapređivanje sigurnosti te za ostvarivanje povoljnijih financijskih rezultata poslovanja. Navedeni su svi elementi sustava koje je potrebno dokumentirati i dokazati njihovu primjenjljivost u praksi. To su: politika sigurnosti i zaštite okoliša, odgovornosti i ovlaštenja za realizaciju te politike na brodu i u uredu brodara, imenovanje odgovorne osobe za sustav sigurnosti, jasno označena odgovornost zapovjednika, osiguranje dostatnog broja osoba i ostalih sredstava potrebnih za sustav sigurnosti, razvijanje potrebnih planova i procedura, uspostavljanje preventivnog održavanja, provedba potpune kontrole nad svim dokumentima i podatcima te stalno ispitivati i potvrđivati sustav sigurnosti. Značaj internih i vanjskih prosuditelja za otkrivanje manjih i većih neusklađenosti posebno je istaknut. Vlade država čiju zastavu brodovi nose najodgovornije su za provođenje sustava u praksu. Jedinstvenim tumačenjem članaka ISM Pravilnika one bi bitno doprinjele njegovoj učinkovitosti na korist pomoraca, brodara i gospodarstva povezanog s pomorstvom. Zaključeno je da se troškovi uspostavljanja sustava sigurnosti brzo nadoknade na primjer kroz smanjenje premija osiguranja za oko 10%, što je uz zakonske obveze dovoljno dobar razlog brodarima za primjenu ISM Pravilnika.

1. Introduction / Uvod

The prime purpose of the shipping industry is to transport people and materials safely by sea to the satisfaction of the "Customer" and in so doing to make a profit.

With the passage of time, vessels have become larger, faster, more numerous, sophisticated and expensive. They tend to be operated by smaller numbers of crew and their effect on the environment becomes progressively greater. Many of the goods and materials being shipped include highly dangerous and polluting substances and there has been a proliferation of ship managers, managing ships for shipowners who are "investors" - those financial entrepreneurs who have no shipping experience or interest in shipping

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operations as such and as a consequence have no interest in matters such as safety.

The result of this has been more accidents and combined with greater media coverage - a significantly greater public interest. There is now a growing pressure for change - government administrations and the public are more aware of and concerned with environmental matters and are demanding improvement, protection and in the event of an accident - recompense. The "ExxonValdez" is a classic example.

There is no one specific way to achieve safety but the system must meet certain criteria as set out in the ISM Code, for example:

a. top management showing visible commitment;

b.adequate supervisory performance;

c.middle management involvement;

d.employee participation;

e.flexibility; and

f.it must be perceived as being positive.

2. The function of a safety system
Funkcije sustava sigurnosti

The function of a safety system is to locate and define the operational errors which alow accidents to occur and to eliminate them. This can be carried out in two ways: a. by asking WHY - searching for root causes of accidents; b.by establishing whether certain known effective controls are being full and effectively implemented.

The safety system should address not only the equipment and activities which are governed by legislation but also those operations which are considered to be "best practice" i.e. good seamanship.

The development by IMO of the International Safety Management Code [1] is an indication of recognition by governments that decisions taken ashore are as important as those taken on board in ensuring the safe and pollution free operation of ships are as important as those taken on board. After many years during which administrations have concentrated on ships and their equipment, the focus of international concern and discussion has now moved distinctly towards the management of ships and the human issues both of training of seafarers and the exercise of responsibility by those determining the policies and procedures in shipping companies. So what is IMO's ISM Code?

The structure of the ISM Code is based upon the Quality Management System ISO 9002 [2] and is essentially an Internationally recognised Standard for the Safe Management and Operation of Ships and for the Prevention of Pollution and is to become mandatory for most ships by **1st July 1998 and all ships above 500 grt. by 2002.**

This Code along with the existing conventions and codes represent an adequate set of requirements to guarantee a good safety level but the problem is that regulations on their own are of little value unless they are effectively implemented. The problem is not the lack of standards or regulations but rather their inadequate implementation and enforcement. In the past many Flag States have been extremely economical in

their support of the existing conventions and codes and have played and inadequate role in ensuring that ships registered under their flag are meeting the current statutory rules and regulations. The ISM Code should correct this deficiency.

If the ISM Code is not administered properly by the Flag States, then it will fall to the Port State Control inspectors to identify the sub-standard ships according to the new and extended powers set out in Resolution A.742 (18) [3] which in addition to ship design and equipment related matters will now allow for the assessment of the ability of the ship's crew to carry out their duties especially on passenger ships and vessels carrying high risk cargoes.

Failure to comply with the requirements of the ISM Code will result in ships being unable to trade. Efficient, well run companies should have nothing to fear, however, since much of the Code is common sense and will only require the Company to document the way in which it operates. The documented system will provide the required objective evidence that - **"they do what they say they do".**

Many companies have instruction manuals which may already include most of the ISM Code's requirements. However, there is a great danger of writing too much, as the more that is written, the less chance there is of anyone reading it and the more difficult it will be to maintain! What is important, is that the content and the format of documentation should be relevant, practical, easy to understand and be controlled.

Frequently, the subjects of Safety and Quality are interchanged and therefore confusion arises, but the following definitions may provide some clarification: QUALITY:- IS MEETING A SPECIFIED OR IMPLIED NEED; SAFETY:-IS CONTROL OF ACCIDENTAL LOSS.

Although Safety and Quality have entirely different meanings, they are closely inter-related and both depend on the Quality of the organisation. (A Safety Management System is 75% of a Quality Management System).

The Quality of operations in a Company will depend not only on its culture and personnel, but also on how well the organisation has defined and communicated its Management Policies, responsibilities, reporting lines, procedures and instructions to its personnel. When these are not as well defined as they should be, it is inevitable that mistakes will be made.

Naturally, it also follows that the Quality of the Shore Management System will affect the Quality of vessels, crews and the operational procedures on board. All these are, in turn, decisive factors in the safety and efficiency of operations.

3. A Safety Management System is inter related with Quality Management System / Odnos između sustava upravljanja sigurnošću i sustava upravljanja kakvoćom

The system must be geared to the continuous improvement of defined performance and this requires evaluation of what performance is required.

WHAT CANNOT BE MEASURED - CENNOT BE CONTROLLED.

Accountability will thus be essential to the success of an effective safety management system.

An accident evolves from an unsafe act and is a symptom of something wrong in the management system. Major accidents normally happen as a result of an accumulation of undetected or unresolved lesser deficiencies. It is essential, therefore that when minor non-conformances are discovered during auditing, they are properly analysed and corrected to prevent them becoming major non-conformances. It should also be borne in mind that the occurrence discovered may be the effect and not necessarily the cause of the accident. Common audit findings may be:

1. Procedure is no longer applicable; 2. Procedure is not available at the point of application; 3. Lack of required skill or inadequate training; 4. Lack of supervision; 5. Wrong person selected for the task; 6. Responsibility not clearly defined; 7. Time stress or fatigue; 8. Drug or alcohol abuse; 9. Inadequate resources; 10. Inadequate maintenance

Reporting of near misses is an important constituent of the safety system and the safety culture and companies should encourage Masters to report such situations by allaying the suspicion of punitive action against any personnel reporting non-conformities or near misses.

The company must accept that small incidents, defects and non-conformances are symptoms of problems in the Safety Management System and should be considered as an opportunity for further improvement. Feed-back is essential to improve performance. Ideas and innovation must be encouraged from all personnel regardless of the scale of the recommendation and should be continuous and not left for consideration at an annual review.

The achievement of efficiency in any organisation has a beneficial effect on a company's financial performance but the potential effect of safety on profits is still to a great extent ignored or not fully appreciated especially by middle management and by ship's crews who think that all costs are borne by the insurance company. The amount that is settled by an insurance claim may be only a fraction of the total overall cost of an accident when all related expenses have been taken into account. **However, if you think adopting a safety culture is expensive then try accidents.**

4. Requirements and responsibilities according the ISM Code
Zahtjevi i odgovornosti prema ISM Pravilniku

It therefore makes sense to address all aspects of management operational costs in order to ensure that "hidden" losses are reduced. An effective Safety Management System will control operational safety, reducing losses and damages which the shipping industry in the past has tended to accept as inevitable. By addressing and correcting those same components which go to make up an accident you will be addressing the elements which create many of a company's day to day operational losses. **Safety does not happen, it is the reward of care, thought and good organisation**.

Just as in a Quality Management System a Safety Management System requires that you document your policies, your procedures and operating instructions to ensure that every person in the company, both ashore and afloat, understands how the company wishes to operate and how you will meet the existing statutory requirements. Also without procedures being documented, it would not be possible to show evidence to a third party (i.e. the Flag State Administration) that you conduct your affairs in a planned and effective manner. Whilst nobody plans to fail - many fail to plan and systems need to be carefully thought out and developed.

It will for example be necessary for companies when developing their Safety management System to address and document the following aspects of safety as it is clearly identified in the Code: 1.Create a Safety and Environmental Policy for the Company and ensure that it is implemented and maintained; 2. Define and document the Responsibilities and Authorities and interrelation of key personnel both ashore and afloat showing the clear lines of communication; 3.Appoint a "Designated Person" or persons to ensure that the Safety Management System is properly controlled and administered and to provide a link between the company and those onboard ship; 4.Clearly define the Master's Responsibility and Authority with special regard to safety and environmental protection and its implementation onboard ship; 5.Ensure that adequate Resources including Personnel are made available to support the Safety Management System; 6.Develop Plans for Shipboard Operations concerning the safety of the ship and pollution prevention with particular emphasis on preventive actions for special and critical shipboard operations; 7.Create procedures to identify, describe and respond to Emergency Shipboard situations such as hazards, accidents and failures. Contingency planning will include programmes for drills and exercises to prepare for such situations; 8.Reporting and Analysis of Non-conformances, Accidents, Hazardous Occurrences and Near Misses; 9.Establish procedures for Preventive Maintenance of Ship and Equipment, the sudden failure of which may result in a hazardous situation.These procedures must provide for adequate inspections and tests of stand-by arrangements and equipment that are not in continuous use; 10.All Documentation and Data necessary for the maintenance of the Safety Management System must be properly controlled with regard to its development, distribution, amendment and disposal; 11.Verification, Review and Evaluation of the Safety Management System by means of internal safety audits to verify its effectiveness.

Once the Safety Management System has been developed and documented it must be fully implemented. When the system has been implemented for a month or more, it should be audited to determine if the policies and procedures are truly effective. The results of audits, non-conformances, analyses, corrective and preventive actions, reports and inspections must also be reviewed by senior management at a

Management Review Meeting to ensure that the safety system is maintained and is continually being improved. If senior management are not made aware of what difficulties and problems are being experienced throughout the company there will be little hope of them being properly rectified. The audit should identify the degree of compliance with the applicable international and national regulations, conventions and standards and the company's instructions.

5. Safety Management System Audits
Prosudba sustava sigurnosti

Selection and training of the audit team is therefore crucial to the success of the Safety Management System. If the auditing is not properly conducted, you will not obtain the required results - your system will most likely be ineffective and non-conformances, problems or deficiencies will develop in your system resulting most probably in the occurrence of accidents. At the very least, the non-conformances will be identified by the Flag State assessor or the Port State Control inspector which may well result in the vessel being detained.

It is important that auditing is not used by the auditor as a vehicle to assail another department or individual. It should be stressed to the audit team that it is the effectiveness of the system and procedures that is being audited and not the auditee.

Audits may be carried out pre-announced or unannounced. There is, however, little to be gained by springing audits on people as there should be adequate evidence in the records to show if the stated procedures are being complied with or not. Unannounced audits tend to be difficult to organise properly and they aggravate the very people you are trying to obtain the maximum co-operation and information from to achieve a good in-depth audit.

Unannounced audits should be avoided unless there is an especially good reason to conduct an audit in this way.

The senior management will determine the frequency of safety audits, approve the scope and extent of the audits and appoint safety auditors, making certain they have the necessary qualifications and experience. The auditor or audit team must be **independent** of the department or function being audited.

The selection and training of the audit team is paramount to the success of the internal auditing and consequently the Safety Management System.

It should be kept in mind that if there are any non-conformances in the system and they are not discovered by the internal auditors they will be the Flag State assessor or the Port State Control inspector which may well result in the vessel being detained. it is important therefore that any faults within the system will be ascertained and rectified internally and not left to be found by the Flag State Authority or their appointed agent.

The audit should establish the corrective and preventive action and arrangements for improvement and also demonstrate the commitment of senior management. The areas of greatest safety concern will be:

1. The safety management skills of personnel afloat and ashore; 2. Motivation of personnel ashore and afloat; 3. The effectiveness of training, drills and simulation of emergency incidents; 4. The provision by the company of adequate resources; 5. The reliability of equipment and systems

Under the ISM Code Flag States carry the prime responsibility for its implementation and enforcement although they may delegate this authority to an approved organisation in accordance with the requirements of IMO Resolution A. (739) 18.[4] Whilst the classification societies consider they have unrivalled certification capabilities, their expertise has historically centred on ship structures and equipment and not on management skills which is the basis of this code. It is most important that the classification societies who will be appointed by many of the administrations do not allow the commercial benefits to cloud their auditing judgement. It will be interesting to see how uniform the verification assessment procedures will be in practice when considering the number of Flag States world wide and appointed organisations whu may conduct the assessments on their behalf. It will be crucial to the success of the ISM Code that a unified interpretation of the ISM Code is adopted by all Flag States.

6. Conclusion / Zaključak

The cornerstone of success will of course be the degree of commitment by the Flag States and to this end it will be crucial that Port State Control publish the identities of ships, companies, registers and classification societies where non-compliance with IMO rules occur. The burden must lie with the Flag States to show transparency of their own efforts to maintain safety under their registry.

There will of course be an initial cost to setting up a Safety Management System, implementing it and having it verified but there is no doubt that there are significant savings to be made especially when the system is incorporated within a Quality Management System. Companies who have developed pre-convention systems are indicating on average a ten percent reduction in insurance and P.& I. premiums from the attendant reduction in accidents, a thirty percent reduction in pollution fines and a sixty percent reduction in cargo claims. That should be a good enought reason for any company to adopt a Safety Management System without the threat of judicial action should they not comply with the ISM Code.

References / Literatura

[1] IMO Resolution A (741) 18

[2] ISO 9002:1994 (E)

[3] IMO Resolution A (742) 18

[4] IMO Resolution A (739) 18