2000

Maritime safety and environmental protection: enhancement through quality and safety management systems: IMO and EU approaches and their adoption in Poland

Katarzyna Monika Jedral

World Maritime University

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MARITIME SAFETY
AND ENVIRONMENTAL PROTECTION:
ENHANCEMENT THROUGH QUALITY
AND SAFETY MANAGEMENT SYSTEMS
IMO and EU approaches
and their adoption in Poland

By

KATARZYNA MONIKA JEDRAL
The Republic of Poland

A dissertation submitted to the World Maritime University in partial
fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE
in
MARITIME ADMINISTRATION AND ENVIRONMENTAL PROTECTION

2000
DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the Polish Maritime Authority or the World Maritime University.

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I wish to express my profound gratitude to all those who has encouraged me to undertake this demanding study at WMU, especially to Mr. Jerzy Vonau, the Director of the International Mobile Satellite Organization and Mr. Wojciech Szulczynski the Head of the CIS/Eastern European Section of the International Maritime Organization for their inspiring advice. I also thank Professor Kazimierz Dendura who encouraged me to choose this topic.

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ABSTRACT

Title of Dissertation: Maritime safety and environmental protection: enhancement through quality and safety management systems.
IMO and EU approaches and their adoption in Poland.

Degree: MSc

The dissertation is a study of existing quality and safety management systems in the maritime industry adopted either on a voluntary or mandatory basis. Special attention is given to the roles and obligations of maritime administrations in the process of their implementation.

A brief look is taken at the ISO 9002 system, which is being implemented voluntarily by shipping companies but moreover it is a basic scheme for the mandatory safety management system developed by the IMO. It is also presented as the main scheme used by maritime administrations and classification societies to monitor the quality of their performance.

The ISM Code itself is also scrutinised. It has been the industry’s hope that the Code would become the most important and efficient remedy against all maritime disasters since it has been very widely adopted. Particular reference is made to the law adopted within the European Union that relates to quality and safety in shipping,
including Port State Control issues and the minimum criteria for recognised organizations acting on behalf of maritime administrations.

Chapter Five evaluates existing requirements for Polish flag vessels in respect of safety management. As well it presents information about the new draft of the ‘Maritime Safety Act’ that is being considered by the Parliament at the time of writing of this dissertation. This part of the paper also includes recommendations regarding further harmonisation of the above standards with those of the IMO and the EU.

The concluding chapter examines the overall results of the study. General conclusions and recommendations as to the possibility of improving maritime safety through better management are presented.

As a research method the author has chosen to analyze the IMO conventions, resolutions and other recommendations together with the EU’s laws and regulations, policy papers and informational brochures as well as Polish maritime laws and regulations. Also available books, periodicals, magazines and materials from international conferences that focus on improving maritime safety through quality and safety management and on flag State responsibilities in this respect were studied. An additional material of great value has been collected during meetings with the Danish, Finish and Swedish Maritime Authorities. The last is mainly in the form of the author’s notes.
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<tr>
<td>CEN</td>
<td>European Committee for Standardisation,</td>
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<tr>
<td>CENELEC</td>
<td>European Committee for Electrotechnical Standardisation.</td>
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<tr>
<td>CUM</td>
<td>(Centralny Urząd Miar) Central Office of Measures in Poland</td>
</tr>
<tr>
<td>CS</td>
<td>classification societies</td>
</tr>
<tr>
<td>DG</td>
<td>Directorate General (body of European Commission)</td>
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<tr>
<td>Dir.</td>
<td>Directive of the European Commission</td>
</tr>
<tr>
<td>DMO</td>
<td>Director of Maritime Office</td>
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<tr>
<td>DOC</td>
<td>Document of Compliance (as per ISM Code)</td>
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<tr>
<td>EA</td>
<td>European Co-operation for Accreditation</td>
</tr>
<tr>
<td>EN</td>
<td>European Norm</td>
</tr>
<tr>
<td>ETSI</td>
<td>European Telecommunications Standards Institute</td>
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<tr>
<td>EQP</td>
<td>European Quality Policy</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FS</td>
<td>Flag State</td>
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<tr>
<td>IAF</td>
<td>International Accreditation Forum</td>
</tr>
<tr>
<td>IEC</td>
<td>International Electrotechnical Commission</td>
</tr>
<tr>
<td>ILAC</td>
<td>International Laboratories Accreditation Cooperation</td>
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<td>MA</td>
<td>Maritime Administration</td>
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Maritime Safety Regulation - Regulation of the Minister of Transport and Maritime Economy on safety of seagoing vessels and safety of life at sea, issued on 2nd September 1997
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<th>Acronym</th>
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<td>Paris MoU</td>
<td>Paris Memorandum of Understanding on Port State Control</td>
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<td>PCBC</td>
<td>(Polskie Centrum Badań i Certyfikacji) Polish Center for Testing and Certification</td>
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<td>PKN</td>
<td>(Polski Komitet Normalizacyjny) Polish Committee for Standardization</td>
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<td>PMA</td>
<td>Polish Maritime Administration</td>
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<td>PN</td>
<td>(Polska Norma) Polish Standards</td>
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<td>PSC</td>
<td>Port State Control</td>
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<td>QMS</td>
<td>Quality Management System</td>
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<tr>
<td>RO</td>
<td>Recognized Organization</td>
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<tr>
<td>SEPP</td>
<td>Safety and Environmental Protection Policy</td>
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<tr>
<td>SMC</td>
<td>Safety Management Certificate</td>
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<tr>
<td>SMS</td>
<td>Safety Management System</td>
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<tr>
<td>STCW</td>
<td>International Convention on Standards of Training, Certification and Watchkeeping for Seafarers</td>
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<td>Reg.</td>
<td>Council Regulation</td>
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CHAPTER 1

INTRODUCTION

Ever since man first went to sea he was concerned with the safety of his life, his ship, the cargo and later the marine environment. On the other hand the shipping industry has always been one of the most competitive markets due to its unlimited international character. Thus the shipowner has to find a right balance between safety and competitiveness. One of the very popular means of competition is a certificate proving that a company has implemented a quality management system.

At present there are several different quality management systems used by the industry. The basic one, suitable for a shipping company is provided in the ISO 9002 Standard which can be implemented voluntarily in its pure version. Often shipping managers choose its modified variant that better satisfies the company’s needs, an example being the International Ship Management Association Code of Ship Management.

For shipping, the most important modification of the ISO 9002 has been made by the International Maritime Organization when adopting as mandatory the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code). The transformation has been so significant, that today some people might not recognise the ISM Code as having originated from the ISO 9002 Standard. Since also the goal of the Code is not simply customer satisfaction but increased safety onboard and prevention of marine pollution also the name of the system has been changed from a quality to a safety management system.
In shipping safety and quality are correlated. They cannot exist separately, because there cannot be shipping operations of high quality that are not safe. Yet, for many years everybody was mostly concerned about the technical aspects of ship safety. The International Maritime Organization (IMO), which came into existence in 1959, has adopted many standards and conventions. All these measures were quite successful resulting in a decrease of the marine casualty rate but disasters still continue to happen. An average of 230 vessels with gross registered tonnage of 1.1 million GRT are lost world-wide every year, with over 1,000 lives lost. (Directorate General Transport-D3 of the European Commission, 1999).

Presently the international trend is that quality of any product or service is a result of the management’s quality. Many companies, which introduced a quality management system, report that it improved the quality of final products meaning reduced employees mistakes and increased customer satisfaction. But can a better, modernised management system in a shipping company also improve the vessel’s safety and prevent loss of life at sea? The dissertation is *inter alia* an attempt to answer this question.

The adopted ISM Code is believed to reduce the number of maritime disasters by integrating existing technical requirements with operational provisions existing in the industry. It is also considered to be the missing link between the ship, her crew and the company ashore. Although for some it was controversial that, the IMO decided to interfere in the relationship between the owner and crewmembers on his vessels the ISM Code became one of the greatest IMO successes in terms of implementation. On 1 July 1998, which was the adoption deadline for 13,000 ships, about 87 per cent of them had certificates required by the Code in order and on time.

The title of the research is ‘Maritime safety and environmental protection: enhancement through quality and safety management systems’. There is no transparent definition of ‘quality shipping’ or ‘quality management in shipping’. In general ‘quality management’ is understood as an integrated system of management
aiming at the production of goods or services that will satisfy the needs of the customers. Thus in this dissertation ‘quality management’ will be related to ISO standards while ‘safety management’ shall be understood as a management system aiming at increasing safety in shipping and reduction of marine pollution. Therefore ‘quality shipping’, a term very popular nowadays, can be defined as shipping service that meets all criteria and requirements established by the customer or public including safety requirements. The ‘Quality Shipping Seminar 2000’ agreed on a similar definition, that a ‘quality ship’ is one that is ‘in accordance with the applicable international standards of the day, as well as any related or additional standards set and adopted by others’ (Summary Conclusions, 2000). The author has chosen this subject for the following reasons.

Firstly, because the issue of improving safety at sea through quality and safety management is still a new one and needs to be further developed and improved.

Secondly the ISM Code has only passed through its first phase of implementation and for many vessels will not be mandatory until the year 2002. There are opinions that it needs to be improved, but the IMO has decided that the Code will not be amended until it is binding for all conventional vessels. It is then worth studying the subject in more detail and be able to participate in the discussions when revision time comes.

Thirdly the European Union (EU) is strongly involved in the implementation of IMO standards. The Member States legislated to turn most of the IMO measures into EU law to ensure there would be a harmonised and uniform application of IMO standards in this region of the world. The requirements are in some cases higher than those adopted by the IMO. Since the Republic of Poland is already an Associated Member of the EU and one of the main principles of Polish maritime policy is the achievement of broad harmonisation with EU requirements, it is necessary to scrutinise and compare standards of the IMO and the EU.

1 As established in 1993 by the Maastricht Agreement.
The primary goal of this research is to establish what is the role of the Flag State Administration in the establishment of a quality and safety management system in a shipping company and whether safety onboard can be enhanced through changes in the company’s management system.

Also the dissertation is an attempt to provide the Polish Maritime Administration with additional data as to the level of harmonization of Polish law with those of the EU and IMO in respect to maritime quality and safety management assurance. Thus, the existing voluntary and mandatory management standards that are being implemented in the maritime industry are scrutinized. For this purpose the ISO 9000 standards will be described, as they are the fundamental basis of the mandatory IMO and EU requirements. The analysis is also focused on common points and differences of these two regimes.

Particular attention is given to the EU policy on safety and quality management in shipping and methods of its implementation by Member States. For this reason an analysis of EU legislation implementing the ISM Code, as well as the Directive on common rules and standards for ship inspection and the Directive concerning enforcement of international standards for ship safety, pollution prevention and shipboard living and working conditions is provided.

This dissertation gives particular attention to the responsibilities of national Maritime Administrations in respect to the implementation of safety and quality management standards. For this reason the analysis is also focused on the means of enforcement of international standards onboard ships that are available to the flag and port States.

Finally, it is important to note that in this dissertation the outline of the ISO 9002 and the ISM Code is presented from the Maritime Administration point of view, not from the shipowners’ position. Hence, particular and detailed descriptions of all related procedures are not provided as the analysis is focused on efficient implementation and control by the Administration.
CHAPTER 2

QUALITY MANAGEMENT STANDARDS
IN MARITIME INDUSTRY

2.1. Concept of quality

The concept of quality was born during ancient times when the product became marked with the initials or name of their designer. For centuries the quality was related to the trademark as no international, general standards were developed.

Today, quality concepts are embracing not only product and service quality but organizational and managerial aspects as well. They are associated with all of the activities connected to quality management, quality assurance and quality control, certification and accreditation, quality marks and labels, standardisation, metrology, tests and so on.

Quality also represents a strategic discipline in company management, based on the overall commitment of managers and employees towards continuous improvement. This commitment seeks, as its ultimate objective, customer satisfaction in all the phases of a product’s life cycle and in all the sectors of a company.

Looking at the history of quality during the period of industrialisation, one can see that the notion of quality is one that has become broader over the years. It started initially with *inspection* focused on product or service quality, then in the 1930’s was followed by *quality control*. This was a shift from quality of the product to quality of
the production process. In the 1950’s the concept of *quality assurance* was introduced with a focus on the quality of the organization. These trends in the evolution of quality management depict the proactive attitude, over the years, of companies continuously looking for the tools of a competition.

Nowadays, *Total Quality Management* refers to a management approach of an organization, which is focused on quality, concerned with managing the entire system, and not only subsystems, isolated processes or functional departments. Quality is thus an essential element of the global management strategy of an organization, based on the overall commitment of managers and employees in continuously improving value for their customers, for the organization itself, its members and society as a whole. As the international Standard ISO 8402 (1994) defines quality as ‘*the totality of characteristics of an entity* (product, service, process, activity, system, organization, person…) *that bear on its ability to satisfy stated and implied needs*’.

While considering improvement of maritime safety through better management it’s necessary to talk about the Quality Management System (QMS), which already is one of the management standards adopted by the maritime industry. The QMS became so important that not only shipping companies have implemented it but also the IMO requires in many cases a quality assurance model as mandatory, as it is for example in the case of certification of maritime training and examination centres. Moreover, the idea of the ISM Code is based on ISO 9002 standards and there are a lot of similarities between these two systems, which will be explained in the following chapters.

**2.2. ISO quality standards**

**2.2.1. What does ISO stand for?**

The most popular quality assurance systems are those created by the International Organization for Standardisation (ISO). It is an international federation of national
normalisation organizations from approximately 100 countries. Its name (ISO) derived from the Greek ‘isos’ which means equal. Developed by Technical Committee, the ISO 9000 series standards concern quality management within the framework of contractual relations between a company and its client, and have been internationally implemented since their first publication in 1987.

At present, the standards related to quality management assurance are:

ISO 9001 - a quality assurance model that is basically used by companies that design, produce, inspect, test, install and service items. (For example, a shipyard that not only builds but also designs vessels)

ISO 9002 - a quality assurance model that is basically used by companies that produce, inspect, test, install and service items. (For example, a shipping company)

ISO 9003 - a quality assurance model that is basically used by companies that must inspect and test items. (For example, an importer or distributor.)

In December 2000 the ISO 9001 and ISO 9002 models are going to be replaced by single model ISO 9001:2000. Unlike the existing standards, which focus on procedures, the new ISO 9001:2000 focuses rather on process. This change, together with a new vocabulary replacing the manufacturing terminology used up to date, will make the standard applicable to all sizes and kind of organizations.

2.2.2. ISO 9002 requirements.

There are 18 ISO 9002 general requirements, which are related to:

1. Management responsibility
2. Quality system
3. Contact review
4. Document and data control
5. Purchasing
6. Control of customer supplied product
7. Product identification and tractability
8. Process control
9. Inspection and testing
Management is primarily responsible for preparing a quality policy for the company and ensuring that it is understood, implemented and maintained at all levels - on shore and onboard. The quality policy is the main goal of the company that the management wants to achieve. Establishment of such a policy shall be preceded by an initial audit that will indicate the present situation of the company and the financial burden related to the launching of a new policy. For this reason one of the top managers should be appointed mainly to carry out duties related to implementation and maintenance of the quality and safety system. It should be frequently reviewed to ensure its continuing suitability and effectiveness. The management ought to present its interest and continuous participation in quality assurance, which shall be its main concern.

In accordance with this standard, a company should establish and maintain procedures for contract reviews and for co-ordination of all its activities. First of all it should be assured that the company is able to fulfil the client’s requirements and that those are absolutely clear. Evidence of all arrangements and their changes should be documented.

To enable the continuous control of service quality, the necessary documents and data prescribing all kinds of activities that might be undertaken by the company must be collected. Responsible persons should be provided with the necessary data to perform their duties. These documents might include government and company regulations, quality and safety manuals, operational procedures, planned

---

2 Under ISO 9002 “contract” is understood as each possible order accepted from a client
maintenance, quality plans, checklists and so on. In the case of a shipping company
the procedures might, for example, prescribe:

- a procedure for cleaning of tanks;
- control of computer systems;
- control of non-conformities and corrective actions;
- the special operation on board, for example emergency;
- the loading and unloading of products.

In the process of production/servicing control special attention must be paid to the
evaluation of subcontractors, since the company is responsible for services and goods
provided by subcontractors to the final customer. Then the purchasing documents
must be kept in order and bought product should be evaluated. The next step is to
control service performance and assure that all operations carried out on behalf of the
client are under controlled condition to safeguard the quality of the product supplied
to him. Here the written procedures might be grouped as follows:

- general
- the ship in port
- preparing for the sea
- preparing for arrival in port

All activities undertaken by the company to satisfy its customer should then be
prescribed in quality manuals as presented in the 'Implementation of the ISO 9002
Chart'. These should also include shore based and shipboard contingency plans,
established to describe how to deal with emergency situations related to damage, fire,
pollution, personnel, security and cargo. Procedures establishing and maintaining
contact between the ship and management ashore should fulfil IMO Assembly
Resolution A.648(16): General principles for Ship Reporting Systems and Ship
Reporting Requirements for future guidance. Also emergency drills, apart form the
SOLAS Convention requirements, are necessary.

For the Chart see Appendix A. Steps 3-17 should be included in the quality manuals.
The following step is to scrutinise the work that has been done. Each department manager shall be able to present the results in the aspect of usefulness of those quality manuals and procedures and suggest adjustments if necessary.

Personnel training is required for all staff in relation to the established quality system. In the author’s view the information, and probably the training process, should start as soon as the managers decide to implement QMS. Depending on the company’s size, scope of activity and so on, it might require from one to a couple of years. People will not only have to familiarise themselves, but also get used to the new procedures and manuals. For this reason all employees should be informed of a management plan to implement ISO Standards and they should start training right after the procedures and manuals are ready.

As soon as the system is launched, the implementation progress should begin to be measured and continuously reported to the managers. Statistical techniques are most suitable because figures usually speak for themselves and do not require future explanation. It is the most efficient way to convince company management that QMS, although costly, results in real gains for the company in terms of increased production, the more cargo shipped or more satisfied customers which indeed means increased income, if not at present then in the near future.

Inspection and testing is an ongoing process for a company which has implemented ISO 9002. It starts from the moment that incoming materials are supplied and finishes when goods are being shipped to the contractor, or in the case of a shipping company, until they reach the place of destination stated in the contract of shipping. The inspection relates not only to the servicing process but also to the equipment used while providing this service. To assure that this inspection is being carried out in an appropriate and efficient way, independent internal quality audits should be carried out to verify compliance of the company’s activities with its policy and planned arrangements. The findings should be reported on a regular basis to senior management.
From the above it might be said that, shipping companies can evidence their capability of providing the required service by focusing mainly on four points:

• management commitment and responsibility,
• contract review
• production/servicing process control
• methods of inspection and prevention of quality deficiencies (Chauvel, 1997, Ch.9)

2.2.3. Ten steps of ISO 9002 implementation.

Implementation of ISO 9002 might be prescribed as ten-step program[^1], that is:

1. Initial audit - assessment of the existing company practice in relation to all company operations and identifying deviations for the 18 sections of ISO 9002.

2. Strategic planning – identification of available resources and preparing realistic timetables and goals to be achieved. At this point the quality policy should be drafted as well as responsibilities of the teams, quality manuals and procedures.

3. Quality policy – clarification of management’s attitude towards the system and their commitment to the program.

4. Responsibilities & authority – definition of obligations of each employee in accordance with company policy, to assure the realisation of this policy. This also includes establishment of various links between onshore and onboard teams as well as between each particular member of the team.

5. Quality team – establishment of a group of people concerned only about quality assurance in a company and the actions necessary to obtain certificate of the company’s quality system. It’s important that the head of this group reports directly to top management.

6. Quality manual – rules for applying the quality policy within a company. It basically consists of all documents that were prepared under steps 1-5, and

[^1]: See Appendix A.
should be available in each department onboard as well as ashore. Also all clients should be allowed to have access to this manual.

7. **Quality procedures** – description of all possible actions that are necessary to maintain the quality policy. They should be prepared by the heads of each department onshore and onboard and be used when verifying the quality system.

8. **Measurement & reporting** – observation of progress made by the company in respect to the quality system implementation. It includes identifying discrepancies and their causes as well as taking the necessary corrective actions.

9. **Personnel training** – development of understanding of the quality system among company employees, both onshore and onboard. This is a continuous process and special repetitive training programs have to be established.

10. **Pre-qualification audit** – the final, internal check of the quality system’s implementation. This is considered the culmination of the project, and should give a clear idea of the company’s preparedness for external quality certification. It is the last step before the external audit and certification process can start.

### 2.2.4. ISO 9002 Certification.

‘Certification is a procedure by which a third party gives written assurance that a product, process or service conforms to specified requirements’. (Definition: ISO/IEC Guide 2:1996). Certification is based on the results of tests, surveys, inspections and audits, thus gives confidence to the customer on account of the systematic intervention of a competent third body.

While speaking of certification in accordance to the ISO 9000 Series it must be said that there is no such document as ‘ISO certificate’. The ISO itself, being an international organization, does not carry out inspections and does not approve if users are implementing the ISO standards in conformity with the organization’s requirements. These services are performed by certification bodies under a mandate from a regulatory authority, or as a commercial activity. In some countries, ISO
members carry out conformity assessments, either on behalf of their respective governments, or as a business. That means that all ISO 9000 audits and certifications are carried out independently of ISO by certification bodies under those bodies’ individual responsibilities.

Following this it has to be stressed that it is false to describe a company as ‘ISO-certified’, ‘ISO-registered’, or to use phrases such as ‘ISO certification’, ‘ISO certificates’ and ‘ISO registration’. ISO operates no system for assessing the conformance of organizations’ management systems with standards in the ISO 9000 family. There is no such thing as an ‘ISO certification’, or ‘ISO registration’, whether in relation to ISO 9000, ISO 14000, or any other ISO standard.

In the certification process an independent qualified auditor who represents a certification body authorised by ISO assesses the QMS implemented by the company. Thus, the certificate issued to the company shall be called the ‘Certificate of compliance with ISO 9002’.

ISO registration and certificates are not valid for a lifetime, but are dependent on periodic follow-up audits. Consequently, a company must always maintain its quality system compliant with ISO standards if it wishes to remain registered as being compliant. The ‘Certificate of compliance with ISO 9002’ can be withheld at any time upon complaint of an unsatisfied client to the registrar.

### 2.2.5. Role of a State in ISO standards implementation.

As stated before, implementation and certification within ISO are generally done on a voluntary basis. States’ Administrations usually do not have influence on the implementation of ISO Standards, in the sense that they do not oblige any company to implement such systems. The Administrations’ role in ISO standards implementation is to participate in preparation of the norms and rules of certification.
Since, in the ISO system standards are developed by national delegations of experts from business, government and other relevant organizations, the best way for a State Administration to enable itself in creation of the standards is to become a member of ISO. Usually the national standards institute is appointed to participate in the technical committees, and obliged to present a consensus position based on the views of stakeholders in their country.

Each national standards body manages its own collection of standards and has access to the collections of other institutes. It places this collection at the disposal of the economic players and proposes a range of services. These may include:
- free information tools or services for identifying standards or for announcing new standards: catalogues, newsletters, web servers, etc.;
- chargeable services for access to the normative texts in different forms such as: subscription, hardcopy form, CD.
- notification or subscription services for regular information;
- technical assistance in standards implementation.

2.2.6. **Quality system in accordance to ISO 9002 - an advantage or additional cost for shipping companies.**

The ISO 9002 is still not very common among shipping companies. In 1996 there were 300-400 shipping companies which voluntarily adopted a combination of the IS 9002 Standard and the ISM Code. They paid a $50,000 certification fee in addition to the cost of using their internal resources (Sagen, 2000.b). After 1997 there were more companies concerned about obtaining the certificate of compliance with ISO 9002 but at a much lower cost and nowadays the tendency is changing again to be more similar to what was in the year 1996.

The reasons for implementing both quality and safety management systems are generally the same. Most managers say that they have implemented the ISO 9002 Standards because:
- it makes good business sense, especially from a marketing point of view;
- it gives possibility to gain a certain advantage over competitors who haven't got the certificate;
- it is a competition tool, since the evidence of compliance is becoming increasingly visible and most companies are displaying the fact that they are ISO certified on their building and on their business letterheads;
- it attracts customers, who generally perceive ISO registered firms as being successful, competent and industry leaders.
- It improves quality, and by doing so increases customer satisfaction (ISO web page, 1999).

Although the reasons for implementing ISO 9002 Standards in a company are mostly the same, the results differ. For some companies it is an advantage while for others it is only an additional cost. The outcome depends on management and personnel attitude, as well as on the company’s status in the shipping market. A company with no major financial problems, well managed will gain a dominance over its concurrence and attract customers. If the system is implemented properly the following benefits are usually observed:
- error reduction resulting from better systematic inspection and testing as well as from increased employee participation, involvement, awareness and systematic employee training,
- improved productivity resulting from planning and teamwork,
- reduction in costs associated with failures,
- resolution of non-conformance and adoption of corrective and preventive action in a systematic way,
- improved communications both internally and externally which usually improve quality,
- efficiency, on time delivery and customer / supplier relations.
From the author’s point of view, the ISO 9002 has only a minor influence on safety onboard vessels. The reasons for such an opinion are that first of all this is not the goal of the QMS, and if the safety improvement can be observed it is only as an additional result. Secondly, establishment of the quality management system in accordance with the ISO 9002 does not prove compliance with any established standard in the shipping industry. The certificate only proves that the company is able to provide a customer with a service that has been promised by the management in the company’s policy. Each company establishes its own rules and standards and this means that even if two shipping companies obtained the Certificate of compliance with ISO 9002 the service provided by them can be of a different quality.

To summarise, it must be said that introduction of the QMS in a company does not guarantee safety onboard although it might fulfil the company’s expectations.

2.3. Mandatory implementation of the quality management systems.

As stated previously, implementation of management quality standards is voluntary for shipping companies. Speaking of quality in shipping one cannot forget Maritime Administrations and classification societies (CS) that set up mandatory regulations for those companies. MA and CS are obliged by IMO to implement the QMS at least in relation to some of their activities.

2.3.1. IMO Resolution A. 739(18).

Assembly Resolution 739(18) ‘Guidelines of the authorisation of organizations acting on behalf of the Administration’ created an obligation for Flag State Administrations, as well as for the classification societies acting on their behalf, to introduce a quality assurance system for their activities. In accordance with this Resolution an Administration should establish a system to ensure the adequacy of work performed by the organizations authorised to act on its behalf.
In practice, performance of surveys and certification on behalf of the Administration under the provisions of Reg. I/6 of SOLAS 74, Art. 13 of Load Lines 66, Reg. 4 Annex I and Reg. 10 Annex II of MARPOL 73/78 as well as Art. 6 of the Tonnage’69 Convention is being done on the basis of written agreements between the Flag State (FS) and classification societies (CS). Under such an agreement all responsibilities, procedures of communication between FS and CS and procedures for reporting are included. In many cases, administrations satisfy themselves with QMS introduced by and mandatory for all members of the International Association of classification societies (IACS). Since the IACS quality system did not include certification of all activities ABS as well as LR in 1994 implemented ISO 9001 and attained ISO certificates ABS from Switzerland’s SGS and Lloyds Register from BS/QA.

2.3.2. Regulation I/8 of STCW’95

Under Regulation I/8 of STCW’95 Convention, the implementation of quality management standards is obligatory for Administrations in relation to maritime education, training, and competence assessment, certification, endorsement and revalidation activities whether in respect to STCW’78 or STCW’95 certificates. The Maritime Administration of a State shall ensure that all the above activities carried out by itself or on its behalf, including those conducted on board ship or in training institutions located in other countries, are monitored through quality standard systems.

As per this Regulation, each Party to the Convention must also ensure that its own Administration and training centres engaged in training and certification are covered by QMS. The system should be focussed especially on the administration’s policy, systems of control and internal quality assurance reviews.

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5 For QMS within classification societies see also Chapter 3.6.2.
Parties are free to choose the quality standards they apply as well as the certification body for external audits. They can even establish their own quality systems. Usually Administrations take into account existing and internationally recognised standards like ISO 9000 Series.

The recognition of quality management system implemented by MA is very important in the scope of recognition of certificates and training of a particular State. It can be crucial especially for evaluation of the initial report on implementation of the STCW’95 Convention and subsequent periodic reports on external evaluations by competent persons appointed by the IMO.

2.4. Conclusion

The existence of QMS in shipping and its influence on safety cannot be overemphasised. The most significant meaning has the family of ISO 9000 Series, particularly the ISO 9002, which basic requirements were used to development of other systems like the ISM Code. The Certificate of compliance with ISO 9002 is very important for the external relations of shipping companies, since they're able to improve confidence among customers although, as said before, the certificate itself does not prove compliance with any safety or other international standard.

Maritime Administrations have also recognised QMS as an important tool to increase efficiency and quality control. The IMO has recommended that monitoring of the Recognised Organizations should be through the quality management system. But the major benefit to the shipping industry from having the ISO 9002 Standard is still development of the ISM Code.
CHAPTER 3

THE INTERNATIONAL SAFETY MANAGEMENT CODE

3.1. ISM Code in general

The International Safety Management Code came into existence in 1993 with IMO Assembly Resolutions A.647(16) and A.680(17). The present version was adopted by IMO in November 1993 in Resolution A741(18). In 1994, Chapter IX of the SOLAS Convention was designed to make the ISM Code mandatory. It finally entered into force under tacit acceptance on 1 July 1998.

As with most of the IMO Conventions, the Code was a result of a few maritime disasters like the Exxon Valdez, Herald of Free Enterprise, Scandinavian Star and Estonia. In all cases the investigations proved that the major cause of the accidents was human not technical error. When in March 1989, the Exxon Valdez ran aground on Bligh Reef, the National Transportation Safety Board described the probable cause of it as ‘... the failure of the third mate to properly maneuver the vessel because of fatigue and excessive workload...' and as ‘...the failure of Exxon Shipping Company to provide a fit master and a rested and sufficient crew for the Exxon Valdez...' (ISM Code and Safety Management Systems lecture notes, 1999).

The Code is considered to be ‘one of the most significant pieces of legislation ever enacted by the IMO’ (Capt. Hill, Divisional Director Standard P&I Club, 1998). It is also very unique in its nature. For the first time The Organization addressed its regulations not to the ship itself but to its management onshore and onboard. Also it is not prescriptive but 'defines a framework within which shipowners are required to
develop a safety management system appropriate to their operation, thereby imposing a degree of self-regulation' as Capt. Hill said later.

The ISM Code is mandatory for the type of vessels, for which the SOLAS Convention is applicable. This means that the Code does not apply to fishing vessels. The timetable requires certification of Safety Management System (SMS) onboard:

- passenger ships - not later than 1 July 1998
- oil tankers, chemical tankers, gas carriers, bulk carriers and cargo high-speed craft of 500 gross tonnage and upwards - not later than 1 July 1998.
- other cargo ships and mobile offshore drilling units of 500 gross tonnage and upwards, not later than 1 July 2002.

The objectives of the ISM Code are expressed in its Chapter 1.2. They are ‘to ensure safety at sea, prevention of human injury or loss of life and avoidance of damage to the environment, in particular to the marine environment and to property.’

It might be said that the adoption of the ISM Code was the IMO response to a growing interest in improving quality and safety, especially after the ISO 9000 management quality series were introduced and implemented by some companies. But first of all it was designed as a remedy for the growing number of casualties caused by human error. Thus, the Code established clear links between operations onshore and onboard as well as between all divisions in the company and by integrating ship operations (especially deck and engine).

The shipping industry, including IACS, considers the ISM Code as a vital instrument to improve safety standards onboard and onshore.

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6 For figures on cause of maritime disasters see Figure 1 in Chapter 3.2.2.
7 Studies conducted by the Swedish Club show, that since introduction of the ISM Code (1995/96) until 1998/99, which included phase II vessel implementation, the P&I Claims have dropped by about 29,4%, while hull have claims decreased by about 31,8% (Herniquist, 1999,p.46)
To comply with the requirements of this unique instrument, by the end of year 2002 about 8,000 shipping companies will have to implement and maintain SMS.

3.2. Aspects of the ISM Code

'The ISM Code covers the organization and provisions taken by the company to control safety and to prevent pollution risks' (Chauvel, 1997, Ch.2)

All aspects of the Code can be grouped as follows:

1. Management
2. Personnel (onboard and onshore).
3. Ship and equipment
4. Procedures

3.2.1. Management

In accordance with the Code a company management is responsible for development of the company safety and environmental protection policy (SEPP) and for definition of responsibilities and authority of each person to assure the fulfilment of their policy. Also this group is obligated to prepare, distribute and periodically update a documentary system, which is a tool to assure the effectiveness of the whole system. In many shipping companies it might be sufficient to write down the existing and already used procedures, in some cases it might be necessary to establish new procedures and prescribe them. Generally the idea of the ISM Code can be summarised as ‘write what you do and do what your write’ (Oleszek, 1997).8

The management is also responsible for the establishment of necessary control procedures for periodic review of operation of the system. This should enable undertaking of corrective actions for elimination of identified non-conformities in order to maintain the system at the required level.

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8 Many other authors of publications on implementation of the ISM Code, including Chauvel and Dendura use this sentence, so it's impossible to determine who is its primary author.
3.2.2. Personnel

‘People are the key to the system’ (Duda, 1995, pp. 24-26). The ISM Code focuses on several aspects related to human resources in the company. First of them are the crew qualifications, especially nowadays, when the crew number is minimised and one person has several responsibilities.

The second issue is communication between crew members. Understanding of orders without involuntary omissions is crucial when talking about safety. Based on this, a company must assure that all employees have a working knowledge of the language in which information is being provided. As established by the P&I Clubs human mistakes are mentioned in 96 per cent of marine casualties (including operations onshore as well as inaccuracy in design, construction and operational errors (see Figure.1.)

![Figure 1. Main causes of major claims (Source: UK P&I Club)](image_url)

3.2.3. Ship and equipment

In reference to a ship and its equipment, the ISM Code requires proper maintenance through preparation and use of written manuals which enable seafarers to minimise
the number of operational errors. Also systematic and periodical inspections (internal and external) together with materials that provide information on the operational condition of the ship is required. The Code does not include any technical provisions in this aspect.

3.2.4. Procedures

Procedures are 'means of transmitting the expertise necessary in order to make progress' (Chauvel, 1997, Ch.2). Procedures are general description of the company operations. They should not contain detailed information that is of concern only to a few people in the company. This detailed information should be contained in a group of work instructions, which support the procedures and need only be issued to those concerned, whereas the procedures are of importance to all personnel. Procedures are also used to record data essential for proper functioning of the vessel, which is used to avoid repetition of errors in future.

3.3. ISM Code Requirements

As stated above, to fulfil the requirements of the Code, the Safety Management System (SMS) must be established in the company. In general it should be a part of an individual company’s management structure and address company safety objectives, instructions and procedures to be implemented onboard and ashore. Management is responsible for providing operational practices in a safe working environment as well as for establishing safety measures against all identified risks. The Code defines each of the requirements in separate chapters as presented below.

3.3.1 Safety and environmental-protection policy

The Safety and environmental-protection policy is the management commitment towards achieving company’s objectives in terms of safety and environmental protection. In accordance with the ISM Code the policy should be drafted by
describing how the company’s objectives will be realised. These objectives must be realistic and measurable and for this purpose must not extend beyond one year. The SEPP, signed by the top manager, must be displayed and become the governing principle of all activities and functions performed by the company.

3.3.2. Company responsibility and authority

The company responsibility and authority must be defined and documented. By doing so it can be assured that all policy goals will be achieved. Each person must be responsible for performing specific tasks, and also have the authority to do so. As someone once has said “Responsibility without authority is like a nail without a hammer” and this principle must always be remembered.

3.3.3. Designated person(s)

Designated person(s) must be appointed to guarantee the application of the company’s safety and environmental protection policy. As per the ISM Code, there can be one or more designated persons, who have direct access to the top management. It’s a good idea towards a reduction of misunderstanding and establishing closer links between onshore and onboard operations, but it seems not to be very practicable. It is not only the author’s opinion, that only one person for a ship shall be appointed to enable contact between onshore management and the crew on board. This is important to eliminate questions like who should be informed first and whose responsibility will it be to report to the management a particular problem that might arise onboard.

Another person, to whom all problems will be reported from vessels, needs to be appointed onshore. This person is to assure appropriate communication between the vessel’s crew and managers, thus he/she should be adequately qualified and

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9 This opinion has been expressed also by the masters during several meeting is the Maritime Administrations. They also said that designated person is a solution for the crew onboard to get what they really need from the shipowner, thus this person should be free from manager's and financial division influences.
experienced in the safety and pollution control aspects as well as have both independence and authority to report deficiencies observed to the highest level of management.

3.3.4. Master’s responsibility and authority

Special attention in the Code is paid to a master’s responsibility and authority. It is recommended that a master shall have a precise written definition of his responsibilities and authority in respect to implementation of the company’s policy onboard. He should be able to give appropriate orders and instructions, verify that the crew respects them and finally review the SMS onboard his ship and indicate the results to onshore managers.

3.3.5. Resources and personnel

Resources and personnel are another very important issue closely linked to the observation of all other IMO conventions and requirements. To be capable of performing their tasks the crew must demonstrate the necessary qualifications, adequate for each position. It is crucial that members of a team working on one ship can rely on each other. This is necessary in order to minimise already very high level of stress that the crew members are exposed to 24 hours a day and to ensure the minimum rest time.

While the STCW’95 established basic requirements for training, a company should provide additional exercises that fit it’s particular needs, like familiarisation training, and issue written procedures, with which crew members should be familiar before sailing.

Training is also necessary for onshore employees, especially when the post is an integral part of the SMS of the company. The ISM Code also aims at strengthening links between onboard and onshore personnel, which is often the weak link in the system. In case of many maritime accidents involving tankers marine pollution
could have been prevented or at least minimised to a large extent if only the management had made the right and timely decisions.

3.3.6. Plans for shipboard operations

Plans for shipboard operations should be developed in such a way that they answer the following questions (Dendura, 1996b):

\[ \text{what?, who?, when?, where?, how?, why?} \]

They should prescribe main the operations onboard related to safety of the vessel and pollution prevention, for example, an emergency plan, a training plan, a loading plan and so on. A plan usually consists of instructions that describe in detail what particular person or workstation must do to ensure maintenance of the effective operation of the system.

3.3.7. Emergency preparedness

Emergency preparedness is based on risk identification. The code requires safeguards to be established against all identified risks (para.1.2.2.2. ISM Code) so that the company can respond at any time to hazardous accidents and emergency situations involving the ship (para.1.4.5). Emergency preparedness is the result of the correct implementation of the ISM Code. It might be said that the SMS is first of all the risk management system thus the 'company shall identify risks and establish barriers, escalating factors and means of their control' (Trbojevic, 1999). Implementation of written emergency procedures must be done through extensive training and emergency drills onboard.

3.3.8. Reports on non-conformities, accidents and hazardous occurrences

Reports on non-conformities, accidents and hazardous occurrences should be prepared by the shipmaster and sent to onshore management. This requirement is

\[ ^{10} \text{A plan is the document that sets out the operational methods, the resources and the sequence of activities.} \]
very important and useful in theory but very difficult in practice. Usually, people don’t want to talk about their own, or their crew’s, mistakes. Such reports are often understood as self-blaming and proving insufficient professional qualifications. In accordance with the ISM Code, the objective of these reports is not to identify who made a mistake but to understand why the implemented system didn’t work, and why a failure occurred.

3.3.9. Maintenance of the ship and its equipment

Maintenance of a ship and its equipment is also curtailed when speaking of SMS. As someone once said ‘a good worker without good tools cannot do a good job’. To fulfil the requirements of the ISM Code, an internal program of onboard maintenance must be established. It should consist of four steps, which are: plan, do, check and act (see Figure 2). External classification and port State controls (PSC) will never be sufficient to assure good technical and safe conditions of a ship, and they are not designed for that. It is the shipping company and its staff who must take care of the equipment they use.

![Figure 2. Internal programme for preventive maintenance of ship and its equipment. Source: ISM Code & Quality Management Lecture notes, 1999, WMU.](image)

3.3.10. Documentation

The documentation of duties related to ship operations is required by the Code. Almost everything should be in writing: the policy, plans, procedures, instructions
and checklists. This is like a revolution in shipping, since this industry for centuries has had an oral tradition. People usually don’t like written procedures, but in reality they are very helpful for training and understanding one’s duties.

### 3.3.11. Company verification, review and evaluation

Company verification, review and evaluation mean internal systematic reviews at all management levels as well as external audits. It must be clear for personnel that an internal audit is not designed to control employees but to control the operation of the safety management system. The audit shouldn’t be a surprise for the audited sector and it would be better if the personnel is informed of its purpose. Employees should never be afraid of showing non-conformities or hazardous occurrences. If they do so, the company will never be able to verify the efficiency of SMS and more over will not be able to undertake corrective actions.

### 3.4. Implementation of the ISM Code in 10 steps

There is no doubt that implementation of the ISM Code in a company is a long process. It is for the company’s benefit to understand the purpose and principles of the Code before undertaking any actions. The whole process consists of ten steps which are as follows:

1. **Initial assessment** – evaluation of existing practices in a company in reference to the ISM Code and the definition of discovered deviations. This relates to all operational procedures onshore and onboard all operated ships and requires the participation of each company manager.

2. **Strategic planning** – preparation of action plans for ISM Code implementation onshore and onboard, based on findings of an initial assessment. At this point the timetable should also be prepared, identifying the resources needed for achieving

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11 See also Appendix B - Chart of the ISM Code implementation
this goal. This is also the latest stage where management seminars on understanding the Code should be conducted.

3. **Safety and environmental protection policy** – legitimisation of the prepared plan. The policy must be clear and be understood by each employee. This also requires an explanation of SEPP and the necessary training of personnel. It’s the author’s view that all employees should be informed that the Code is intended to be implemented as soon as the decision is made by the company management and that this should be an ongoing process including training at later stages. By doing so, management will express its trust to their personnel as well as avoid misunderstandings. An example being personnel’s questions regarding the collection of strange data from employees by the management or possible employment reduction.

4. **Responsibilities and authority** – definition of the role of each staff member in implementation and maintenance of the policy. It’s very important that everyone knows his exact place in the whole system, his own duties and responsibilities. At this stage operational links between departments must be clarified, especially between onshore and onboard staff. For this reason also the designated person must be appointed as presented in Chapter 3.3.3.

5. **Project team** – appointment of company employees responsible for carrying on the project’s permanent monitoring and implementation. This group of people should consist of personnel, who already have management responsibilities and one of the managers should be appointed as project manager. Short-term goals should be established and obtaining the SMS certification should be the first one.

6. **Company procedures** – description and clarification of all company activities that contribute to the safety and environmental protection policy. In relation to onshore operations, the existing documentation system must be listed and existing procedures analysed in terms of conformity to the ISM Code. The
documentary systems should be adjusted to the requirements of the Code as well as omitted procedures should be established. This step includes writing of quality manuals and also working instructions which should be contained in a short document reflecting established company quality policy in relation to particular tasks performed by particular divisions or employees.

7. *Shipboard procedures* – description of all necessary actions to be undertaken on board ship to implement the policy. This step is similar to the establishment of onshore procedures, keeping in mind that the company has only one policy, which is the same for onshore and onboard activities. Shipboard procedures include drafting of instructions by the master and officers for all crewmembers on each ship. Instructions are important as an aid to procedures, especially for a multilingual crew. Together they constitute manuals as presented below.

![Figure 3. Structure of the Safety Management System.](image)

The ISM Code para.6.3 to 12.12 requires procedures to “be established for training, information, onboard operations, emergency situations, notification and analysis on non-conformities, accidents and hazardous occurrences, maintenance of the ship and its equipment, identification of equipment, documents and internal audits”.

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12 A procedure is a description of a specific activity and definition of responsibilities and methods to attain an expected result, while an instruction is more detailed and describes a particular task to be accomplished inside a system in order for a specific requirement to be met (“Chauvel, 1997, Ch.3).
8. **Measurement and reporting** – review of the progress made by a company up to this point. It might take several months before this stage can be achieved but it is necessary to inform the top manager of the progress made and of future necessary actions. From that time it ought to be an ongoing process, with regular management and project team meetings.

9. **Personnel training** – development and improvement of personnel skills. Training should be based on already drafted procedures for each group of employees. The creation of a training cycle for all those, who are responsible for implementation and maintenance of the new system should mainly be aimed at familiarisation with the ISM Code, drafting procedures, internal audits, problem solving and so on.

10. **Final assessment and certification** – prove that the company has achieved its goal and has successfully implemented the new SMS. The last necessary adjustments can be made at this stage and an initial certification started. Although obtaining Safety Management Certificates (SMC) for all operated ships might seem as an achievement of the final goal it should be remembered that this is only a point of passage. The real goal of the company is to improve safety on board and by doing so reduce the unnecessary cost of a ship’s maintenance caused by crew negligence.

### 3.5. Certification

The certification process, under the ISM Code, is one of the Administration’s major responsibilities. From all of the Flag States, around 40 have delegated all ISM certification to classification societies and a similar number of States have given limited authorisations to the societies act on their behalf in this respect.

In accordance with Reg. 4, Chapter IX SOLAS, for each ship two certificates must be issued: a Document of Compliance (DOC) for onshore operations and a Safety Management Certificate (SMC). Both documents are interrelated and an SMC can
be issued only if a Company has a DOC. They can be issued either by the Administration itself, by an Organization Recognised by the Administration (RO) or by the Government of another country acting on the request of the Flag State. In this case copies of all DOCs and SMCs should also be sent to the Administration on behalf of which they have been issued.

Although the issuance of DOCs and SMCs is very important for a company and, sometimes it is considered as a prize for efforts and working hours dedicated to the implementation of the SMS, it is very important to keep in mind that this is not an end but one of the steps in implementing a safety management system in a company. A new working culture must be implemented and the SMC proves only that a company is on the right track, that it is able to describe activities undertaken by its personnel and that employees are able to do what has been written. Besides, both the DOC and the SMC are valid only for 5 years and can be withdrawn at any time if non-compliance with the International Safety Management Code is observed.

The Safety Management Certification process consists of three stages, which are:
- initial certification,
- maintenance of certification,
- re-certification.

3.5.1. Initial certification
An audit for initial certification is carried out only upon a company’s request to the appropriate body (which is either the Administration or the classification society, depending on the State’s decision).

The procedure starts onshore, providing that a SMS system has been operating at least three months. In accordance with Resolution A.788 (19) the nominated lead auditor should prepare, with management assistance, an audit plan and present it to the company’s management.
The next step of the audit is to scrutinise the documentary system onshore and if it complies with the ISM Code requirements the auditors proceed to the next stage, which is to check if observed procedures in the company correspond to the written procedures and instructions. The DOC can be issued if the audit witnesses a match between company policy, its written procedures and the situation observed.

The initial audit of the system on board all operated ships concerned should start as soon as the onshore company has been audited. In the beginning, documents are checked. A ship has to have a valid classification certificate, proving that it conforms to Resolution A.739(18) and the statutory certificates required by the Flag State, the statutory inspection and classification files including the observations and comments of the inspectors as well as the DOC issued to the onshore company. If all of the above are available on board and in order, this audit is concerned as a continuation of the onshore evaluation. Often to facilitate the process, audits in the company and onboard begin at the same time, which is not exactly in accordance to the ISM Code, but can be accepted provided that an SMC is not issued before the DOC.

If deviations are observed, corrective actions must be undertaken by the company. If the initial check onboard is successful the auditors proceed to the next step, which is verification of the implemented SMS onboard; how it corresponds to what has been written in the onboard plans and procedures. Finally the SMC can be issued.

3.5.2. Maintenance of the Safety Management System

The above presented activities of a company and MA have one goal – to establish a sound SMS that will fulfil requirements of the ISM Code and improve safety onboard. The certificates obtained are not going to bring any benefits to a company. It even can be said that the certificates are for the MA and PSC while the procedures are for a company. For this reason the ISM Code requires continuous internal audit,
and liquidation of observed deviations in due course, as well as external audits by the certification body.

3.5.2.1. Internal audit

An internal audit must be performed by groups of internal auditors, consisting of personnel that did not implement an SMS in that audited area. The goal of permanent internal auditing is to assess the effectiveness of the SMS, whether ashore or on board, and to continuously monitor to ensure that it meets the required standards.

The conclusions drawn after each audit are input into the SMS for corrective actions. They should be presented in a form of Shipboard/Ashore Internal Audit Reports.

3.5.2.2. External Audits

IMO recommends that external audits of DOCs be done annually, while SMC’s be audited by external auditors between the second and third year after issuance of the certificate. Since this is only the minimum obligation, the FS is empowered to change the frequency of audits, especially during the first year of compliance.

Even after the DOC and SMC are issued, a company has the right and even more, is obliged to make changes and undertake corrective actions. The purpose of an intermediate audit is to verify that the SMS still corresponds to the requirements of the ISM Code. If modifications made in due course do not meet the Code requirements, the company has three months to undertake corrective actions. This is crucial because the DOC can only be revalidated if an audit confirms that the procedures match the situation observed.

Validation of a Document of Compliance is done on an annual basis by the FS Administration or a recognised organization upon a company’s request, sent at least one month in advance. Maintenance of the DOC is significant also for the SMC, since loss of validity means also loss of validity for the SMC on all certified vessels.
**3.5.2.3. Re-certification**

The Safety Management System onshore and onboard must be re-certified every five years. The process is in general the same as during the initial certification, except for documentation control. It relates to onshore operations (for renewal of DOC) and to onboard operations (for renewal of SMC).

![Diagram of ISM Code Certification Scheme](image)

Figure 4. ISM Code Certification Scheme.
Source: Bureau Veritas – ISM Code Certification Scheme, 1996.

**3.6. Administrations’ responsibilities for implementing the ISM Code.**

Chapter IX of SOLAS’74, and the ISM Code, clearly define the role and responsibility of the Flag State Administration or recognised organization as well as the company itself in relation to Code implementation.

The Administration is defined in the ISM Code as *the Government of the state whose flag the ship is entitled to fly* (para.1.13 ISM Code). It has the major
responsibility to ensure that each company will develop and implement a documented SMS. The most important part of this responsibility is certification of the system, which is performed by the Flag States as presented in Chapter 3.5.

3.6.1. Legislative duties

The ISM Code is a special piece of IMO regulation because it cannot be implemented separately, without the implementation of other international maritime safety and environment protection conventions. Para.1.2.3. of the ISM Code requires that the SMS ensure compliance with all mandatory rules and regulations.

The IMO conventions are not mandatory for a particular shipowner until they enter into force by being ratified and properly implemented by the Flag State. This means that to implement the ISM Code, the State should be first of all a party to and enforce Conventions such SOLAS, MARPOL, STCW and LOAD LINES, naming only a few.

The implementation of the SMS should ensure not only compliance with IMO conventions but also with applicable codes and guidelines, as recommended by the IMO, FS, CS and the maritime industry. This is not only a task for the company that implements an SMS, but also a tremendous task for the Administration itself. Because international conventions define only the minimum requirements necessary for safe operation of a ship, Administrations have the right and are encouraged to implement other, more detailed norms.

The ISM Code para.1.2.3, mentioned above, does not make related conventions and IMO standards mandatory, since the Organization does not have the enforcement power and it is only the States themselves, who can make any rules mandatory and binding. On the other hand, under the United Nations Convention on the Law of the Sea (UNCLOS) Art. 94.3, every State Party to the Convention is obliged to take such measures for ships flying its flag as are necessary to ensure safety at sea with regard *inter alia* to the construction, equipment and seaworthiness of ships, their manning,
labour conditions and the training of crew, the use of signals, the maintenance of communications and the prevention of collisions. The above Article also includes an obligation for Flag States to conform to generally accepted international regulations, procedures and practices and take any steps that may be necessary to secure their observance.

Saying this, it must also be remembered that shipping companies might choose to apply IMO standards, even though a particular Flag State (FS) has not made them mandatory. Some shipowners, even if not required by the flag Administration choose to comply with mandatory IMO requirements because they operate in the international market and are aware of port State controls and the possibility of detention if they fail to comply. The reason can also be that they want to operate their fleet safely and efficiently.

In relation to the ISM Code the legislative duties of a Flag State also include definition in domestic law of the scope of application and entry into force of the Code. Dates of entry provided within the Code are the deadlines and a FS might require faster implementation. As well, it can widen the scope of its application to non-conventional vessels flying its flag.

Also, provisions as to the verification and certification of the SMS in shipping companies must be provided. This should clarify which entity and how will conduct verification of the SMS established by the company as well as which entities are responsible for issuance of certificates.

In reference to particular provisions of the Code, Administrations should give careful consideration to the possible need for nationally developed explanatory notes. Furthermore, even if the Flag State decides to delegate this issue to one or more classification societies, it should still develop its own guidelines to companies on the following:
- application for certification (directly to the classification society or through the Maritime Administration);
- documentation needed when applying for certification;
- organization and conduct of audits;
- structures of co-operation between the Administration and shipping companies.

Since the Administration is responsible for performance of verification and certification of the SMSs it should also develop common and transparent requirements for the qualifications of auditors. Correspondingly, general standards for recognition of an organization to act on behalf of the Administration ought to be established in advance. These should be based on IMO recommendations.

3.6.2. IMO requirements for the organization performing ISM Code certification

To ensure that ISM Code certification is conducted in the most efficient and appropriate way, the IMO adopted Resolution A.788(19): ‘Guidelines on implementation of the International Safety Management (ISM) Code by Administration’. This Resolution provides that the organization performing the ISM Code certification is responsible for ensuring that the certification process is conducted according to the Code and the above Guidelines. Appendix 1 to the Resolution specifies standards, that the organizations, performing the ISM Code certification must meet.

First of all, the organization shall have adequate authority from the FS for inspection to ensure the compliance with rules and regulations that are mandatory for a ship and its crew. As well, it should be able to conduct approvals, surveys and certification in relation to maritime certificates. It is also necessary that the organization has practical experience of ship operation, not to mention that it must comply with Appendix 1 Resolution A.739(18): ‘Guidelines for the authorisation of organizations actin on behalf of the administrations’.

Appendix 1 also sets up minimum qualification requirements for auditors, like a practical knowledge of ISM Code certification, a minimum standard of education and minimum experience. For example 5 years of experience on areas relevant to the
technical or operational aspects of safety management for personnel in charge of initial or renewal verification are required.

Besides, the organization should have documented systems to ensure that:
- its employees have the necessary qualifications to perform their job and that they systematically update their knowledge,
- the certification process is performed in accordance with this standards.

It is the author’s view, that at present, in many cases only reputable classification societies are able to fulfil the above requirements and conduct ISM Code audits in appropriate way. There are several reasons for such an opinion. First of all these classification societies have a working knowledge of all international applicable instruments. Secondly it is required by the IMO standards that a CS acting on behalf of the Administrations must itself have quality assurance systems. Thus, auditors also have a practical knowledge of QMS, which makes the assessment of an SMS easier. The Administrations that many years ago delegated their responsibilities to CSs might not actually have the necessary qualified personnel to conduct audits and monitor SMS onboard. These reputable societies that are Members of IACS are:

Full Members

- AMERICAN BUREAU OF SHIPPING (ABS)
- BUREAU VERITAS (BV)
- CHINA CLASSIFICATION SOCIETY (CCS)
- DET NORSKE VERITAS (DNV)
- GERMANISCHER LLOYD (GL)
- KOREAN REGISTER OF SHIPPING (KR)
- LLOYDS REGISTER OF SHIPPING (LR)
- NIPPON KAIJI KYOKAI (NK)
- REGISTRO ITALIANO NAVELE (RINA)
- RUSSIAN MARITIME REGISTER OF SHIPPING (RS)

Associate Members

- HRVATSKI REGISTAR BRODOVA - CROATIAN REGISTER OF SHIPPING (CRS)
All of the IACS members have the status of authorised organization in respect to Resolution A.739(18) and are authorised by many FS to conduct ISM Code certification on their behalf, including the issuance of certificates.

To ensure that all of the above societies have the same standards and that the certificates issued by them can be mutually recognised, IACS introduced the Quality System Certification Scheme (QSCS) in 1991. Based on the requirements of ISO 9001, QSCS sets and monitors rigorous standards to create and maintain the uniformity and consistency of internal operations of all IACS members. Ongoing compliance with the QSCS requirements is mandatory for all IACS members. All members must have valid QSCS Certificate of Conformity and are subject to satisfactory intermediate audits and a renewal audit at the end of each three-year period. IMO has recognised the QSCS scheme as an important contribution to safety and is involved in the audit process as an observer.

3.7. ISM Code – does it meet the expectations?

When the ISM Code was introduced many expectations were born. First of all the industry hoped that it would eliminate the substandard operators and create a new ‘safety culture’. This scenario did not come happen. Adoption of the Code, as many other international standards, has and will continue to have a gradual effect over many years. The shipping industry is very unique and complex, yet it faces structural problems with regard to the drafting, implementation and enforcement of regulations. As a consequence the ISM Code 'suffers', because it is based on implementation of all other IMO conventions and lack or improper implementation of one of the conventions results in feeble implementation of the ISM Code.

13 While this dissertation is being written, PRS has been temporarily excluded from IACS membership, due to the ongoing investigation of the sinking of m/s Leader L.
After two years experience of practical exacting compliance, several inherent weaknesses of the ISM Code have been discovered. The first of them comes from the Code’s origin which is the ISO 9002. As in the company certification for compliance with the ISO 9002 Standard, the external auditor of the ISM Code is not authorised to verify procedures prepared by the company. The ISM audit confirms only the observance of these procedures onboard and onshore but does not approve their safety and adequacy for specific purposes.

Another deficiency of the ISM Code is its terminology. Many terms, like ‘resources and personnel’ or ‘company’s authority’, were transferred from the ISO vocabulary, which was prepared mostly for companies designing or producing goods. Regardless of its unsuitability for a servicing company, this terminology is new to the shipping industry and creates many difficulties during seafarers’ familiarisation with training instructions. Since the ISO is changing its Standards by the end of the year 2000 to make them more suitable for all kinds of industry it might be worth thinking about changes to the ISM Code terminology while amending it due to more serious insufficiencies.

In the author’s view, the ISM Code is still too remote from other IMO conventions and requirements. Although it should encourage implementation of other mandatory instruments the verification is very often done separately for the Code and for other safety requirements. Regardless of the ISM Code’s main objective, that is establishment of safeguards against all identified risks, the IMO Maritime Safety Committee has decided that a Formal Risk Assessment is ‘outside the scope of the ISM Code’.

Moreover, the Code has been created, inter alia, to reduce human errors or omissions which are the main cause of marine casualties. The SMS procedures, although very helpful, tend also to create problems. This is additional paperwork for the crew and extra stress originated by additional inspections (internal and external audits as well as PSC). To attain full success of the Code the industry must also reduce paperwork
created by the ISM Code to a necessary minimum as well as minimise the number of inspections. With the introduction of the ISM Code the number of existing statutory surveys and inspections should decrease since the Code integrates all requirements for vessels and their crew. Unfortunately this did not happen and one of the reasons might also be lack of confidence within the industry in the Code and in the quality of inspections.

Above all, the introduction of the ISM Code is one of IMO great successes. The first phase of implementation, with the July 1 1998 deadline, applied to all passenger ships, oil and chemical tankers, bulk carriers, gas carriers and high-speed cargo ships over 500 gross tonnage, and the companies that operate them. This affected approximately 13,000 ships and 7,000 companies. From all of these about 87% had their DOC and SMC on time (Norwegian Shipowners Association, 1998). None of the IMO previous, mandatory obligations have reached that level of compliance. Yet phase 2, with a deadline of July 1 2002, will affect another 20,000 ships.

However, looking back at the statistics, more then 50% of all SMC’s were issued during the last 6 months before the deadline (Einarsrud, 1999, pp. 9-13). The meaning of these certificates could be questioned. Do they really prove that the company as a whole have implemented the system or might it be that they are just worthless papers to avoid detention by a port State control (PSC) officer? The statistics do not give a comprehensive answer to this question.

In the period from July to September 1998, under the Paris and Tokyo Memoranda of Understanding (MoU) on PSC, intensive inspection campaigns on ISM Code compliance on more than 3,300 ships to which the ISM Code applied was conducted. The detention ratio due to ISM Code non-conformities was 5.1% under the Paris MOU and 3.6% under the Tokyo MOU. (Einarsrud, 1999, pp. 9-13). Apart from certificates and particulars not being in order or on board the following non-conformities were the most frequent:

- senior officers not being able to identify the designated persons,
- no routine maintenance records being available,
- programs for drills and exercises to prepare for emergency actions not being available.

From the above data, it can be seen that the Code was implemented under time pressure. Although efforts made by shipping companies could be sufficient to gain certification, many have doubts that it was sufficient to actually improve safety and working practices on board ships or management systems ashore, that it had changed the company’s culture.

The PSC inspections do not indicate other existing problems, mainly due to limited authority of the inspectors, as presented before. The ‘grey area’ is related to the ISM Code expectations from company management, especially regarding definition of authority and levels of communications. This is the basic foundation of QMS, however managers very often deliberately leave it not clarified. In case of an accident if the responsibility can be traced to the crew the company will be entitled to obtain insurance coverage. This may not be the case if it is proved that the manager himself was liable.

As Arne Sagner summarised in July, 2000 the ISM Code has led to a three-way effect throughout industry. The top 20 per cent of the shipping companies demonstrate operational benefits from implementation, the bottom 20 per cent are the ‘rule benders’ who don’t want any new code and don’t implement it regardless of the consequences and the middle 60 per cent manage to obtain the certificates and for them the improvement of safety culture has finished at that stage.

The managers of shipping companies are not consistent in their opinions about the ISM Code. Mr. du Moulin, chief executive of Marine Transport Lines of New Jersey, said in the Shipping Times in March 1998 that, though the cost of compliance was high, his company will recover it in the long run because of lower insurance premiums and damage losses. He said ‘It took the company two years to implement the ISM system and an additional 12 months to get all 22 ships with their safety
certificates on board. Excluding people's time, this cost Marine Transport Lines approximately US$750,000'. He estimated additional running costs of about US$200,000 a year plus two full-time salaries. However, the company's P&I insurance has dropped by about US$200,000 per year, and hull insurance also by US$200,000, Mr. du Moulin said also that 'the number of incidents has dropped from 58 to 20 over a three-year period'. Others, less successful, do not want to talk about it or only complain about the cost and paperwork.

The studies carried out by some of the CSs have confirmed that a growing number of shipowners is now discovering the benefits of the ISM Code, especially regarding the emergency preparedness which has been improved through better hazard identification and better structures of emergency plans. The negative effects reported are the high costs of implementation and too extensive paperwork.

Likewise, in the case of other international conventions the effect of the ISM Code on the shipping industry varies between different regions and companies. At the company level the differences are caused by the manager’s approach towards SMS. If management understands the principles of the Code, if it considers it as a tool to decrease human error and increase safety through better management system, it is more likely that the Code will have a positive impact.

At the international or regional level deviations result from different ways of implementation of the ISM Code by Flag States. Each FS can appoint its own audit body and, consequently, the scope of wide variations in the interpretation and standards of audits is observed. Besides there can be regional differences that are taken into consideration by individual States when developing their domestic law. For Poland, the European Union establishes such regional requirements and for this reason the EU approach toward quality and safety management needs to be scrutinised before speaking of the Polish domestic system.
CHAPTER 4

QUALITY AND SAFETY MANAGEMENT IN THE EUROPEAN UNION

As presented in Chapter 2, quality management systems are implemented on a voluntary basis, with significant influence of the national standardisation bodies who are ISO members. The overall system of standardisation and certification bodies in each country also has influence on standards used by classification societies, which first of all must comply with domestic requirements before they can comply with international standards established for them by the IMO or the IACS.

Speaking of the EU quality and safety management requirements for the shipping industry, it is necessary to present the specific overall picture and the role of many different bodies which are involved in improving QMS in the EU.

4.1. Quality management systems in the European Quality House

Since the creation of the Internal Market, the quality of its products has been one of the major concerns of the EU, both in order to ensure the free circulation of goods and to increase and strengthen the competitiveness of the European economy.

Figure 5. Structure of the European Quality House.
(Source: The European Quality Landscape/Introduction 3.)
The so-called 'European Quality House' is a structure composed of different public and private entities both at the European and national level. It is composed, firstly, of the institutional ‘pillars’ of: Standardisation, Testing & Certification, Metrology and Accreditation, and secondly of the managerial pillar of Quality Management.

4.1.1. Standardisation

In the European Commission the Directorate General (DG) III/B is responsible for standardisation. The main tasks of this unit are:

- general aspects of standardisation,
- relationships with the standardising bodies;
- relationships with Member States in relation to this file;
- promotion of public awareness;
- specific actions and projects;
- integration of standards into Community policies and actions;
- facilitation of the standardisation requirements of the different sectors;
- services to the Commission and to use the available instruments in order to promote their implementation.

The European Standardisation Bodies that prepare European Standards EN and ETS are The European Committee for Standardisation (CEN), The European Committee for Electrotechnical Standardisation (CENELEC) and The European Telecommunications Standards Institute (ETSI). Under the ‘New Approach’, harmonisation directives above standard bodies are responsible for preparation of technical specifications governing the essential requirements set out in the Directives.14

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14 The ‘New Approach’, represents an innovative way of technical harmonization. It introduces, among other things, a clear separation of responsibilities between the EC legislator and the European standards bodies CEN, CENELEC and ETSI in the legal framework allowing for the free movement of goods. EC directives define the "essential requirements", e.g., protection of health and safety, that goods or services must meet when they are placed on the market. The European standards bodies have the task of drawing up the corresponding technical specifications meeting the essential requirements of the directives, compliance with which will provide a presumption of conformity with the essential requirements. Such specifications are referred to as "harmonized standards".
4.1.2. Quality Management

This ‘pillar’ is under the responsibility of DG III/B. The EU is basing the QMS on the international standards EN ISO 9000 and EN ISO 14000. There is no difference between the ISO 9000 and EN ISO 9000 standards except their name. They are referred to in Council Decision 93/465/EEC as harmonised standards for the purpose of the conformity assessment modules based on quality assurance systems.

The EN ISO 14000 family of standards addresses various aspects of environmental management. An environmental management system represents a structured approach to environmental objectives and targets and by adopting them a company presents itself as ‘environmental friendly’. This management system becomes also more popular among reputable shipowners.

The EN 45000 series of standards and their corresponding ISO/IEC Guidelines lay down general criteria for the operation of testing and calibration laboratories, certification bodies for products, quality systems and personnel, inspection bodies and accreditation bodies with the aim of ensuring confidence and reliability in the activities of these bodies. The EN 45000 standards are referred to in Council Decision 93/465/EEC as the ‘Harmonised Standards’, which can be used for demonstrating the technical competence of Notified Bodies.

The Directorate General III/B is also responsible for relations with relevant European and international standards organizations.

4.1.3. Metrology

Metrology is the discipline that covers all the operations required to determine the value of a quantity. It is generally divided into three main areas: legal, scientific and industrial metrology. Co-operation and technical assistance in the field of metrology must anticipate an increase in the capacity to guarantee the quality of measuring instruments at national level, which would increase confidence in the results of tests carried out.
Legal metrology involves ensuring the accuracy of measurements which affect the transparency of commercial transactions, health and safety. This aspect is regulated by New Approach Directives: 90/384/EEC (Non automatic weighing instruments) 80/181/EEC (Units of measure).

Scientific metrology relates to the organization and development of measurement standards and means of maintaining them while industrial metrology makes it possible to ensure the proper functioning of measuring instruments used in industry and manufacturing and testing processes.

4.1.4. Testing & Certification

“Testing involves determining one or more characteristics of a product according to a defined method. Certification involves giving assurance that a product, service or process conforms to specified requirements” (Lagaris, 1998). It covers products, quality systems and personnel.

The bodies that carry out testing, certification and inspection, called ‘Notified Bodies’, are important elements in the quality infrastructure of the European Union. They provide confidence in the conformity of products and services as well as offer a tool for the industry with regard to the design, conception and manufacturing of goods and services.

4.1.5. Accreditation

Accreditation entails laboratories, certification and inspection bodies being assessed and audited at regular intervals by a third party (accreditation body) as to their technical competence against published technical criteria (e.g. the EN 45000 series of standards).

As a third party assessment, technique accreditation is therefore an important instrument for the generation of confidence in these bodies. Therefore the Council
has given accreditation a privileged status determining the competence of Notified Bodies under the New Approach directive.

Within the European Union it is the DG III/B, that is responsible for Accreditation. It conducts its duties in co-operation with relevant organizations like The European Co-operation for Accreditation (EA), The International Laboratories Accreditation Co-operation (ILAC), and The International Accreditation Forum (IAF).

4.1.6. European Quality Policy

The European Quality Policy (EQP) is a framework policy designed to bring greater awareness of the benefits of quality for society as a whole. Based on the five ‘pillars’ it generally aims at increased competitiveness.

The Policy was designed to ‘develop a favourable environment in which companies and public administrations in Europe aim to achieve excellence in terms of their outputs and internal organization for the benefit of society as a whole’ (Silvamendes, 1999, p. 2).

In a more specific manner, this Policy is intended to develop a European quality image and culture by reinforcing or developing instruments and resources (both technical and human) to create awareness of and to promote quality in partnership with the industry and other parties in a horizontal approach. Many European entities involved in this program undertake different initiatives such as the European Quality Award, which was created in 1992 by industry itself with support from the Commission. Another example is the European Quality Week, which was initiated in 1995 and is managed by the European Organization for Quality. This is a one-week campaign of public awareness, promotion and demonstration of the advantages and the importance of quality for the competitiveness of the European economy.
4.2. Quality and safety in shipping

4.2.1. Maritime Safety and Quality Policy

The EU Member States, being also IMO Members with long maritime traditions, have always worked for increased safety at sea. Since the creation of the European Union its institutions, like the Parliament and European Commission, have undertaken many initiatives in this respect. The Commission itself has observer status at all meetings conducted by IMO, where - with the support of 15 Member States - it participates in the drafting of new measures on shipping safety and prevention of marine pollution. In Europe, the Commission contributes to 'safer ships and cleaner oceans' by providing the uniform interpretation and enforcement of international regulations onboard all vessels sailing in EU waters.

One of the first Commission initiatives was in the 1976 'Communication on the Scope and Content of a Maritime Transport Policy'. Two years later the Council adopted Recommendation 79/114/EEC urging Member States to ratify the existing conventions in the field of maritime safety and environmental protection (precisely SOLAS 73, Marpol’78 and ILO C 147) and Recommendation 79/114/EEC on the ratification or accession to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW’78). Later the Commission undertook many proposals of common shipping policy as well as adopting several directives, recommendations and regulations.

In 1993 the Commission announced its policy on Safe Seas and adopted measures binding not only the administrations of Member States but also the private sector.

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15 regulations: these are directly applied without the need for national measures to implement them; directives: bind Member States as to the objectives to be achieved while leaving the national authorities the power to choose the form and the means to be used; decisions: these are binding in all their aspects upon those to whom they are addressed. A decision may be addressed to any or all Member States, to undertakings or to individuals; recommendations and opinions: these are not binding. (EU web page)

16 A list of EU legislation related to maritime safety is provided in Appendix F.
On November 17, 1997 The European Commission launched The ‘Europe and Quality Shipping’ campaign. The main goal of the initiative was to increase safety, and improve working and living conditions onboard by enforcement of existing rules and international regulations rather than framing of new legislation. As Neil Kinnock, the European Commissioner responsible for Transport Policy said on that day:

‘the Community doesn’t want to multiply regulations for their own sake, the priority will be given to binding quality standards for flag administrations and registers, rather than composing further new demands that would widen the cost gap for honest, responsible operators’.

In particular, this campaign’s aim is to stimulate and promote policies oriented towards an enforcement of quality and safety in shipping. Its main action lines are:

- Enforcing compliance with international and European maritime safety rules,
- Reducing human error through high standards for training and qualifications, good working and living conditions and good management of ships,
- Promoting a quality minded culture for all industry players concerned through voluntary implementation of ‘The code of best behaviour’ in shipping industry,
- Harmonising safety standards,
- Protecting waters from pollution by ships,
- Ensuring safe flow of traffic,
- Stimulating research to contribute to quality of shipping.

(Lagaris, 1998, Ch.3)

The European Commission’s policy on quality shipping has been confirmed by Mr. Roberto Salvarani, the Head of the Maritime Safety Unit in the EU Maritime Transport Directorate who believes that safety in shipping cannot be increased by more legislation. The key to success is to enforce the rules that already exist. As he said in January 1998 for the Fairplay:

‘Development of further standards for ocean shipping should, for the moment, be drastically slowed down while the priority should be given to binding quality standards for flag administrations and registers. Too
many Flag States have neither the will nor the ability to fulfil their important obligations and by their very existence, they undermine standards of safety world-wide as well as undercut responsible registers.’

The European Commission completes its policy on, the one hand, by providing necessary legislation and technical assistance to many countries and regions, which are committed to quality and, on the other, by closing its ports for ships that do not comply with adopted standards, i.e. do not have valid Safety Management Certificates.

4.3. Implementation of the ISM Code

As presented previously, the only existing, mandatory, international safety management system for shipping operators is the ISM Code, adopted by the 1994 SOLAS Conference as the new chapter IX of the 1974 SOLAS Convention. At the time of adoption it was decided that this would be mandatory for passenger ships not later than 1 July, 1998.

Following the tragedy of the ferry Estonia in 1994, in which 852 lives were lost, the Council of Transport Ministers of the European Union asked the European Commission to submit a series of proposals to guarantee the best possible safety standards to passengers travelling to and from EU ports. As a result, among other initiatives, the Council adopted a Regulation implementing the ISM Code for ro-ro passenger ferries.

4.3.1. Special provisions for ro-ro passenger ferries.

Regulation 3051/95/EC on the safety management of ro-ro passenger vessels was adopted on 8 December, 1995. This legislation made the ISM Code mandatory for roll-on/roll-off (ro-ro) ferries from 1 July 1996.

The purpose of the Regulation, as well as the ISM Code, is to improve safety at sea and prevention of marine pollution through the establishment and maintenance by
companies of adequate SMS on board and on land and control of these systems by the administrations of the Flag State and the port State. In general it incorporated the complete text of the ISM Code into EU legislation, and for this reason only the differences and new elements will be looked at in this chapter.

4.3.1.1. General differences between the Regulation 3051/95/EC and the ISM Code

First of all the Regulation applies only to ro-ro ferries and provides its own definition of such, which is “a seagoing passenger vessel with facilities to enable road or rail vehicles to roll on and roll off the vessel, and is carrying more than 12 passengers” (art. 2A Reg. 3051/95 EEC). This definition is slightly different from the definition of passenger vessel in the SOLAS Convention. The Convention and the ISM Code define a passenger vessel, as a ship, which carries more than twelve passengers. The definitions’ common feature is only the number of passengers, although there is no doubt that the SOLAS definition, being wider, also includes ro-ro ferries.

Another difference is that the SOLAS Convention is mandatory for any ship on an international voyage. This EU Regulation is mandatory for companies that operate at least one ro-ro ferry to or from any port of a Member State (Art. 3 Reg. 3051/95/EEC). This definition does not mean international voyages but also domestic ones, meaning that the Regulation applies also for ships that travel only between ports of one Member State. The provisions under which Greek ships obtained a grace period (see Chapter 4.3.1.4) proves the correctness of this interpretation.

An additional distinction is that the EU Regulation applies only to ferries on regular service within the Community. Such service is defined as a "series of ro-ro ferry crossings operated so as to serve traffic between the same two or more points, either according to a published timetable, or with crossings so regular or frequent that they constitute a recognisable systematic service” (Art 2 (b)). The ISM Code applies to all passenger ships, regardless of the nature of their voyages.
4.3.1.2. Issuance of DOC and SMC

In an international legal regime it is the Flag State that issues the ISM Code certificates or enters into agreements with other States or RO to do so on its behalf. Within the EU, the situation is more complicated, mainly because EU legislation is binding only for its Member States, while vessels can fly the flag of any State. Before the ISM Code was mandatory for all passenger vessels according to IMO regulations, the shipowner operating a ro-ro ferry within the Community could find himself in a position where the Flag State of the ship was not prepared to issue a SMC, while it was required by the PSC in the EU ports.

In this respect Reg.3051/95/EC includes a provision, that EU Member States issue DOCs and SMCs not only for ships under their flag, but may also issue documents of compliance for companies operating ferries registered elsewhere, if such companies have their principal place of business in the territory of a particular Member State. The only condition is that a Member State “shall consult the administration of the States whose flag the ro-ro ferries of that company are entitled to fly, if that administration is not that of the issuing Member State” (Art.5.2).

The Regulation obliges Member States to recognise DOCs and SMCs issued by another Member State or Recognised Organization (RO)\(^\text{17}\). If these documents are issued by the Administration of a non-Member country, they shall also be recognised if the Member State is satisfied that such Administration demonstrates compliance with the provisions of Reg.3051/95EC. Very likely Documents of Compliance and Safety Management Certificates will not be issued by the third country’s Administration but by the organization (classification society) recognised by it. In such cases these DOCs and SMSs might be recognised only if such an organization is a recognised organization in accordance with Directive 94/57/EC\(^\text{18}\).

\(^\text{17}\) For more information on recognition of organizations acting on behalf of EU Flag States see Chapter 4.4.
\(^\text{18}\) See previous footnote.
There are no provisions in Reg. 3051/95/EC that can be used if a certificate onboard is issued by an organization not recognised in the EU. It’s the author’s view that this aspect has not been clarified enough and in this case a literal interpretation of existing law could be used. This would mean that certificates issued by an organization not recognised within the Community, acting on behalf of a non-Member State, will not be recognised.

Another interpretation problem is caused by Reg. 179/98/EC, amending Reg. 3051/95/EC. While Reg. 3051/95/EC requires recognition of a DOC and SMC under the circumstances described above, Reg. 179/98/EC regulates the recognition of interim DCs and SMCs. Interim certificates can be recognised if being issued by any EU Member State or by organizations acting on its behalf. An interim DOC and SMC issued by or on behalf of the Administrations of third countries must be recognised by a Member State if it is satisfied that the documents demonstrate compliance with the provisions of this Regulation. Reg. 179/98/EC does not require the organization acting on behalf of a third country to also be RO in EU. Concluding, only DCs and SMCs with 5 years validity must be issued by a Member State or organization recognised by it or by a third State’s Administration, while the interim DOC and SMC can be also issued by an organization acting on behalf of non-Member State, that is not recognised within the Community.

Nevertheless, the interpretation has been left open for Member States who will have to face the problem of certificates and interim certificates issued by an organization not recognised by the Community. In the author’s opinion, Administrations should take into account the objective of the regulation and general principles of certificate recognition within the EU. The idea was that only reputable and reliable organizations should be permitted to act on behalf the Flag States and that ship owners should entrust supervision over their ships only to those classification societies that can ensure their safety with due care. Thus, the interim certificates should be recognised in accordance with the principles applied to DCs and SMSs and the literal interpretation as presented above should not be used.
As to the validity of the DOC and SMC, the EU Regulation is consistent with the ISM Code. They are valid for 5 years from the date of issue. The only difference is that, in accordance with the Regulation, an intermediate verification must take place at least every 30 months or more frequently, while the ISM Code provides that if only one intermediate verification is to be carried out, it should take place between the second and third anniversary date of the issue of the SMC.

4.3.1.3. Suspension of operation

In general, Member States are responsible for ensuring that all ro-ro ferries calling to their ports regularly comply with the provisions of Reg. 3051/95/EC. Nevertheless, compliance is not narrowed to obtaining appropriate certificates. Under the provisions of this Regulation the Member State, regardless of whether a particular ship carries a valid SMC and a copy of a DOC, has the right to suspend the operation of any ferry that creates a risk of ‘serious danger’ to safety of life or property or the environment.

Again, there is no definition of ‘serious danger’ in the Regulation so it might be subject to different interpretations and its understanding might vary from State to State. To avoid misinterpretation or misuse of this provision, a special procedure has been provided. In any case of suspension the Member State shall, without any delay, inform the Commission and other Member States of the action taken and provide them with reasons thereof. The Commission, assisted by a regulatory Committee, is in a position to examine the decision taken by the State, and in case where there are no clear grounds for suspension it has the right to request its withdrawal.

4.3.1.4. Grace periods

In accordance with Art. 4, ferries operating exclusively in sheltered waters could defer compliance with the Regulation until 1 July 1997. This ‘privilege’ was given

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19 As provided in the Regulation ‘sheltered waters’, mean areas where the annual probability of the significant wave height exceeding 1.5m is less than 10%, and in which a ro-ro ferry is at no time more than six nautical miles from a place of refuge where shipwrecked persons can land.
by the Commission to vessels operating in the sheltered waters of Greece which are registered in and fly the flag of this country. The Commission recognised that a rapid introduction of provisions would raise specific technical and administrative problems for Greece, because of the large number of companies operating there. A grace period for later implementation has been given to companies ‘which are incorporated under Greek law, and have their principal place of business in Greece, and which operate ro-ro ferries registered in and flying the flag of Greece providing regular service exclusively between ports situated in Greece’ (Art.11). For these vessels the Regulation did not apply until 1 January 1998.

4.3.2. Other types of vessels

The European Commission did not take any further legislative initiatives in reference to implementation of the ISM Code for companies operating other types of vessels. The provisions of the SOLAS Convention bind EU Member States as all other States - Parties to the Convention. Thus, the scope of application and the timetables as provided in the ISM Code remained unchanged for other passenger and cargo ships operating within the EU.

Members States implement these provisions individually, with respect to other existing EU regulations. The two main legal acts that have an influence on the ISM Code implementation are those related to the PSC and minimum standards for organizations acting on behalf of Member States as they are presented below.


Directive 94/57/EC on common rules and standards for ship inspection, survey organizations and for the relevant activities of Maritime Administrations establishes standards for the competent Administrations of the Member States and the survey organizations acting on their behalf, as well as introducing a system of Community-wide recognition of classification societies.
The purpose of this Directive is to adopt measures which must be taken in order to assure effective application of the international conventions. For this reason the Member States can entrust inspection, survey and certification duties only to organizations recognised within the EU. In the Annex to the Directive 94/57/EC, criteria for such organizations have been established. Generally they are the same as the IMO requirements for RO acting on behalf of the Flag States. A detailed description of EU requirements that must be fulfilled by RO is provided in Appendix G. In exceptional cases a three-year recognition may be granted by the Commission for organizations which do not meet the criteria related to the minimum number and tonnage of classed vessels as well as to the minimum number of exclusive surveyors.

The Directive distinguishes between a ‘recognised’ and an ‘authorised’ organization. A Recognised Organization (RO) is an organization that ‘has been given recognition in accordance with art. 4 of the Directive’ (art.2 Dir. 94/57/EC) and that is on the list of such organizations published by the European Commission. This does not give to such an organization many rights, but only means that ‘Member States shall in principle not refuse to authorise any of the Recognised Organizations located in the Community’ (art.5 Dir.94/57/EC). An ‘authorisation’ means an act whereby a Member State ‘grants an authorisation or delegates powers to a recognised organization’ to act on its behalf (art 2 Dir.94/57/EC).

EU Members might also authorise organizations from non-Member State to act on their behalf. If this is the case, recognition should be limited to the requesting Member State, which may in addition request from the State Administration of this organization, reciprocal recognition of organizations recognised in EU.

In each case a working relationship between the Administration and the Organization acting on its behalf must be regulated by a formalised written and non-discriminatory agreement or equivalent legal arrangements. Particular duties and functions assumed by the organizations shall be specified in an agreement, including at least the provisions set out in Appendix II of IMO Resolution A.739 (18) on
guidelines or the authorisation of organizations acting on behalf of the Administration as it stands on the date of the adoption of this Directive.

The European Commission, as well as EU Member States, should be informed about the organizations that have been recognised by a particular Member. On this basis a list of Recognised Organizations is published and updated by the Commission.

The subject Directive also imposes an obligation on each Member State to monitor the recognised organizations. In the case of organizations located outside the EU, a Member State recognising such an organization is obliged to review the control exercised over such organization by the Administration of the States where it is located. Member States, following the procedures set out in the Directive, may withdraw or suspend authorisation of a recognised organization. The updated recognition criteria shall be taken into account while doing so and, respectively, the Commission shall be informed of such suspension.

In exercising their inspection rights and obligations as port States, the Member States are obliged to ensure that ships flying a third state flag are not treated more favourably than ships entitled to fly the flag of a Member State. They shall report to the European Commission and the Secretariat of Paris MoU discovery of any valid certificates issued by organizations acting on behalf of a Flag State for a ship which does not fulfil the relevant requirements of the international conventions. Also any failure of a ship carrying a valid class certificate and relating to items covered by that certificate shall be reported.

Member States are also obliged to ensure that vessels flying their flags are constructed and maintained in accordance with the requirements for hull and machinery as well as electrical and control installations laid down by a recognised organization. On the other hand, an obligation is imposed on ROs to consult with each other periodically in order to maintain equivalence of their technical standards and the implementation thereof, since no international standards exist so far in this matter.
Directive 94/57/EC entered into force on 1 January, 1996 with a deadline for implementation on 31.12.1995. It was amended in 1997 by Directive 97/58/EC in order to take into consideration the provisions set out in the Annex to IMO Resolution A.789(19) on specifications for the survey and certification functions of recognised organizations acting on behalf of Administrations.

From the author’s point of view, the criteria and a system of recognition of classification societies acting on behalf of the Flag States established in the EU is not completely satisfactory. The most controversial issue is the list of ROs published by the Commission which is not transparent and often misleading for maritime authorities or commercial entities not familiar with the EU system. There are also opinions voiced that the list, although it should represent the highest quality, also includes names of CSs that are not considered to be reputable and that, probably, the list is not needed if it can include a Society that is authorised to act on behalf of only one Member State.

The deficiency of the list could be rectified to some degree if besides the names of the RO it also included the list of Flag States which authorised that particular RO to act on their behalf. As to the quality of CS performance, it must be said that it is the Societies that need to do more, not the Commission, if they are to retain their responsible role and the continuing trust of the maritime community.

4.5. Port State Control

For the EU Member States Port State Control mostly means the implementation of Council Directive 95/21/EC of 19 June, 1995, concerning the enforcement, in respect of shipping using Community ports and sailing in the waters under the jurisdiction of the Member States, of international standards for ship safety, pollution prevention and shipboard living and working conditions (Port State Control Directive). This is an enforceable law that makes voluntary participation in the Paris Memorandum of
Understanding on Port State Control (Paris MoU) and its common rules for port State inspections an obligation within the Community.

The Directive applies to all merchant ships and crews using a seaport of any Member State or offshore terminal or anchored off such a port or installation. It requires States to establish and maintain national Maritime Administrations - the 'competent authorities' for the inspection of ships in their ports or in the waters under their jurisdiction. These authorities are obliged to inspect at least 25% of the ships flying other countries' flags which enter their ports, in accordance with selection criteria laid out in the Annex to the Directive.

The Directive provides an inspection procedure, a list of the certificates and documents to be inspected, as well as the types of inspection to be carried out and the rules to be followed if a more detailed inspection proves to be necessary. PSC officers are obliged to look beyond certificates and assess the general condition of the ship and her engine room as well as hygienic conditions and accommodation. Any deficiency exposed in the course of the inspection shall be rectified before the ship leaves the particular port. If, due to lack of necessary facilities, this is not possible the ship might proceed to the nearest repair yard. If the ship does not call on the agreed shipyard, the penalty imposed on it will be prohibition of further entry to all EU ports (section 3.9 of the Paris MoU).

In accordance with the above standards, enhanced controls must be carried out on:
- oil tankers within five years or less of the date of phasing out;
- bulk carriers older than 12 years of age;
- passenger ships;
- gas and chemical tankers, over ten years of age.

The EU regulates the professional competence and qualification criteria for surveyors. Harmonisation of training is achieved by running courses for participants from all Paris MoU States, which also helps to fulfil another requirement, that is the necessity of co-operation between all competent authorities.
EU Members are also under an obligation to supply every 3 years, details of the number of surveyors working on their behalf and of the number of ships entering their ports. Also, once every quarter, details of detention orders are published by the competent authorities. In practice there is an accessible database via internet containing all information about inspections, detained ships and ships that are banned. At the time of writing this dissertation, 14 vessels were banned from EU ports, among which seven jumped detention, four failed to call at indicated repair yard, and one, an oil tanker, did not have valid ISM Code Certificates (Paris MoU web side). The database includes all particulars of a ship, i.e.: its name, IMO number, call sign, flag, ship type, gross tonnage, year of build, banning date and banning reason. On detained vessels, the port of detention, date of release from detention, duration of detention in days, total number of deficiencies, reason(s) for detention, classification society and owner or operator are also published.

Directive 98/25/EC, amending Dir.95/21/EC includes provisions related to inspection of implementation of the ISM Code. In accordance with article 9A, a ship without ISM certificates on board must be detained. However, if no other deficiencies warranting detention are found, the detention may be lifted to avoid port congestion. Ships leaving port under these circumstances are banned until valid ISM certificates are obtained.

When speaking of PSC and quality in shipping, one must also mention recent EU and other states’ initiatives on the creation of ‘EQUASIS’. It is a currently developing database, which will provide the maritime industry with a single point of access to all relevant information concerning the safety and quality of ships. The EQUASIS is a global system that will contain data for all ships in the world fleet. On 28 January, 2000, the European Commission and few Maritime Administrations representing European states and Singapore signed a Memorandum of Understanding on the setting up of the EQUASIS. The system should be easily accessible via Internet and can be consulted by all interested parties for a small subscription fee.
In the author’s view, the *EQUASIS* will fulfil the expectations only if it contains complete data and if the whole industry and all Flag States from around the world use it and participate in related data collection. This cannot be done by the regional agreement or as an agreement between a few FS. For this reason, the accession to the system should not depend on a fee payment.

4.6. Conclusion

Safe shipping of high quality has always been one of the EU’s priorities, together with environmental protection and fair competition in the market. The list of legislative initiatives in this matter is quite long and is frequently updated. The ISM Code is considered as one of the three ‘pillars’ of an infrastructure established to eradicate sub-standard shipping. The other two are the Flag States performance and Port State Control.

The European Union welcomes the most voluntary initiatives of its Members and especially shipping companies to increase safety and quality. Many companies operating within the Community have also implemented the ISO 9002 quality standards, others perform their operations in accordance with the ISMA Code or obtained the Safety and Environmental Protection (SEP) Certificate offered to the maritime industry by Det Norske Veritas (DNV) since 1990.

The problem foreseen by the Community is that although the quantity of cargo shipped and the number of passengers travelling to and from European ports are increasing, the number of shipping companies, as well as the number of ships registered and the number of officers from the Member States, are decreasing. This means that the only influence that the Community might have on these ships is by exercising extensive Port State Control and providing training and technical support to other States. On the other hand, it is realised that it is the Flag State’s responsibility to assure that ships registered by it are safe, and the Flag State that has the best tools to do so. For this reason the Commission actively supported
development by IMO of guidelines to assist Flag States in the implementation of international instrument. Roberto Salvarani said few years ago that “The most important IMO initiative by far, is the creation of a set of internationally obligatory criteria for qualifying as flag administration”. He even expressed an opinion that “IMO must have the courage to apply these quality criteria at the risk of losing some of its members and shutting down administrations, which are just operating a flag for profit with disregard to safety and the environment”. (100A1,1997) but this scenario is not going to happen.

The quality and safety regime established by the EU is very important for the entire European region. Not only the Member States must comply with its requirements but also ships operating between their ports. For this reason and for going sometimes beyond requirements of the IMO this system is being criticised. In the author’s opinion the EU has a right and should continue to adopt measures that best suit the needs of its Member States. It must be also remembered, that for a long time the Commission did not regulate maritime safety and that initiatives that might influence other States are either the result of international conventions or are first brought to IMO for consideration. Only if the proposal is not supported then it is carried on within the EU.

With respect to maritime safety, the EU requirements, as presented in this chapter, are not very different from those established by the IMO. Thus, its important for all Associated Member States to define the slight differences and adopt appropriate domestic measures where necessary. Besides, the EU internal law is of great assistance to the States’ maritime authorities since in many cases it implements the international conventions without a need for national regulations. For this reason the next chapter does not only present the existing Polish legislation regulating implementation of the quality and safety management systems in shipping, but also provides a comparison with the EU standards and proposes necessary changes to achieve harmonisation with both the IMO and EU requirements.
CHAPTER 5

THE QUALITY AND SAFETY MANAGEMENT STANDARDS IN POLAND – PRESENT SITUATION AND FUTURE RECOMMENDATIONS

5.1. Quality management standards in Poland

Standardisation in Poland dates from the beginning of this century. The first standardisation at that time dealt with the electrical and engineering fields. In 1924 the Polish Committee for Standardisation (PKN) was established, with the task of standardising industrial products and their delivery requirements.

As a result of the political and economic changes that took place in Poland after 1989, on 3 April, 1993 the Polish Parliament passed a set of laws concerning standardisation, metrology and quality. The Standardisation Law constituted the basis for implementation of the new, voluntary standardisation system. Three independent bodies were established: The Central Office of Measures, The Polish Centre for Testing and Certification (PCBC) and The Polish Committee for Standardisation (PKN). The last one took over the obligations and duties related to standardisation.

5.1.1. The Polish Committee for Standardisation

The Polish Committee for Standardisation (PKN) is a collective, state body subordinated to the Prime Minister but located outside the state’s administrative structures. It establishes and replaces Polish Standards (PN).
Most Polish Standards are fully harmonised with international standards like the ISO and European Standards (EN) Series. All of the ISO 9000 series have been incorporated unchanged into the PN and are used as presented in Chapter 2. These are the PN-ISO 9000.

The standardisation activity of PKN is strictly connected to the activities of the Polish Government associated with Poland's integration into the European Union, and with assurance of uniformity of the provisions of standards and technical regulations in of this process. The PKN is a member of the ISO, the International Electrotechnical Commission (IEC) and is an affiliate of CEN and CENELEC. It is also a signatory of the Memorandum of Understanding with the ETSI.

5.1.2. The Polish Centre for Testing and Certification

The second standardisation body is the PCBC which is a State entity, subordinated to the Minister of Economy. It supervises the systems of testing and certification in Poland, and runs quality system certification according to the PN-ISO 9000 norm. This Centre does not issue ISO Quality Certificates to companies, but supervises and gives accreditation to bodies like PRS, which can then perform external audits of quality systems and issue ISO 9000 Certificates to companies.

On June 12, 1997, during the international meeting of the International Certification Network in Stockholm the PCBC became a full member of the organization. This means that the Polish law fully corresponds with the European and international law on quality systems certification.

5.2. Implementation of requirements established by the IMO.

Poland has been an active Member State of the IMO since its establishment. It has incorporated and made mandatory most of the international conventions and their amendments. The Polish Maritime Administration (PMA) and the Polish
Classification Society (PRS) have also implemented most of the resolutions that are not mandatory but recommended by the IMO.

5.2.1. Mandatory establishment of quality management systems

During the last few years the IMO has adopted some Assembly Regulations and two mandatory amendments to the conventions that impose an obligation to establish QMS. Figure 6 below presents these IMO requirements together with listed Polish norms and entities responsible for their implementation as well as corresponding ISO Quality Standards.

![Diagram showing the relation between IMO and ISO Quality Standards](image)

Figure 6. Relation between IMO and ISO Quality Standards and their implementation in Poland. (Source: K. Dendura, Quality Management Seminar, Gdynia, 1996.)
5.2.1.1. Adoption of the IMO recommendation for Recognised Organization

IMO Assembly Res. A.739(18) ‘Guidelines of the authorisation of organizations acting on behalf of the Administration’ has been presented in Chapter 2.3.1. The Polish Maritime Administration did not authorise any Classification Society to issue certificates on its behalf. Polski Rejestr Statkow is a Polish CS that is authorised to conduct audits and statutory inspections that lead to issuance of mandatory ship certificates, but these are always issued by the PMA. The process of certification is analogous for all safety certificates as it is presented in Chapter 5.3.1. for the Safety Management Certificates.

PRS is supervised by the PMA in accordance with IMO standards, through a quality management system. In 1992 the PRS implemented a QMS conforming to ISO 9001 requirements. The society has been granted the IACS Quality System Certificate of Conformity and the Certificate of Quality System, issued by the PCBC. This last one proves conformity also with the Polish quality standards. Thus, it might be said that the IMO recommendations for Recognised Organizations are already implemented.

5.2.1.2. Implementation of Regulation I/8 of STCW’95

In Poland, the obligations imposed on Maritime Administrations by Regulation I/8 STCW 95, as presented in Chapter 2.3.2. are also fulfilled. The Gdynia Maritime Office, in co-operation with the Szczecin and Slupsk Maritime Offices, implemented in the divisions which monitor training and certification of seafarers the ISO quality system. The Certificate confirming implementation of ISO 9001 Standards was issued by Lloyd's Register Quality Assurance and the system is continuously monitored. The reason why PRS is not the external auditor is that this CS is supervised by the PMA so it wouldn’t be right for PRS to audit the Administration’s activity.
As required by the STCW’95 Convention, maritime schools and training centres for seafarers have implemented or are in the process of implementation of the ISO quality management systems. In addition to being monitored by organizations issuing these certificates, training centres are audited by the PMA. The Administration approves and supervises the realisation of the training programs that are being used.

5.2.2. Implementation of the ISM Code

The International Safety Management Code was implemented into the Polish legal system on 2nd September, 1997 by Regulation of the Minister of Transport and Maritime Economy on safety of seagoing vessels and safety of life at sea, (Maritime Safety Regulation), which was issued in accordance with Resolution A.788(19) – Guidelines on implementation of the ISM Code by Administrations.

The Maritime Safety Reg. para.12 provides that a ship may be engaged in a voyage at sea only if she fulfils the requirements of the ISM Code, together with the technical standards established in applicable international conventions, codes and standards as adopted by the IMO, the PMA and the CS. Para.32 makes the Code mandatory for all passenger and other vessels of 500 GRT or more (excluding fishing vessels) engaged in an international voyage. The timetable for obtaining an SMC by other types of vessels is the same as provided in the ISM Code.

5.2.2.1. Certification

In accordance with the Maritime Safety Regulation initial audits as well as interim external audits aiming at issuance of DOCs and SMCs or their annual endorsements and renewals are to be conducted upon a company’s request by a Classification Society – the PRS. Such audits are performed in accordance with regulations developed by the PRS and approved by the Directors of Maritime Offices. PRS does not issue the certificates by itself but prepares a report to the Polish Maritime Administration. The report consists of results of the audit and a recommendation as to whether the DOC and SMC should be issued or withdrawn. After an evaluation of
the report prepared by PRS the Directors of Maritime Offices (DMO) in Gdynia, Slupsk or Szczecin, according to the domicile of the company, issue the above documents.

This rule applies to all certificates that are being issued to a ship in accordance with international regulations. The DMO has a right to send an inspector that will be present on board the ship during an audit conducted by the PRS. In addition to this, inspectors from Maritime Offices are obliged to undertake initial and interim inspections related to the safety management of a ship in order to confirm that the ship and its owner/operator fulfil the SOLAS and ISM Code requirements in this respect. Such inspections are part of the Flag State control. This double-check system ensures that the PRS follows the Administration’s instructions and that no favourable treatment is given to any of the companies. The PRS, being an associated member of IACS, is authorised by several administrations around the world to act on their behalf, including the issuance of statutory certificates.

The above-presented construction fulfils IMO requirements as to FS responsibilities in relation to ISM Code certification. No other Classification Society is authorised to act on behalf of Polish Maritime Administration although the Minister of Transport and Maritime Economy has a right to entrust technical supervision of Polish flag vessels to other societies besides PRS (para.9 Maritime Safety Regulation). Since there is no such provision in relation to issuance of SMS and DOC it is the author’s view, that at the present time ISM Code external audits on Polish flag vessels can only be done by the PRS however, the interpretation is left open.

5.3. Harmonisation of Polish law with EU requirements

As stated in Chapter 4, there are many EU Regulations and Directives which aim at increasing maritime safety in EU waters and ports. Since this dissertation presents only the requirements that relate to quality and safety management, this chapter will deal with harmonisation only in this area.
5.3.1. Implementation of Council Regulation 3051/95/EC

Since Reg.3051/95/EC, relating to the safety management of roll-on/roll-off passenger ferries, is a regulation, it is directly applicable in Member States, without the need for national measures to implement it. For Poland this means that on the day of accession, this Regulation will be directly applicable and if there will be provisions in domestic law that are in contradiction to Reg. 3051/95/EC, they will cease to be in force and provisions of the Regulation will become binding for Polish citizens.

From this point of view there is no need to implement this Council Regulation, since it will be automatically enforced. On the other hand, if there will be many such Regulations, then on the day of accession we will have to face total legislative chaos. For this reason, if there are domestic regulation on a particular subject, it is suggested by the Commission that they should be updated in accordance with the provisions of the new regulation or that the existing domestic legal acts shall be denounced. This will also allow domestic entities to prepare themselves for the date of accession.

As stated previously, Poland has implemented the ISM Code as adopted by the IMO. Since there are only a few differences between the approaches of the EU and the IMO that will have to be implemented (see Chapter 4.3.2), it is being said that Poland has also already implemented Council Reg. 3051/95EC. Adoption of existing insignificant differences that exist is not considered to be an implementation problem, because there are no contradictions between Polish law and that of the EU. In this respect these two are complementary.

It is the author’s view that none of the Commission regulations should be incorporated into domestic law. To avoid ‘double’ regulation of one issue in two different legal acts, of different rank and including different provisions, the domestic law should cease to be in force if the Commission regulations exist. Publishing Reg. 3051/95EC in the Official Journal of Law, and denouncing domestic provisions
that are overlapping or contradictory will make the system more transparent and will be coherent with the Commissions vision of adopting regulations.

The first difference between the Polish and the EU law is that the Council Reg. 3051/95EEC makes the ISM Code mandatory for all roll-on/roll-off passenger ferries also on domestic voyages. Such a provision does not exist in Polish law, but there is no need to change this situation at present. When Poland will become a Member of the EU this provision will also become binding in Polish ports as there are no contradictory provisions in domestic law.

There is also a difference in respect to DOC and SMC issuance and recognition, since EU legislation allows their recognition only if issued by Recognised Organizations or Administrations under certain conditions (see Chapter 4.3.2). Since in Poland only the Maritime Administration can issue the relevant ship’s certificates there should not be any uncertainty as to their recognition within the Community as they are recognised at present. Besides, after becoming a Member State, Poland will be obliged to recognise certificates issued only by Flag States themselves or by Organizations recognised within the EU. In the Polish law there is still a lack of provisions in this respect.


Directive 94/57/EC established standards for the recognition of classification societies acting on behalf of UE Member States. It has not been incorporated into Polish law so far. Since this is a so called 'old approach directive' it binds Member

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20 Until the mid-1980s harmonization took place through so called “Old Approach Directives” which were often narrow in scope and contained too detailed mandatory technical requirements. Under this approach harmonization has been achieved by putting into the text of the directives all the detailed requirements, which later had to be transposed into domestic law of Member States. This created a need for permanent amendments due to technical progress, that led to the introduction of the New Approach Directives, which are also called “total harmonization directives”. Under these directives the co-existence of national regulations covering the same public interests as in the directive are prohibited, and if such national law exists it is inapplicable. Thus, the new approach directives are more like the Commissions Regulations in respect of their implementation by Member States. See also footnote No 14. (Lagaris, 1998)
States as to the objectives to be achieved while leaving the national authorities the power to choose the form and the means of implementation. This kind of directive must be incorporated into national law to be binding for citizens of each particular country and national implementation measures must be communicated to the Commission for publishing.

At present there is only one organization, the PRS, that is authorised by the PMA to issue technical regulations and to conduct ship inspections on behalf of the Administration but it is not authorised to issue any certificates. These are being issued by the PMA itself. There are many reasons behind such a situation, which are mainly:

- satisfactory performance of duties by PRS;
- PRS being an IACS member (later Associated Member) and fulfilling all IMO requirements for an organization acting on behalf of the Administration as well as fulfilling all requirements of Dir. Council Directive 94/57/EC (with an exception to tonnage and number of exclusive surveyors);
- small and decreasing number of Polish flag vessels;
- the history, since PRS was established in the present form after the Second World War as a State organization monitored by and responsible to the Administration.

**5.3.2.1. Implementation recommendations**

The Polish Maritime Administration has already undertaken steps towards the implementation of many EU legal acts by submitting to the Parliament a proposal of new law on maritime safety and the safety of life at sea. Although this is still subject to change the main concept will probably remain the same. The above project assumes that the DMOs will continue to be ‘inspection bodies’ for the PSC and Flag State control, and that they will continue to issue ship certificates as it is at present. The new provision is that the Minister for transport affairs will have the possibility to entrust particular types of ship inspections to classification societies other than PRS, by issuing a decree. The same article also includes the provision
that DMOs will be able to entrust one particular inspection of a particular ship to an appointed CS on a case-by-case basis. In the author’s view, to ensure complete implementation of Dir.94/57/EC this article should also include a paragraph providing that only CSs having the status of Recognised Organization within the EU can be appointed in either case. Nevertheless, this solution would create a problem of entrusting inspections to the PRS before it gains a status of RO, as is presented in Chapter 5.3.2.2.

The next step of implementation should be a Minister’s regulation setting up general rules that must be fulfilled by an organization to apply for and be appointed as a body acting on behalf of the Polish Maritime Administration. These should be the same as in the Annex to the Council Directive 94/57/EC. At this point another difficulty might be faced. In accordance with the Directive an agreement must be signed between an administration and an organization. In Poland the proposed new law on maritime safety provides for a Minister's regulation, which is very different from an agreement. From the author’s understanding, this provision relates only to the process of choosing CS to act on behalf of PMA. During the process of adopting the regulation the Minister of Transport will have to consult and get an approval from the Government of the CS which have been chosen. Then later, acting on behalf of PMA, he will be able to sign an agreement with a particular CS.

### 5.3.2.2. Recognition of PRS

Implementation of the Council Directive 94/57/EC means for the Polish Maritime Administration that it should not authorise any CS to act on its behalf which is not a Recognised Organization. Thus, the recognition of the PRS within the EU becomes a very important issue.

As said above, at present, the PRS fulfils all the general and specific minimum criteria for RO included in Annex to Dir. 94/57/EC with the exception of tonnage and a number of classified vessels as well as, related to this, the number of exclusive surveyors employed. The Directive gives the possibility for such a Society to be on
the list of Recognised Organizations (see Chapter 4.4) and PRS has already undertaken the necessary steps to obtain recognition from one of EU Members before Polish membership begins. The PMA already expressed its support to the efforts of PRS in obtaining such recognition, but nothing more can be done by the Administration since only the EU Member States have the right to present to the Commission a CS to be included on the list of Recognised Organizations.

The recognition of PRS within the EU before Polish membership begins is a very important issue. In accordance with existing domestic law, the Minister of Transport can anytime authorise another Classification Society to act on behalf of the PMA. It is apparent, that after Poland becomes an EU Member, there will also be additional CS acting on behalf of PMA. The problem to be solved is to assure that after joining EU, PRS will still be able to act on behalf of the Polish Maritime Administration and continue to issues technical regulations that are recognised as mandatory for the Polish flag vessels. It is not a matter of preserving monopolistic position of the Polish Classification Society but it is a matter of creation of equal opportunities for all CS, including PRS, which meet the minimum criteria for Recognised Organizations.

The Polish Maritime Authority has declared that Dir. 94/57EC will be implemented by the year 2002. Having more than a year, it is possible for this plan to be realised in accordance with the interests of the Polish State.

5.3.3. Implementation of the Council Directive 95/21/EC

This so-called Port State Control Directive is one of the best-harmonised EU legal acts. Poland has been a Member of the Paris Memorandum of Understanding (Paris MoU) since its establishment and as a result provisions of Dir.95/21/EC have been completely implemented for many years.

According to Maritime Safety Regulation Chapter 4, foreign flag vessels calling at Polish ports can be inspected by inspectors of Maritime Offices. There are two PSC
divisions, one in Gdynia and the other in Szczecin, responsible to the Directors of Maritime Offices. A detailed scope of inspections as well as organization of these divisions is accordingly determined in the Organizational Rules of Maritime Offices.

The main responsibility of PSC officers is to control statutory ship’s certificates as well as crew qualifications in relation to STCW and Safe Manning Certificate, vessel technical condition and equipment, rescue, fire fighting and medical equipment, observation of MARPOL 73/78 and its annexes as well as onboard living conditions in accordance with ILO C 147.

All inspections are concluded with a report, a copy of which is submitted to the Information Centre in Saint Malo. Also, if any non-conformities have been detected the Flag State Administration, ship’s classification society and the PSC in the next port of call are informed. One of the paragraphs also obliges the PSC Divisions to follow and implement all relevant Paris MoU and IMO instructions and recommendations.

Polish PSC inspectors also follow the rule of Directive 98/25/EC that imposes an obligation to detain a ship if she does not have a valid SMC. The ratio of inspected ships in Polish ports is above 35% and all data required from EU Members is available to the Commission also from Poland.

5.4. Conclusion

At present, Poland has already implemented IMO requirements and mandatory provisions related to implementation of quality and safety management systems. Regarding adoption of the EU law it might be said that Poland is in the middle of its road towards complete harmonisation in the area of maritime safety and quality assurance. The proposal of new law on maritime safety will be similar to many acts existing in EU Member States. It is a kind of blanket act that gives power to the Minister for maritime affairs to implement amendments to existing international conventions through the issuance of regulations, without involvement of the
Parliament. This formula will also be applicable to the implementation of many EU laws after the new law enters into force.

As many other Flag States, Poland also had to overcome problems related to establishment of a system to control PRS performance or recognition of certificates. The process of improvement of the Flag State performance continues and shall never stop since there always will be more to be done, more international or regional requirements to be implemented.
CHAPTER 6

CONCLUSION

Maritime shipping is one of the oldest means of transportation used. Yet, as we have entered the 21st century there is still much to be done to increase safety as well as to clean and protect the marine environment. Pressure on international forums, governments and shipping industry increases as the public’s attitude towards maritime disasters is changing and societies are not any longer willing to accept accidents as a necessary cost to be paid for development and globalisation.

Following public demand, as well as the present global tendency to improve quality through a better management system, the IMO adopted the International Safety Management Code, expecting it to be a remedy against human error in maritime disasters. P&I statistics show that it has been quite successful in the reduction of claims, meaning that the number of accidents onboard is continuously decreasing.

Since it originated from statutory safety requirements and the ISO 9002 Standard, the ISM Code is very similar in its structure to this Standard but has a different objective. In accordance with the ISO 9002 a ship manager is free to establish the company’s policy, which might be for example, to operate his fleet at the lowest possible freight rate. Such policy wouldn’t necessary mean safe operation of the fleet. For this reason the mandatory ISM Code was needed. Thus it requires establishment of a safety and environmental protection policy that is immutable throughout the whole industry and cannot be substituted by any voluntary scheme.

It must be said that the ISM Code will not prevent maritime disasters and might not even increase safety as much as its authors have expected. After two years of
practical experience it became apparent that obtaining a certificate does not prove that the company has already adopted a new safety culture. Too often the safety procedures and manuals are considered only as an additional cluster of paper. Discouraging is also the fact that, only 20 per cent of shipping companies are willing to go beyond the certificates and continue improving their safety culture.

In the ‘responsibility chain’ for safety at sea and pollution prevention the duties of the Flag State come right after shipowners’ obligations. Unfortunately Flag State performance varies between registers. Creation of ‘target factors’ for PSC inspectors to inspect vessels flying a particular flag underlines even more this growing lack of confidence among IMO Members.

Also during the author’s research a question arose several times as to whether flag Administrations are prepared to perform their responsibilities as it is expected. This is still uncertain and response to the IMO request for submission of self-assessment report as per Resolution A.881(21) only by a few States creates even more doubts. In this situation the Secretary General of IMO Mr. William A. O'Neil said, that the IMO is ready to take the responsibility also for implementation of its standards if this is what Governments want, but it is doubtful whether states will reach an agreement and give up some of their sovereign powers to an international organization. The European Union consists of only fifteen Member States that already have given up some of their rights to the European Commission and the Parliament in several areas, yet they were very reluctant to entrust to them maritime safety issues. Even at present there is no mechanism for control the performance of EU flag States. Member States have reached agreement only on a system of control for Recognised Organizations acting on behalf of the flag States (Directive 94/57/EC) but there isn't an entity that performs any of the flag States responsibilities for Member States.

Since Maritime Administrations are losing their credibility, the author's vision is, that as one of the remedies to this problem, all flag States should be obliged to introduce a quality management system governing their institution. The beginning of
such a process can be observed in respect to the recognition of seafarers’ certificates introduced by the STCW’95 Convention.

Speaking of uniform implementation of the IMO standards it must be said that the European Union plays major role in this process. The measures taken by the Commission are in support of the IMO but they might go further, imposing more strict rules, where there appear to be sound, objective reasons to do so, as it was done in the case of earlier implementation of the ISM Code onboard ro-ro passenger ferries.

During the last few years the Polish Maritime Administration was strongly involved in the process of re-examination of its own maritime safety legislation. The results have proven complete implementation of the IMO standards in the area of quality and safety management. Also the Polish law corresponds to this of the EU mainly due to wide implementation of the IMO requirements and Polish participation in the regional agreements like the Paris Memorandum of Understanding on PSC.

Speaking of implementation of the EU requirements related to quality and safety management systems it must be remembered that only directives need to be transposed into national legislation and on the other hand, that it is not necessary for transposition to take place in all Member States before benefit accrues from the presumption of conformity (European Commission, 1994). Therefore the only problem encountered during this research, that is recognition of PRS and authorisation of other CS to act on behalf of the Polish Maritime Authority, can be resolved later, after Polish membership begins. The remaining differences between Polish and EU law will be obliterated by the new proposal of maritime safety law presented last year to the Parliament.

Although findings of this research confirm that Polish law generally complies with international standards, there is still much to be done to preserve the status of a high quality Flag State in the future.
REFERENCES

The Act of the Prevention of Pollution from ships of 16.03.1995 (OJ 47/1995, item 243)


Commission Decision 96/587/EC of 30 September 1996 on the publication of the list of recognized organizations which have been notified by Member States in accordance with Directive 94/57/EC (OJ N° L 257 of 10.10.1996, p.43).


Council Directive 95/21/EC, of 19 June 1995, concerning the enforcement, in respect of shipping using Community ports and sailing in the waters under the jurisdiction of the Member States, of international standards for ship safety,


IMO Assembly Resolution A.739(18) Guidelines for the authorization of organizations actin on behalf of the administrations.

IMO Assembly Resolution A.788(19) Guidelines on implementation of the International Safety management (ISM) code by Administration.

IMO Assembly Resolution A.789(19) on specifications on the survey and certification functions of recognized organizations acting on behalf of the administrations.


maritime economy. (Budownictwo okrętowe i gospodarka morska) 04/95. 24-26.


The Regulation of Minister of Transport and Maritime Economy of 2 September 1997 on safety of seagoing of vessels and safety of life at sea. (O.J. 132/1997 item 878)

The Regulation of the Minister of Transport and Maritime Economy on the technical provisions on the prevention of pollution from ships, the procedure of survey and inspection, the model forms of international certificates concerning fees and the authorization of the classification society to some competence over the inspection authority of 20.12.1996 (OJ 2/1997, item 16)


**How to implement ISO Standards**

1. Management responsibility
2. Quality system
3. Contact review
4. Document and data control
5. Purchasing
6. Control of customer-supplied product
7. Product identification and traceability
8. Process control
9. Inspection and testing
10. Control of inspection measuring and test equipment
11. Inspection and test status
12. Control of non-conforming product
13. Corrective and preventive action
14. Handling, storage, packaging, preservation and delivery
15. Control of quality records
16. Internal quality audit
17. Training
18. Statistical techniques
19. Measurement & reporting
20. Personal training
21. Prequalification audit
22. Quality manual
23. Quality team
24. Quality policy
25. Initial audit
26. Strategic planning

**APPENDIX A**

IMPLEMENTATION OF THE ISO 9002 87

<p>| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Source: &quot;Chauvel, 1997, Ch. 8&quot; | | | | | | | | | | | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Initial assessment</td>
</tr>
<tr>
<td>2</td>
<td>Strategic planning</td>
</tr>
<tr>
<td>3</td>
<td>Safety &amp; Fire Prevention Policy</td>
</tr>
<tr>
<td>4</td>
<td>Project team</td>
</tr>
<tr>
<td>5</td>
<td>Company procedures</td>
</tr>
<tr>
<td>6</td>
<td>Shipboard procedures</td>
</tr>
<tr>
<td>7</td>
<td>Safety and Environmental Protection Policy</td>
</tr>
<tr>
<td>8</td>
<td>Designated Person(s)</td>
</tr>
<tr>
<td>9</td>
<td>Master’s responsibilities and authority</td>
</tr>
<tr>
<td>10</td>
<td>Company responsibilities &amp; authority</td>
</tr>
<tr>
<td>11</td>
<td>Resources and personnel</td>
</tr>
<tr>
<td>12</td>
<td>Development of plans for shipboard operations</td>
</tr>
<tr>
<td>13</td>
<td>Reports, non-conformities, accidents and incidents on board</td>
</tr>
<tr>
<td>14</td>
<td>Emergency preparedness</td>
</tr>
<tr>
<td>15</td>
<td>Maintenance of ship and equipment</td>
</tr>
<tr>
<td>16</td>
<td>Documents</td>
</tr>
<tr>
<td>17</td>
<td>12. Company verification, review and evaluation</td>
</tr>
<tr>
<td>18</td>
<td>11. Documents</td>
</tr>
<tr>
<td>19</td>
<td>10. Maintenance of ship and equipment</td>
</tr>
<tr>
<td>20</td>
<td>9. Reports, non-conformities, accidents and incidents on board</td>
</tr>
<tr>
<td>21</td>
<td>8. Emergency preparedness</td>
</tr>
<tr>
<td>22</td>
<td>7. Development of plans for shipboard operations</td>
</tr>
<tr>
<td>23</td>
<td>6. Resources and personnel</td>
</tr>
<tr>
<td>24</td>
<td>5. Master’s responsibilities and authority</td>
</tr>
<tr>
<td>25</td>
<td>4. Designated Person(s)</td>
</tr>
<tr>
<td>26</td>
<td>3. Company responsibilities &amp; authority</td>
</tr>
<tr>
<td>27</td>
<td>2. Safety and Environmental Protection Policy</td>
</tr>
</tbody>
</table>

**APPENDIX B**

**IMPLEMENTATION OF THE ISM CODE**

Source: Chauvel, 1997, Ch. 8.
APPENDIX C

THE INTERNATIONAL SHIP MANAGEMENT ASSOCIATION (ISMA) CODE OF SHIP MANAGEMENT

The International Ship Managers’ Association is the only entity, which can claim to be the representative of the shipping companies' managers. It was created in 1991 as a response to criticism for decline in maritime management standards. At the beginning when the Code was launched there were many members, joining the Association for different reasons. Later, when the membership become dependent on absolute compliance with the Code the membership has dropped and at present there are 27 members from 16 countries.

Fundamental principles of the ISMA CODE

In 1992 the International Ship Management Association presented the Code for Shipmanagement Standards – the ISMA Code, that could serve as a basic for new management of shipping companies. The Code was designed on base of ISO 9002 model with a standard interpretation, that would be common and suitable for all shipmanagers, thus avoiding many of the traps found in the bare interpretation of ISO 9002. It also took into account some requirements prepared by IMO like Resolution A 741(18), that later became the ISM Code, the major international requirements related to environment protection from oil pollution (including OPA'90) as well as the functions of accounting and insurance. In addition the ISMA Code attempts to outline the expectations, that a client might have of a shipping company. In general this Code is a combination of the ISM Code and ISO 9002. Applied even before the ISM Code was developed, it is still in use after several revisions of which the last was in 1998.

More details of the ISMA Code are provided in Appendix E where its comparison with the ISO 9002, ISM Code and SEP is provided.
ISMA Certificate.

Certification of compliance with ISMA Code is neither done by a Recognized Organization which can be chosen like in the case of ISO 9002, nor by the body pointed out by a flag Administration nor by the Administration itself like in the case of ISM Code certification. Accreditation in ISMA is carried out by a body consisting of four major Classification Societies, which perform audits consistently and to a homogeneous standard. At present there are members from the following societies: American Bureau of Shipping, Det Norske Veritas, Germanischer Lloyd and Lloyd’s Register of Shipping.

For each audit auditors from three of the above CS are selected to conduct the audit onshore and onboard some selected ships. The rule is that during the initial audit only the office onshore and at least one ship of each kind shall be inspected. All the operated fleet must be audited during a period of five years from the initial audit. The certificate itself is valid for five years and is subject to annual/intermediate audits.
APPENDIX D

MANAGEMENT OF SAFETY AND ENVIRONMENTAL PROTECTION (SEP) CERTIFICATION

The Safety and Environmental Protection (SEP) Certification has been offered to the maritime industry by Det Norske Veritas since 1990. Until now, over fifty companies (Eriksen, H. 1995) have implemented SEP on voluntary base.

The SEP includes requirements and relevant principles from ISO 9000 Series as well as those provided later by the ISM Code. Generally speaking, SEP covers in addition to the ISM Code claims handling, media response, drug and alcohol policy, occupational health and hygiene and engineering management.

Certification for a 'Company SEP Classification' certificate and a 'Shipboard SEP Classification' Certificate is similar to the procedure for obtaining DOC and SMC, but audits are being carried out on annual base. Although both the company and its fleet must comply with more standards to obtain SEP Certificate then it's necessary for DOC and SMC, ISM audits must be carried as well and for that purpose they both are generally harmonized by DNV.

Details of the SEP requirements are provided in Appendix E where a comparison with the ISO 9002, ISM and ISMA Codes is provided.
APPENDIX E

SUMMARY OF DIFFERENCES AND COMMON FEATURES OF THE ISM, ISO 9002, ISMA AND SEP REQUIREMENTS

As presented in Chapters one and two the ISM Code is based on the ISO 9002 standards. Thus there are a lot of similarities between these two, but there are also many differences. The principal differences of these two systems can be described as follows:

<table>
<thead>
<tr>
<th></th>
<th>ISM CODE</th>
<th>ISO 9002</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal:</strong></td>
<td>- To improve safety at sea and reduce environmental pollution</td>
<td>- to provide a client with adequate assurance that the expected service will meet his requirements</td>
</tr>
<tr>
<td><strong>Application framework:</strong></td>
<td>- relation between a shipping company and its supervisor – the flag State Administration</td>
<td>- contractual relation between supplier - shipping company and its customers</td>
</tr>
<tr>
<td><strong>Concentrate on:</strong></td>
<td>- personnel competence and involvement</td>
<td>- contract review</td>
</tr>
<tr>
<td></td>
<td>- good condition of equipment and maintenance</td>
<td>- production/service process control</td>
</tr>
<tr>
<td></td>
<td>- inspection and risk prevention methods</td>
<td>- methods of inspection and prevention of quality deficiencies.</td>
</tr>
<tr>
<td><strong>Means deployed:</strong></td>
<td>- Safety Management System for persons</td>
<td>- Quality Management System for a client</td>
</tr>
</tbody>
</table>


The main difference between these two systems is their respective goals. The ISM Code concentrates on a company itself and SMS is designed to prevent it and its personnel from life and property losses as well as from pollution of the marine environment. The ISO 9002 series are designed to satisfy customers and assure them of the quality.

Also it must not be overlooked that ISO 9002 management quality standards are being implemented on a voluntary basic. This means that the top management in the company is more dedicated to it and that it can cause real changes in the management and work culture. Notwithstanding so, this is not always the case. Some shipping companies implement ISO 9002 and reconcile it with the ISM Code only because their concurrence did so and it is a demand of the free international market in which they operate.

The voluntary systems like ISMA and SEP are based on the requirements of the ISM Code and ISO 9002. As a result, they consist of a combination of these two although differences can be found. Major principles of these four are presented in a table below.
Table of comparison between major safety and quality management standards in used in shipping.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>ISM Code</th>
<th>ISO 9002</th>
<th>ISMA Code</th>
<th>DNV SEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>General system requirements</td>
<td>X</td>
<td>*</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Safety and environmental protection policy</td>
<td>X</td>
<td>*</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Company responsibilities and authority</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Designated person(s)</td>
<td>X</td>
<td>*</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Master’s responsibility and authority</td>
<td>X</td>
<td>*</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Resources and personnel</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Development of plans for shipboard operations</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Emergency preparedness</td>
<td>X</td>
<td>*</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Reports of non-conformities, accidents and hazardous occurrences</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Maintenance of the ship and equipment</td>
<td>X</td>
<td>*</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Documentation</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Company verification, review and evaluation</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Certification, verification and control</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Contract review</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>Purchasing</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Control of products supplied by customers</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>Control of inspection, measurement and test equipment</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Handling, storage, packaging, preservation and delivery</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>Statistical techniques</td>
<td>-</td>
<td>X</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Business ethics</td>
<td>-</td>
<td>*</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>Drug and alcohol policy</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Insurance</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>Accounting</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>Shore-based personnel (training, qualifications)</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>*</td>
</tr>
<tr>
<td>Media response policy</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>Claims handling</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Engineering management</td>
<td>-</td>
<td>X</td>
<td>*</td>
<td>X</td>
</tr>
</tbody>
</table>


X complete fulfilment of requirement needed.
* partial fulfilment of requirement needed.
– no requirements exist.
APPENDIX F

LIST OF LEGISLATIVE TEXTS ADOPTED WITHIN EU IN THE MATTER OF MARITIME SAFETY AND PROTECTION OF THE MARINE ENVIRONMENT.


6bis Commission Decision 96/587/EC of 30 September 1996 on the publication of the list of recognized organizations which have been notified by Member States in accordance with Directive 94/57/EC (OJ N° L 257 of 10.10.1996, p.43), amended by:


APPENDIX G

MINIMUM CRITERIA FOR RECOGNISED ORGANIZATIONS
AS PER DIRECTIVE 94/57 (as amended).

A. GENERAL

1. The recognised organisation must be able to document extensive experience in assessing the design and construction of merchant ships.

2. The organisation should have in its class a fleet of at least 1 000 ocean-going vessels (over 100 GRT) totalling no less than 5 million GRT.

3. The organisation must employ a technical staff commensurate with the number of vessels classed. As a minimum, 100 exclusive surveyors would be needed to meet the requirements in paragraph 2.

4. The organisation should have comprehensive rules and regulations for the design, construction and periodic survey of merchant ships, published and continually upgraded and improved through research and development programmes.

5. The organisation should have its register of vessels published on an annual basis.

6. The organisation should not be controlled by shipowners or shipbuilders, or by others engaged commercially in the manufacture, equipping, repair or operation of ships. The organisation should not be substantially dependent on a single commercial enterprise for its revenue.

7. The organisation should operate in accordance with the provisions set out in the Annex to IMO Resolution A.789(19) on specifications on the survey and
certification functions of recognised organisations acting on behalf of the administration, in so far as they cover matters falling within the scope of this Directive.’

**B. SPECIFIC**

1. The organisation is established with:

   (a) a significant technical, managerial, support and research staff commensurate to the tasks and to the vessels classed, catering also for capability - developing and upholding rules and regulations;

   (b) world-wide coverage by its exclusive technical staff or through exclusive technical staff of other recognised organisations.

2. The organisation is governed by a code of ethics.

3. The organisation is managed and administered in such a way as to ensure the confidentiality of information required by the administration.

4. The organisation is prepared to provide relevant information to the administration.

5. The organisation's management has defined and documented its policy and objectives for, and commitment to, quality and has ensured that this policy is understood, implemented and maintained at all levels in the organisation.

6. The organisation has developed, implemented and maintains an effective internal quality system based on appropriate parts of internationally recognised quality standards and in compliance with EN 45004 (inspection bodies) and with EN 29001, as interpreted by the IACS Quality System Certification Scheme Requirements, and which, inter alia, ensures that:
(a) the organisation's rules and regulations are established and maintained in a systematic manner;

(b) the organisation's rules and regulations are complied with;

(c) the requirements of the statutory work for which the organisation is authorised are satisfied;

(d) the responsibilities, authorities and interrelation of personnel whose work affects the quality of the organisation's services are defined and documented;

(e) all work is carried out under controlled conditions;

(f) a supervisory system is in place which monitors the actions and work carried out by surveyors and technical and administrative staff employed directly by the organisation;

(g) the requirements of major statutory work for which the organisation is authorised are only carried out or directly supervised by its exclusive surveyors or through exclusive surveyors of other recognised organisations;

(h) a system for qualification of surveyors and continuous updating of their knowledge is implemented;

(i) records are maintained, demonstrating achievement of the required standards in the items covered by the services performed, as well as the effective operation of the quality system; and

(j) a comprehensive system of planned and documented internal audits of the quality related activities in all locations.

7. The organisation must demonstrate ability:

(a) to develop and keep updated a full and adequate set of own rules and regulations on hull, machinery and electrical and control equipment having the quality of internationally recognised technical standards on the basis of which SOLAS Convention and Passenger Ship Safety Certificates (as regards
adequacy of ship structure and essential shipboard machinery systems) and Load Line Certificates (as regards adequacy of ship strength) can be issued;

(b) to carry out all inspections and surveys required by the international conventions for the issue of certificates, including the means of assessing, through the use of qualified professional staff, the application and maintenance of the safety management system, both shore-based and on board ships, intended to be covered in the certification.

8. The organisation is subject to certification of its quality system by an independent body of auditors recognised by the administration of the State in which it is located.

9. The organisation should allow participation in the development of its rules and/or regulations by representatives of the administration and other parties concerned.
APPENDIX H

LIST OF THE CLASSIFICATION SOCIETIES
ACTING ON BEHALF OF THE EU MEMBER STATES

At present the list of recognized organization published by the European Commission consists of the following classification societies:

- American Bureau of Shipping (ABS)
- Bureau Veritas (BV)
- China Classification Society (CCS)
- Det Norske Veritas ((DNV)
- Germanischer Lloyd (GL)
- Hellenic Register of Shipping (HR)
- Korean Register of Shipping (KR)
- Lloyd’s Register of Shipping (LR)
- Nippon Kaiji Kyokai (NK)
- Registro Italiano Navale (RINA)
- Russian Maritime Register of Shipping (RS)