

No. 137/2026, 7–16

ISSN 2657-6988 (online)

ISSN 2657-5841 (printed)

DOI: 10.26408/137.01

Submitted: 01.08.2025

Accept 26.09.2025

Published: 30.03.2026

REMARKS ON THE EVALUATION OF THE CORRECT IMPLEMENTATION OF THE ISM CODE IN INTERNATIONAL SHIPPING

Jerzy Herdzik

Gdynia Maritime University, Morska 81–87, 81-225 Gdynia, Poland, Department of Marine Power Plants, ORCID 0000-0002-2339-807X, e-mail: j.herdzik@wm.umg.edu.pl

Abstract: This article discusses the proper implementation of the ISM Code by shipowners, its subsequent implementation, and the achievement of effective performance in order to obtain a Safety Management Certificate, and its subsequent validation and renewal. As required by IMO regulations, this code is intended to create conditions for safe ship operation, cooperation with shipping-related institutions, and the mitigation of the risks and consequences of environmental pollution. Primarily, this problem concerns shipowners and superintendents who wish to cut shipping costs by significantly reducing the conditions for safe ship operation. The article highlights the interdependencies between the stakeholders and a number of existing or potential problems.

Keywords: international shipping, implementation of ISM Code, SOLAS convention, ship operation, safety of shipping.

1. INTRODUCTION

At the end of the 20th century, a need arose to standardize the standards used for ship operation in international shipping. Negligence, disregard for safe ship operation, absolute cost-cutting, and increasing competition in the shipping market all significantly increased the risk of major environmental disasters. This forced the International Maritime Organization (IMO) to take radical steps to improve the situation [SOLAS 1974]. The intermediate goal was to eliminate entities (shipowners) unable to meet these requirements or to have them acquired by larger entities. On the other hand, the opposite process was observed: due to the potentially high costs of covering the consequences of major environmental disasters, which could result in bankruptcy, the shipowner's fleet was divided into subsidiaries, which were to be held solely responsible for damages up to their own assets, limiting maximum losses and simultaneously protecting the entity's core capital.

Another problem was the process of reflagging ships under cheaper flags, i.e., defection from national flags. Attempts were also made to change the classification society to one that was more "friendly" to shipowners. This process was partially halted by the formation of the International Association of Classification Societies [IACS 2025], which established the world's most recognized societies, listed on a "white list", which agreed on standards of conduct, audits, recognition, certification, and so on.



Fig. 1. Classification societies belonging to IACS

Source: IACS 2025, <https://iacs.org.uk/>.

The situation has also been improved by the activities of maritime administrations, which have established local agreements (MoU – Memorandum of Understanding) creating the databases of ships along with information on the results of their inspections by port state inspectors or flag state inspectors (PSC – Port State Control, FSC – Flag State Control). Such independent inspections require increased attention to the technical condition of ships and allow for the imposition of penalties, including detention in port. These "Ships of Understanding" lists have been established, with "Blacklists" of ships that cannot enter specific ports (e.g., European Union ports), formally also their territorial waters and economic responsibility, but, due to the freedom of navigation of merchant navy ships (the principle of freedom of the sea) (United Nations Convention on the Law of the Sea (UNCLOS 1982), it has been difficult to control the technical condition of ships that only pass through

specific waters (e.g., the Danish Straits and the “shadow fleet” of ships entering Russian ports). On the other hand, ships that do not meet the required technical requirements continue to operate; they cannot enter many ports, but their presence is tolerated in some areas. There is no possibility of an international ban on the operation of ships deemed (from the point of view of IMO regulations) to be unfit for safe navigation, only their entry into specific ports can be limited.

2. IMPLEMENTATION OF THE INTERNATIONAL SAFETY MANAGEMENT CODE FOR THE SAFE OPERATION OF SHIPS AND POLLUTION PREVENTION

2.1. Requirements for implementation of the ISM Code

The three basic principles of implementing this code are: safety of people on board, the ship and the cargo being carried, and the natural environment [Szwed and Bea 2000]. Implementation of the code through the implementation of a Safety Management System (SMS) by the shipowner and the vessels in its fleet requires the undergoing of an audit process by an authorized institution and obtaining the appropriate Safety Management Certificate (SMC) issued by the maritime administration of the ship's flag state, which is mandatory [IMO 2007; 2013].

The ISM Code requires reporting of hazardous or potentially hazardous events on ships, and now also applies to cybersecurity threats. These reports should be sent to appropriate databases by the shipowner. They are intended to be used for analysis, allowing for the development of response proposals. Preventive actions should then be implemented in the Safety Management System and practiced by the ship's crew. Due to insurance companies' potential access to these databases, many shipowners do not submit reports of these events or significantly limit the number submitted. European Maritime Safety Agency (EMSA) databases are significantly more extensive than others, suggesting that the waters around Europe are more dangerous than other waters, which is in fact not true. Therefore, the IMO has been adopting guidelines in successive years [IMO 2007; 2008; 2013; 2021; 2025] aimed at standardizing reports, the data entered therein (e.g., near-miss events), and mobilizing such actions. Classification societies play a crucial role, as they conduct audits to ensure the proper functioning of the Safety Management System.

2.2. Preliminary steps to obtain the Safety Management Certificate

The basic initial action taken by a shipowner was and remains the acquisition of an ISO 9001 Certificate, a quality standard. Developing an appropriate structure for the shipowner's department, ensuring proper document flow between the shipowner's

services and the ship's crew, and demonstrating that the actions taken does ensure compliance with the quality standards allowed for an audit by an institution authorized by the ship's flag state, and obtaining a relevant certificate. After developing and positively assessing the operation of the Safety Management System (SMS) in the shipowner's department and on all of the shipowner's ships, the shipowner could apply for an audit to verify this system and, upon positive assessment, they were then awarded a Safety Management Certificate (SMC). The shipowner held the original certificate, and copies were kept on each ship (all other ship documents must be originals on board). The validity of the SMC is a condition required for the ship's operation. If the shipowner loses this certificate, all of its ships will be detained in the nearest ports they enter.

2.3. The validity of the Safety Management Certificate

In addition to the numerous ship documents required for sailing, depending on the ship type, a copy of the shipowner's Safety Management Certificate is required. It is valid for a maximum of 5 years from the date of issue, but periodic audits (e.g., annual, intermediate after 3 years) are necessary to maintain its validity. This requires the maintaining of document circulation, information flow between the shipowner and the ship (daily and monthly reports), and the ability to maintain uninterrupted communication with the Designated Person Ashore at all times and every day of the week (24/7). A key element in achieving a positive audit is confirmation of the operation of the Safety Management System [IMO 2008; 2021; 2025]. Simulated actions were also undertaken for this purpose. This constitutes one of many significant threats to the proper implementation of the ISM system. This is a pathology that distorts the very idea of the ISM system, but is a fairly common practice. If such simulated activities (e.g. artificially forcing the circulation of information, fictitious training and crew training) are the main activities, it means that the system is not working, although this is difficult to detect during an audit inspection.

3. COOPERATION WITH INSTITUTIONS RELATED TO SHIPPING

Shipping involves many expenses and responsibilities for shipowners, and the introduction of the ISM Code has forced numerous changes in this market. The system of inter-institutional links, established many years earlier, has not changed significantly (Fig. 2). However, additional obligations have been added, significantly increasing bureaucracy and the time required to complete these tasks. The perception of such activities as unnecessary and time-consuming is another threat to the functioning of the ISM system [Lappalainen, Kuronen and Tapaninen 2012; Guevara and Dalaklis 2021; Supratman, Hadiningrat and Wardani 2025].

They will then be performed without due commitment, bureaucratically, without understanding the purpose of such activities, and as a result, their value will become almost nonexistent. The shipowner's established procedures (there are now around a hundred of them) must be periodically updated, specifying their validity period, and then, after their use, properly archived.

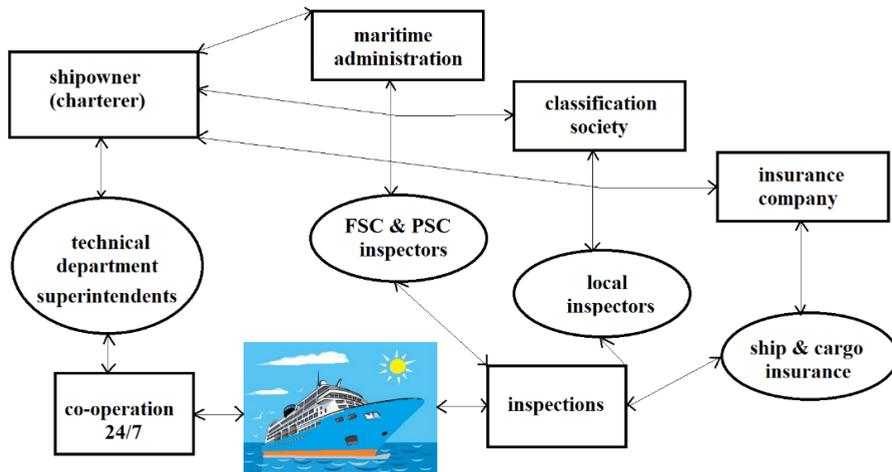


Fig. 2. Connections between institutions enabling navigation

Source: own study.

The shipowner is obligated to cover the costs associated with:

- maintaining the vessel's good technical condition, periodic inspections and repairs, and ongoing operation (fuel, lubricant, spare parts, etc.);
- shipyard repairs, docking, and equipping the vessel to meet additional safety requirements for ship operation, environmental protection, etc.;
- costs of annual and periodic inspections, for confirmation and renewal of the five-year class;
- costs of obtaining documents authorizing the vessel to sail;
- insurance of the vessel and the cargo carried;
- costs of crew subsistence, social conditions on board, meals, insurance of crew members (in the event of illness, accidents, or death of crew members), and transportation of crew members to and from the vessel (repatriation);
- costs of port entry and stay, towing services, passage of the vessel through locks, canals, etc.;
- tonnage taxes, flag state taxes, income taxes on business activities, and taxes on the quantity and level of atmospheric emissions (e.g., ETS, European Tax System), etc.;
- maintaining a shipowner's office.

The costs of acquiring new or existing ships are usually not fully deductible from income (this depends on the tax regulations of the flag state), but ship depreciation amounts are considered, which allows for a reduced tax burden.

To perform these tasks, a shipowner must employ specialists in specific industries in the shipowner's office. Shipping activities must generate financial benefits, which allow for maintaining operations and a presence in the shipping market, company development, etc. This poses a significant challenge in the face of rising costs and, consequently, can give rise to a number of undesirable consequences and threats [IMO 2024; Syuhada and Dinariyana 2024].

4. UNDESIRABLE ACTIONS AND THREATS TO NAVIGATION SAFETY

Shipping involves numerous risks to the health and life of the crew, the safety of the ship and cargo, and the marine environment. Regulations introduced in this market are intended to minimize these risks and/or effects. To enhance the safety of ships, crew, and shipping, the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) entered into force on 1 July 1998. On 27 June 2002, Regulation (EC) No. 1406/2002, at the initiative of the European Parliament and the Council of the European Union, established the European Maritime Safety Agency (EMSA) (entered into force on 9 July 2002). This agency prepares annual reports on actions taken (e.g., IT networks), cooperation between countries, the current situation in the shipping market, safety (acts of piracy), cybersecurity [EMSA 2024b], and a list of dangerous incidents, accidents involving ships, accidents resulting in injuries, serious bodily harm, fatalities, and maritime disasters [EMSA 2024a; b]. These documents demonstrate the scale of maritime threats and the level of safety. The analysis of annual reports allows for an assessment of the effects of actions undertaken by EMSA and the processes of change taking place in the shipping market.

5. COMMENTS TO THE CURRENT CONDITIONS IN THE SHIPPING MARKET

Competition in the shipping market has always existed. The winner was the one who brought the cargo to its destination port the fastest and safest, and above all, obtained financial benefits from it. The primary goal of these actions is profit, and the shipping market is no different from other economic activities. Basing actions solely on the primary goal – financial profit – usually leads in the wrong direction. Due to the significant costs of operating a ship and maintaining all activities related to maintaining its good technical condition, various attempts exist at various levels to reduce and limit these costs, to generate additional private income (theft, corruption),

and to engage in many other activities in this field. Many would like to profit from this "pie" as much as possible, including obtaining a larger "piece." This discussion ignores the possible theft of shipowners' assets (equipment, spare parts, fuel, tools, etc.). Attempts to find savings (after assessing the balance of benefits and costs) are undertaken in many areas, one of these (recognized by maritime administrations and classification societies – CS) being the use of a Planned Maintenance System (PMS) on ships, developed by ship equipment manufacturers. This system allows for a significant number of scheduled periodic inspections to be performed by the ship's crew under the supervision of a department manager (in the engine department, this is the chief engineer officer). Such reports can be uploaded to the CS website, which contains all important information regarding issued documents, their validity, etc. The shipowner bears the costs of using the PMS, with specific authorized personnel having access to it and the ability to verify entries, while entries can be made by ship's crew members based on individual passwords, ensuring the identity of the person who made the entry. A properly maintained system allows for a reduction in the scope of inter-class and class repairs, significantly reducing repair costs (savings for the shipowner).

Consequently, there is strong pressure on department managers to complete such reports within a specified timeframe, sometimes with the knowledge (the shipowner's technical department) that actual inspections have not occurred. Here, department managers bear the greatest responsibility for reliable operations and not succumbing to pressure. Unfortunately, the largest problem can be seen with the reliable operation of the shipowner's technical department. Sometimes, random people are assigned there (this should not be the case, but ideally, these should be individuals with years of experience at sea in officer positions who, due to age, health, or family circumstances, no longer wish to be part of the ship's crew), for whom other goals are more important. Some examples of inappropriate actions by technical superintendents include:

- inadequate preparation of the scope of the repair (lack of detailed specifications), limiting the scope of the repair to the minimum necessary without considering the opinion of the ship's crew and their actual knowledge of the ship's technical condition;
- purchasing inappropriate spare parts (inappropriate, used, uncertified);
- refusal to purchase necessary spare parts, replacement filter elements, lubricants, preservatives, cleaning agents, marine chemicals, etc.;
- selecting the ship repair yard offering the lowest price for the ship's repair despite negative reviews (e.g., lack of experience in repairing a specific type of ship), poor repair conditions, lack of experienced shipyard workers, lack of repair facilities, lack of cooperation with other service companies, etc.;
- making the decision dependent on the expected amount of bribe from the shipyard, service company, etc.;

- selecting the incorrect service company (through acquaintances, or even family ties), which will not perform the service properly (without financial consequences for them), leaving the problem to be resolved by the ship's crew or go unresolved;
- fraud (concealing the source of origin) concerning the lack of certification for important spare parts requiring a CS certificate;
- forcing the ship's crew to enter false information in the ship's documents;
- attempts to bribe the CS inspector(s) to confirm that work had not been carried out or to conceal the poor technical condition of certain ship equipment or systems, resulting in a significant deterioration in the ship's operational safety;
- and many other reasons.

Such actions do not only concern the operating rules for ships under "flags of convenience." They are more frequently inspected by port state inspectors. When entering European ports, American ships must be in proper technical condition. Increasingly, many irregularities involve large shipowners whose ships are under the technical supervision of recognized CS, with a very good reputation in the shipping market. Despite this, in some situations, improper actions are taken (with the knowledge of superiors, who never admit to it), which can result in serious ship breakdowns, environmental disasters, and threats to the health and lives of seafarers.

From my own observations and conversations with ship engineering officers who were my students and then attended qualification courses for higher officer ranks, or on professional forums, I hear that significant technical and technological advancements have been made in ship equipment. This requires training and continuous skill development. This allows the maintenance of ship operation at a level that ensures the safety of the ship and crew (this is a one-sided view). However, the qualifications of technical officers, service companies, and, increasingly, shipyards, have not kept pace with this progress. Money plays a significant role here, and it is what is at stake. Furthermore, a lack of accountability for the work performed, and even a lack of basic technical knowledge, even in companies with appropriate certifications, is increasingly common.

6. SUMMARY AND FINAL CONCLUSIONS

Shipping has always posed many risks. Technological advances and legal regulations governing the approval of ships for navigation have significantly reduced many risks and improved the safety of shipping, ships, their crews, and passengers. Because waterways are the cheapest (and least energy-intensive) form of transport, approximately 80% of global transport (measured by cargo weight and distance) is carried out by international shipping. This has, thus far, fostered the globalization of the world economy.

A number of threats have been identified resulting from the inappropriate role of certain entities involved in the decision-making process that ensures the proper maintenance of ships.

Proper implementation of the ISM Code and its full implementation at every level, from management, supervision, and control to direct ship operation, can provide conditions conducive to maintaining or raising standards ensuring the safety of shipping, ships, and cargo, as well as the health and safety of crew (for ships still manned), and above all, reducing the environmental impact (pollution of the seas, oceans, and atmosphere) resulting from shipping.

The introduction of the ISM Code in international shipping has already brought about numerous changes, most of them beneficial to maritime safety and the environment. Opponents' accusations of a significant increase in bureaucracy, and, consequently, the time spent operating the system, are true. The goal should be proper operation with maximum benefits, and excessive bureaucracy should be reduced. Nowadays, in the internet age, it is possible to send automatic reports on ship operations, and shipowners can be kept up-to-date (notified) on the current situation on board.

The IMO's introduction of new guidelines is a response to emerging threats. The ISM Code is constantly evolving and requires implementation into the Safety Management System. The validity of this code was confirmed at the time of its introduction, as it was incorporated into the SOLAS convention as additional Chapter 9.

REFERENCES

- EMSA, 2024a, <https://www.emsa.europa.eu/damage-stability-study/items.html?cid=77&id=5352> (03.06.2025).
- EMSA, 2024b, <https://www.emsa.europa.eu/publications/item/5484-emsa-facts-figures-2024.html> (03.06.2025).
- Guevara, D., Dalaklis, D., 2021, *Understanding the Interrelation between the Safety of Life at Sea Convention and Certain IMO's Codes*, TransNav, vol. 15, no. 2.
- IACS, 2025, <https://iacs.org.uk/> (03.06.2025).
- IMO, 2007, *Guidance on the Qualifications, Training and Experience Necessary for Undertaking the Role of the Designated Person under the Provisions of the International Safety Management (ISM) Code* (MSC-MEPC.7/Cir.6).
- IMO, 2008, *Guidance on Near-Miss Reporting* (MSC-MEPC.7/Circ.7).
- IMO, 2013, *Revised Guidelines for the Operational Implementation of the International Safety Management (ISM) Code by companies* (MSC-MEPC.7/Circ.8).
- IMO, 2021, *Maritime Cyber Risk Management in Safety Management Systems* (Resolution MSC.428(98)).
- IMO, 2024, *ISM Code-related Matters for the Consideration of MSC 109*, MSC 109/19/7.
- IMO, 2025, *Guidelines on Maritime Cyber Risk Management* (MSC-FAL.1/Circ.3-Rev.3).

- Lappalainen, F.J., Kuronen, J., Tapaninen, U., 2012, *Evaluation of the ISM Code in the Finnish Shipping Companies*, Journal of Maritime Research, vol. IX, no. 1 pp. 23–32.
- SOLAS, 1974, Convention. Safety of Life at Sea Convention as amended.
- Supratman, A., Hadiningrat, K.P.S.S., Wardani, F.F., 2025, *Implementation of Occupational Health and Safety (OHS) Standard Operating Procedures (SOPS) to Improve Work Safety on Tanker Ships: A Case Study on MT FTM 24*, Journal Cakravala Akademika, vol. 1, no. 8.
- Syuhada, D.N., Dinariyana Dwi Putranta, A.A., 2024, *Evaluation of International Safety Management (ISM) Code Implementation using Quantitative Descriptive Methods and Quality Function Deployment on Passenger Ferries*, IJEBD, vol. 7, no. 1.
- Szwed, P.S., Bea, R.G., 2000, *Development of a Safety Management Assessment for the Safety Management Code*.

The article is available in open access and licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0).