



## Historical Insights into Designing International Maritime Safety Management Regulation

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### ABSTRACT

This paper is aimed to explore historical insights into the designing of the maritime safety regulations and provides a summary of the deliberations and activities at the IMO during the development of these maritime safety management regulations in the context of shaping them through influences of various incidents and actors. The study reveals an initial cautionary approach later getting a momentum towards consensus for necessity of mandatory provisions with verifiable evidence and enforcement. The prominent role played by the UK and the Nordic countries in bringing into focus important nuances in these regulations and swiftly processing them for early adoption and implementation is also evident. This paper is also aimed to serve as an archival record and documentation of various activities, deliberations and work carried out at IMO related to this subject, for reference of scholars for posterity. No such concise narrative or summary is available with authenticated official IMO documents sources.

### 1. Introduction.

The adoption of the International Safety Management (ISM) Code is considered one of the most important developments in maritime safety by focusing on the operational practices and organizational role in management of ship operations (Anderson, 2015). It is widely known how the inquiry post-accident of UK ferry 'Herald of Free Enterprise' highlighted the lackadaisical attitude of the management of the shipping company and its direct impact on ships safety, and led to the initiatives for development of the ISM Code (Gill & Wahner, 2012).

However, the process of the finalization of international regulations related to the safe management of ship operations not only encountered initial skepticism during negotiations at IMO but also witnessed divergent approaches in addressing the requirement.

Interestingly, very less focus has been given to these deliberations and process of adoption of these maritime safety regu-

lations to study the development strategy and influences of ongoing maritime scenario at that time. The nuances related to initial focus of safety management regulations on only passenger ferries, general lack of enthusiasm for instituting mandatory provisions, overall cautionary approach towards pathbreaking and radical provisions related to direct and identifiable role of companies, e.g., 'designated person,' operations book, etc. and recognition of importance of verifiable evidence of compliance through audits and certification provisions provide an interesting overview.

Therefore, a commentary on the work by the International Maritime Organization (IMO) and contribution of various approaches in shaping the final outcome of the maritime safety management regulations provide interesting lessons. It is appropriate to examine now, with the benefit of hindsight, as it gives us opportunity to look into the broad perspective of developing the maritime safety management regulations. This opportunity would be missing while the work was ongoing during this process at that time.

Thus, this paper is aimed to explore historical insights into the designing of the maritime safety regulations and provides a summary of the deliberations and activities at the IMO during the development of these maritime safety management regula-

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tions. The detailed examination of all documents and records of various meetings of the Committees, working groups, correspondence groups and Conference documents have been undertaken for this study. Such detailed analysis of the proceedings of IMO work for development of maritime safety management regulations has not been attempted earlier.

This paper is also aimed to serve as an archival record and documentation of various activities, deliberations and work carried out at IMO related to this subject, for reference of scholars for posterity. No such concise narrative or summary is available with authenticated official IMO documents sources.

The maritime safety management regulations for this paper are considered to consist of relevant IMO Assembly Resolutions, ISM Code and SOLAS amendments.

## 2. Research Question.

The paper is primarily focused on the question – How the international maritime safety management regulations were designed and what were the influences in finalizing the text of these regulations?

The aim is to present historical insights into the development of maritime safety management regulations in the context of shaping them through influences of various incidents and actors.

## 3. Method.

The overall analytical framework applied for answering the research question is by broadly applying qualitative research strategy. The ‘document analysis’ is used in this study as a tool for systematic review and evaluation of identified documents to gain understanding and develop empirical knowledge, and subsequently the data is examined and interpreted.

The data from IMO records from 1987 post-accident of UK ferry ‘Herald of Free Enterprise’ till adoption of the SOLAS amendments for inclusion of Chapter IX in 1994 has been used in this paper. This list also includes the submissions of the member states of IMO apart from the proceedings or reports of various relevant meetings of committees, working groups and conferences at IMO. All such documents used in this study are available to be accessed by the public.

## 4. Initial Efforts by UK post-accident of Herald of Free Enterprise.

During the 54th Session of the Maritime Safety Committee (MSC) of the International Maritime Organization (IMO) held from 27 April to 01 May 1987, the UK delegation informed about the tragic loss of the ro-ro ferry ‘Herald of Free Enterprise’, which capsized without warning off the port of Zeebrugge, Belgium on 06 March 1987 with heavy loss of lives (IMO, 1987a). The measures being taken or planned to avoid the recurrence of this type of casualty were also outlined.

Interestingly, the UK specifically pointed out that the preliminary investigation suggested that though the cause of the

capsize of the vessel was an inrush of water through the bow loading doors, there was no evidence available to suggest that this was due to any fundamental fault in the design of the ship (IMO, 1987b). Thus, it provided a hint that the cause was something not very apparent as technical failure.

The UK informed that the UK Marine Directorate had embarked on a programme of checks on ro-ro ships leaving UK ports to ensure that all loading door mechanisms were in working order; that officers and crew were aware of the operating procedures; that all openings in the hull and superstructure were closed before proceeding to sea in accordance with statutory requirements; and that recommendations of safe practice are observed (IMO, 1987b). In addition, owners of ro-ro ferries have been advised to fit warning lights on the bridge of the vessels to show whether or not the car loading doors are properly closed. Incidentally, the UK also informed that it was considering making this a statutory requirement.

During the discussions in the MSC, some countries referred to the human factor which should be considered in deciding to what extent the safety of ro-ro ships should be catered for by operational procedures and by the design (IMO, 1987c). The MSC readjusted its work programme to give priority to the safety of ro-ro ships.

UK demonstrated its seriousness in prioritizing action on the deficiencies for safety of ro-ro vessels based on the investigation into this accident by expediting the corrective actions to be undertaken through IMO. It quickly submitted the proposals for consultation with other IMO members for amendments to SOLAS in July 1987 about technical improvements related to the integrity of hull and its superstructure, damage prevention and control, and emergency lighting (IMO, 1987d). The full report of the investigation was also shared with IMO in September 1987 (IMO, 1987e).

While the draft amendments and the formal explanation about the need were first circulated through letter, they were formally submitted by UK in October 1987 for consideration of the 15th Session of the IMO Assembly (IMO, 1987f).

The proactive stance of UK was evident as they proposed extra sessions of concerned sub-committees, MSC and other preparatory work, and agreed to bear the additional costs aiming to prepare these amendments for adoption in the upcoming Diplomatic Conference of SOLAS in 1988 (IMO, 1987f). In addition, with the objective of enhancing the safety of passenger ro-ro ferries, it also made available one million pounds for research into the stability and safety of these vessels.

It is interesting to note that almost all the recommendations steered by the UK for safety of ro-ro vessels were related to the technical or operational requirements. The human factors and the role of shore organizations for safe management of ships operations were yet to be highlighted in the corrective actions envisaged.

## 5. Recognition by International Community for Maritime Safety Management Regulations.

However, the focus on these issues began to emerge during the 15th Assembly in November 1987, which agreed with the

UK proposals and requested MSC for appropriate actions. Further, the Assembly recognized that human frailty and error was the single major cause of maritime accidents, and requested the MSC to prepare, as a matter of urgency, guidelines, wherever relevant, concerning shipboard and shore-based, management procedures to better ensure safe operation of passenger ro-ro ferries (IMO, 1987g). This decision was incorporated in Resolution A.596 (15) on 'Safety of Passenger RORO Ferries' adopted by the Assembly (IMO, 1988a). Thus, this Resolution not only requested the MSC to take action for SOLAS amendments but also develop urgently the guidelines for safe management of operations of ro-ro ferries.

Incidentally, the increased recognition of this issue was already evident with the statement of the IMO Secretary General during the opening of the 15th Assembly Session on the theme for the 1988 World Maritime Day of 'Shipboard management for maritime safety and pollution prevention' (IMO, 1987g).

Accordingly, a new item for work was added to both MSC and the Marine Environment Protection Committee (MEPC) and it was suggested that it could be pursued jointly with support by international organizations representing the shipping industry (IMO, 1987g). It was also suggested that this might include the development of guidelines or manuals which may be employed by seafarers, shipping companies, Governments, and others, who are involved in shipboard and shore-based management, in order to ensure that the ship is operated safely in compliance with the requirements of conventions relating to maritime safety and pollution prevention. Accordingly, this work was incorporated in the Resolution A.631 (15) on 'Long-Term Work plan of the Organization' as specific objectives for MSC and MEPC respectively (IMO, 1988b).

## 6. Preliminary Efforts at IMO to develop Maritime Safety Management Regulation.

The issue was further progressed as draft guidelines were prepared by a consultant from Marine Safety Services Limited in February 1988, at the request of the IMO Secretary General, as a basis for the work of the MSC (IMO, 1988c). The draft was prepared in consultation with the IMO Secretariat and the shipping industry. These Guidelines broadly defined increased focus on safety of ships operations by shipping companies through commitment from top management, qualified and experienced manager responsible for seaworthiness and safety, and regular audits for safety and operational procedures.

Meanwhile, the UK submitted the draft amendments of SOLAS for ro-ro passenger ferry safety in December 1987 for consideration of the 55th Session of the MSC. Apart from additional provisions related to stability, watertight integrity, means of escape, etc., a new chapter II-3 was proposed (IMO, 1987h). This new chapter was called 'Operational Procedures - Role of Management Ashore'. The new regulations proposed designation of a person ashore by shipping companies with responsibility for monitoring the technical and safety aspects of the operation of the ships and to provide such shore-based support and assistance as appropriate. Further, it also proposed that operating manuals prepared and maintained by owners be carried

by ships about certain designated activities onboard. MSC resolution would specify headings and core requirements and responsibility for various operations for these operating manuals.

Subsequently, draft IMO Guidelines for the production of operating manuals to be adopted and promulgated by MSC, was submitted by the UK in February 1988 for consideration of the 55th Session of the MSC (IMO, 1988d). It was suggested that IMO Guidelines should not go into great detail and only indicate an acceptable outline for the ship owner to follow, in setting out his full requirements. There were two significant aspects included in the draft Guidelines. Firstly, it proposed that the manual should include the name of the person designated ashore to monitor the technical and safety aspects of the ship's operation. Secondly, the operating manuals must not reduce the authority of the master to take any steps and issue any orders for ensuring safety of ship. In addition, broad headings were mentioned as guidance for drafting various chapters and contents in the manual.

The proposals of the UK received mixed responses from other countries. The United States recognized the initiative of the UK in proposing, for the first time, provisions formally identifying shoreside management responsibilities with regard to ship safety (IMO, 1988e). Further, it recommended that the proposed operating manual and shoreside management provisions be extended to include all ships, instead of being restricted to only ro-ro ferries, as it could bring potential benefits. Netherlands while supporting the proposal, suggested that the industry should be invited to develop the guidelines for operating manual and then IMO can scrutinize and recommend their use (IMO, 1988f).

Though USSR expressed few reservations about the proposals related to technical measures, it supported the idea of new chapter of SOLAS on operational procedures and recommended to enlarge it to cover all ships and not only ro-ro ferries (IMO, 1988g).

Recognizing the importance of the matter, the MSC during its 55th Session, formed a Working Group to examine the development of 'Guidelines on management for maritime safety and pollution prevention'. The Committee agreed that these guidelines should apply to all ships. It is to be understood here that these guidelines are distinct from the operating manual and its guidelines related to passenger ro-ro ferries linked to the UK proposals. The work of the working group was consequent to the IMO Assembly Resolution A.596 (15) and not about the UK proposals.

Sweden, also the Chair of the Working Group, suggested that the 'Code of Good Management Practice in Safe Ship Operation' prepared by International Chamber of shipping (ICS) and International Shipping Federation (ISF) should also be taken into consideration when developing IMO guidelines. Incidentally, this Code was shared to the 47th Session of the MSC in 1982 by ICS and ISF (IMO, 1982).

## 7. Joint work by MSC and MEPC.

Based on the Working Group recommendation, the MSC also recommended that a joint MSC/MEPC Working Group be

formed during the next 56th Session of MSC to carry out the work on these Guidelines (IMO, 1988h). Incidentally, an ad hoc working group examined the UK proposals and amendments to SOLAS separately, though the MSC did not consider its recommendations about operating manual due to paucity of time (IMO, 1988i).

Meanwhile, the MEPC considered the draft guidelines for shipboard management prepared by consultant at its 26th Session in September 1988 and concurred with the proposal of MSC to establish a joint Working Group to work on these guidelines (IMO, 1988j). It also forwarded the note submitted by the International Association of Independent Tanker Owners (INTERTANKO) at MEPC. for consideration by the Working group, which brought out the skepticism about the need for any new regulations, (IMO, 1988k).

A revised version of the IMO Guidelines was submitted by the Nordic countries recommending that the guidelines should be very concise and to the point to maintain flexibility in operation of ships and to meet the requirements of differing ship-owning and ship-operating structures (IMO, 1988l). International Association of Classification Societies (IACS) also submitted few amendments to the draft guidelines focused on the classification of ships and the role of Classification Societies (IMO, 1988m). Oil Companies International Marine Forum (OCIMF) suggested that the format of the 'Code of Good Management Practice in Safe Ship Operation' prepared by ICS and ISF could be used which can be suitably reviewed and updated. While ICS and ISF observed that the draft under consideration was too detailed and recommended that guidelines should be clear and concise.

These submissions were considered by the Joint MSC/MEPC Working Group, under the chairmanship of Sweden, during the 56th Session of the MSC in October 1988 (IMO, 1988n). The draft submitted by the Nordic countries was used as basis for discussion. UK proposal to designate a senior person in management to be specifically responsible for safety and environment protection within the company, though supported by Sweden, was not agreed by group. It was due to the view that there was a widely different nature of shipping company operations, and therefore, individual companies should decide how best to select the most suitable arrangements.

The group prepared the draft Assembly Resolution and the draft Guidelines for submission to the MSC for consideration.

While deliberating on the report of the Joint Working Group, the MSC carried out minor revisions in the text of draft Assembly Resolution and the draft Guidelines (IMO, 1988o). However, the MSC agreed to consider finalization of these drafts in the next 57th Session of the MSC and also recommended sharing of the drafts to MEPC for consideration in next 27th Session and comments.

Incidentally, the observer from INTERTANKO supported the development of concise guidelines and suggested that they should not reduce the responsibility of the master for safety and pollution prevention (IMO, 1988o).

It is important to highlight that the United Kingdom delegation reiterated their concern at the MSC, also expressed in the Joint Working Group, at the omission from the draft guide-

lines of any reference to a person in senior management within the company being given specific responsibility for safety and environment protection (IMO, 1988o).

Incidentally, the MSC decided that it was premature to adopt the UK proposed new Chapter II-3 on 'Operational procedures – Role of management ashore' in SOLAS and referred the documents related to guidelines on operating manuals and other items to the joint MSC/MEPC working group for consideration (IMO, 1988o). Subsequently, the UK proposal for operating manual was also not agreed to by the Joint Working Group, though it recommended further consideration at next MSC session and invited comments from members on the question of whether or not an operating manual, as proposed by UK, was necessary (IMO, 1988n).

While expressing regret at this development at the MSC, the UK suggested expansion of the text in the proposed Assembly Resolution to include a mention about clearly setting out instructions and guidance for those charged with their operation. The same was agreed by MSC.

It may also be relevant to note here that during the MSC, the UK also shared a copy of the national regulations promulgated related to provisions of operations manual (IMO, 1988p). These regulations not only defined details about the manuals but also included comprehensive provisions about 'Designated Person' (UK,1988). It specifically mentioned that the owner of every ship shall designate a person who shall be responsible for monitoring the safe and efficient operation of the ship. This person not only be provided with sufficient authority and resources, and direct access to the owner, but also be having appropriate knowledge and experience of ships operations. And most importantly, the designated person shall be named in the operations book.

Therefore, these regulations could be considered as pioneers in establishing several essential elements in the regulatory framework of the evolving international maritime safety management regulation. Ironically, despite the best efforts by the UK, the significance of such specific measures to ensure safety of ship operations were not recognized in the deliberations at IMO.

The MSC during its 57th Session in April 1989, considered the draft Assembly Resolution and the draft 'Guidelines on Management for safe Ship operation and Pollution Prevention'.

The MSC agreed that no specific reference should be made to a designated person ashore or a person in senior management being given specific responsibilities for safety and environment protection (IMO, 1989a). The United Kingdom expressed concern at the MSC decision to omit any reference to person, persons or department within the Company being given specific responsibility for safety and environmental protection. In their view, the responsibility ashore must clearly be identified within the management structure of companies operating ro-ro passenger ships on intensive schedules and carrying large numbers of passengers. This was also supported by Canada and International Confederation of Free Trade Unions (ICFTU).

The working group worked on the final drafts and submitted them to MSC for consideration (IMO, 1989b). The MSC unan-

imously approved the drafts for submission to the 16th IMO Assembly.

Resolution A.647 (16) on 'IMO Guidelines on Management for the Safe Operations of Ships and for Pollution Prevention' was adopted by the Assembly during the 16th Session in October 1989 (IMO, 1989c). Interestingly, the Assembly was informed by Sweden of a joint project in Denmark, Finland, Iceland, Norway, and Sweden on the implementation of the IMO Guidelines, the purpose of which was to gain experience in using the Guidelines and to produce a model that may support the industry in the development, implementation and assessment of their safety and environment protection management. A report on the project, which was expected to be completed by February, 1990, was to be submitted to the 58th Session of the MSC (IMO, 1989d).

## 8. Thrust to Improve Safety Management through Mandatory Legislation.

During the 58th Session of the MSC in May 1990, the Secretary General referred to the fire accident onboard Scandinavian Star and called for continuing need to strive for higher standards of safety in ships engaged in ferry services (IMO, 1990a). Norway informed that pending the outcome of the official investigation, an internal review of national and international regulations had resulted in short term action being taken to require passenger lists for all voyages in excess of three hours and to step up Port State Control of both passenger and cargo ships. The internal review had also revealed the need to make resolution A.647(16) mandatory.

### 8.1. Lessons learnt from Scandinavian Star Disaster.

Thus, there was increasing recognition about the importance of mandatory regulations on ship management in ensuring safety of ships operations. This became more clear after Norway submitted the recommendations made by the Official Investigation Committee to the 59th Session of the MSC in May 1991. Amongst the principal recommendations for improving safety and to prevent recurrence of such incidents, organizational requirements for ship owners regarding safe operation of ships were included apart from other measures for technical safety. Incidentally, the report highlighted that the disaster revealed various forms of human errors (IMO, 1991a).

It also highlighted sectoral approach in considering and implementing measures of safety of shipping where each country considered its own interests. Interestingly, it quoted from comments of representatives of the British marine administration as 'they felt that the experiences they had gained from the Herald of Free Enterprise disaster were largely regarded by other countries as being only applicable to the UK'.

The report repeatedly expressed views that maritime safety is clearly not only a question of technical factors, and the operational aspects also need to be subjected to better regulation and control. It recommended that the application of the principles laid down in IMO Resolution A. 647 (16) should be made compulsory and verification of such compliance by flag states should also be incorporated.

Based on the recommendations of the Official Investigation Committee, a proposal for mandatory requirements for a safety management system was submitted by Nordic countries at the 59th session of the MSC. It proposed a new chapter II-3 in the SOLAS titled 'Management for the Safe Operation of Ships' (IMO, 1991b). It is important to note here that this included for the first time, provisions for verification to ensure that the company and the shipboard management operate in accordance with the safety management system.

## 9. Other Developments impacting Development of Regulations.

Incidentally, the UK continued to pursue provisions related to the operations book and designated person ashore, which were omitted from Resolution A.647 (16), for their inclusion. It considered that both these aspects were very important in ensuring the safe operation of ships. Accordingly, it submitted proposals for amendments to Resolution A.647 (16) to incorporate these provisions both to MEPC (30th session) (IMO, 1990b) and MSC (59th Session) (IMO, 1990c).

MEPC during its 30th Session in November 1990 also recommended to the MSC to consider making the management requirements for oil tankers mandatory using Resolution A.647 (16) as a basis and amending the Resolution to include provisions proposed by the UK about operations book and designated person ashore (IMO, 1991b). Interestingly, it also recommended the MSC to consider means of monitoring the management structure.

A separate proposal for revision of the IMO Guidelines in Resolution A.647 (16) was submitted by the Nordic countries in the 59th Session of the MSC. It highlighted that many shipping companies were introducing principles of the quality assurance system of ISO 9000 series and the provisions in IMO guidelines in comparison were considered inadequate (IMO, 1991c). It submitted a detailed draft for amendment of the Resolution which incorporated material from the existing Resolution and also provisions adapted from ISO 9004 and 9001. Important provisions related to independent assessment and verification of implementation of management system by company, internal audits and management review & evaluations were included to ensure objective assessment of compliance to the guidelines.

Japan also developed a 'Safe Operation Code for Passenger Ship Operators' for voluntary compliance, which specifically mentioned the formulation of a 'safe operation booklet' and appointment of a 'safe operation manager' as the person ashore responsible for ensuring safety (IMO, 1991d). Japan shared this document with the 59th Session of the MSC and recommended that these provisions be also included in the international regulations given in Resolution A.647 (16). As these provisions were similar to the UK proposals, Japan supported their views for amendments to the Resolution.

The MSC agreed to examine all issues related to this matter including preparing a new Resolution to replace Resolution A.647 (16), proposed amendments to SOLAS, etc. and established a working group for detailed examination (IMO, 1991e).

## 10. Final Phase of Development of Regulations.

The working group recommended development of an International Code for the Safe Management and Operation of Ships and for pollution prevention and to include in SOLAS requirements for 'companies' to comply with the requirements of such a Code (IMO, 1991f). The Code would contain provisions on quality management requirements and safe operational requirements. Further, a preliminary proposed draft of SOLAS amendment for a new chapter 'Management for the Safe Operation of Ships' and draft outline of the International Safety Management Code were prepared.

The proposed SOLAS chapter included the requirements that the company shall designate a person ashore who shall be responsible for monitoring the safe and efficient operation of every ship (IMO, 1991f). Further, the provisions also catered for verification of compliance with the requirements of the Code by the Administration and making the Code mandatory. Similar provisions were also included in the draft outline of the proposed Code.

However, as an interim measure, a revision of Resolution A.647 (16) was also recommended and a draft was prepared for approval of the MSC. The revised draft also included provisions related to designated person ashore and operational documentation based on the UK proposals along with a list of suggested subjects for such documentation (IMO, 1991f).

The MSC agreed to consider these proposed amendments to SOLAS along with the Code, recommended by the working group, in its next 60th Session. However, a correspondence group was established with Norway as the Chair, to review and revise as necessary, the text of the Safety Management Code prepared by the working group. A joint MSC/MEPC Working Group was also recommended to be established to consider these drafts along with other matters related to the role of human element in maritime casualties (IMO, 1991e).

In addition, the MSC approved as an interim measure, until the new SOLAS chapter and related code are adopted, a draft revision of resolution A.647(16) on IMO guidelines on management for the safe operation of ships and for pollution prevention, for submission to the 17th Assembly for adoption.

Accordingly, Resolution A.680 (??) on 'IMO Guidelines on Management for the Safe Operation of Ships and for Pollution Prevention' was adopted by the Assembly during the 17th Session in October 1991 (IMO, 1991g).

The correspondence group prepared a comprehensive document of the draft of the proposed 'Safety Management Code' which included provisions about designated persons, development of plans for shipboard operations and verification and control (IMO, 1992a). However, there were still inconclusive deliberations whether the Code should be made mandatory or a voluntary instrument and was it possible to include this in SOLAS as amendment or it required a new instrument.

The report of the correspondence group was considered by the joint MSC/MEPC Working Group during the 60th session of the MSC in April 1992. The deliberations in the working group brought out interesting points on significant nuances in legal principles.

Japan and Greece, supported by other countries, were of the opinion that the SOLAS Convention was not the appropriate instrument in which to include a new chapter or annex dealing with management for the safe operation of ships, since SOLAS deals exclusively with ships rather than private shipping companies (IMO, 1992b). Interestingly, serious reservations were expressed by Greece as to the ability of Administrations to certify or verify the system unless this was done by the Government of the country in which the Company elects to conduct its business.

Further, there was no consensus on the ships to which the Code should apply on a mandatory basis, though it was agreed that it should apply to all ships on a voluntary basis. It prepared a provisional draft of the ISM Code based on the draft submitted by the correspondence group. It also prepared a preliminary draft for inclusion in SOLAS, another Convention or a new instrument related to requirements concerning management for safe operation of ships.

The MSC had referred the report of Correspondence Group and comments of members on its report, to the joint MSC/MEPC Working Group, subsequently invited the members to comment on the proposals of the Working Group and agreed to consider it in next 61st Session (IMO, 1992c).

While approving the report of the joint MSC/MEPC Working Group in general in the 61st Session in December 1992, the MSC agreed that the ISM Code for the time being be applied on a voluntary basis to all ships (IMO, 1993a). However, it also endorsed that the ultimate aim would be to make it mandatory for it to be done on a step-by-step basis. Accordingly, it directed the Working Group to look into the process of making ISM Code mandatory and recommend it for consideration at next 62nd Session of the MSC.

During the second meeting of the joint MSC/MEPC Working Group, detailed deliberations were undertaken on the issues and it prepared revised drafts of the ISM Code and the Assembly Resolution, to which it will be attached (IMO, 1993b). Though the Resolution included a mention that countries shall implement the Code on a national basis pending development of mandatory requirements in SOLAS. Incidentally, the observers of ICS and ISF informed the Joint Group of a joint initiative to develop industry guidelines to assist in the uniform application and implementation of Safety Management Systems (SMS), consistent with the ISM Code. The Working Group agreed to consider these guidelines for evaluation and inclusion in the ISM Code, if necessary.

The alternatives for mandatory implementation of the ISM Code due to various complexities were also deliberated in detail based on a paper prepared by the IMO Secretariat on the request of the Group. Subsequently, it was also recommended by the Group that the draft ISM Code be made mandatory only by means of inclusion of a new Chapter IX in the SOLAS and no other Convention was required to be amended.

The MSC during its 62nd Session in May 1993 approved in general the report of the second session of the joint MSC/MEPC Working Group and directed it to finalize the drafts under consideration (IMO, 1993c).

During its third meeting, the joint MSC/MEPC Working

Group finalized the text of the drafts of the proposed ISM Code and the Assembly Resolution. However, the industry guidelines were not submitted to the Group by the ICS and ISF as they were not yet finalized.

Recognizing that the proposed SOLAS chapter IX could be adopted at the SOLAS Diplomatic Conference which was proposed to convene in conjunction with 63rd Session of the MSC, the Working Group established a Correspondence Group with a view to finalizing the draft of the new chapter IX. The Chairman of the Joint Working Group was to coordinate the Correspondence Group and, if the effort was successful, Denmark, as a Contracting Government to SOLAS, would request the Secretary-General IMO to circulate the proposed text of new chapter IX for consideration and adoption at the Conference in May 1994 (IMO, 1993d).

The MSC during its 62nd Session, considering the report of the third session of the joint MSC/MEPC Working Group, approved the draft Assembly Resolution on the ISM Code with the Code as attachment, for submission to the 18th Session of the IMO Assembly [49]. It also noted the efforts of the Working Group to take advantage of the upcoming SOLAS Conference in trying to finalize the new Chapter IX on ISM Code through setting up of the Correspondence Group and circulate it in time for adoption during this Conference. Subsequently, the MSC agreed that these amendments should be considered for adoption during the proposed SOLAS Conference (IMO, 1993e).

Accordingly, Resolution A.741 (18) on ‘International Management Code for the Safe Operation of Ships and for Pollution Prevention (International Safety Management (ISM) Code)’ was adopted by the Assembly during the 18th Session in November 1993 (IMO, 1993f).

### 11. Adoption of SOLAS Chapter IX.

The draft text of the new SOLAS Chapter IX was submitted by Denmark to the SOLAS Conference directly and not discussed in the 63rd Session of the MSC (IMO, 1994a). The draft text was based on the deliberations and text agreed in the joint MSC/MEPC Working Group and was finalized in the correspondence group chaired by Denmark with comments from 11 out of 23 countries and 4 out of 8 other organizations (IMO, 1994b). The comments and suggestions mainly related to the date of application to various vessels and type of vessels it shall be applicable.

During the SOLAS Conference, some suggestions were also received on the draft text submitted by Denmark. Germany submitted that it was essential that verification of compliance with requirements of ISM Code and issue of certification were carried out by qualified bodies (IMO, 1994c). Without this, the intended benefit of mandatory introduction of the Code as well as anticipated gain in safety, would be greatly reduced. Further, Organization and authority authorized to act on behalf of Administration as auditor and issue certification, must at least fulfil criteria developed by the IMO. Thus, proposed regulation 4 in Chapter IX be amended to mention this in the text.

IACS while recommending some amendments about dates of entry into force, also suggested appropriate reference to Res-

olution A.739 (??) containing relevant standards for Recognized Organizations (ROs) to act on behalf of the flag states for the purpose of providing audits and certification of safety management systems, at relevant provisions in new chapter IX (IMO, 1994d). This was to ensure that consideration is given to identifying the qualifications which should be met by ROs.

The amendments related to the new Chapter IX of SOLAS were adopted in the Conference in May 1994 (IMO, 1994e).

### 12. Discussions and Interpretations of IMO Work for Designing Regulations.

The work for improvement in maritime safety post ‘Herald of Free Enterprise’ disaster was initially progressed in three tracks – firstly the technical related amendments for improvement of safety of ro-ro vessels, secondly shoreside management responsibilities with regard to ship safety and guidelines for operating manuals, and thirdly the ‘Guidelines on management for maritime safety and pollution prevention’.

The technical amendments were taken up in relevant sub-committees and progressed on for implementation. The work on these regulations at IMO is not tracked for this paper as the focus is only on safety management regulations.

The second issue was addressed through an Assembly Resolution, though not fully, as the provisions related to ‘designated person’ and ‘operations manual’ were not considered.

The third track broadly addressed overall safety management and later emerged as the key arena for comprehensive development of all-encompassing regulations holistically incorporating all related work at IMO.

The ‘Herald of Free Enterprise’ is commonly considered as the primary impetus for origin of the ISM Code or the maritime safety management. Though the significance of this incident cannot be discounted in bringing into focus this issue, it is found during this study that ‘Scandinavian Star’ was more significant in shaping important nuances of the regulations. Thus, it led to a decisive improvement in the overall maritime safety management regulatory framework and helped in laying the foundation of the current regulations.

This is evident through the fact that many important proposals of the UK were witnessing reluctance or hesitancy from the international community. However, post ‘Scandinavian Star’, there was greater acceptance of the need to consider them. It can also be argued that without this impetus, the provisions of maritime safety management could not have been mandatory and would have also lacked effective implementation and compliance.

One of the most interesting observations which is quite noteworthy, especially in hindsight, and evident from various documents at IMO, is the consistent and persevering approach of the UK in steering the development and implementation of necessary regulatory provisions related to the safe management of ship operations. Despite facing repeated nonchalant response to the proposals related to the ‘designated person ashore’ and the ‘operations book or manual’ for ensuring safe shipboard operations, the UK continued to bring these up for discussions in all IMO forums including MSC, working groups, etc.

Though they were considered by the UK to be an essential and necessary part of the improvements in safety management regulations along with other provisions, they could not convince their significance to other countries or the industry organizations. However, post the ‘Scandinavian Star’ disaster, both these requirements were quickly agreed on as part of the revised provisions.

Another significant issue was making the safety management provisions mandatory. The UK proposed it to be made mandatory and brought amendments to be considered in the text of Chapter II-3, however, this also did not see encouraging response with MSC deciding it to be premature at that stage. However, the ‘Scandinavian Star’ incident highlighted the need for mandatory compliance of the safety management provisions and accordingly, the focus was now deliberately shifted to include them in SOLAS for mandatory compliance.

In addition, the high commitment and recognition of the UK, about the necessity of these provisions to improve safety, was evident as they implemented them quickly into the national regulations.

Another interesting point was the speed at which things moved at the last leg of the process leading to the adoption of these regulations. The enthusiasm was astonishing, and the process was fast tracked, which is also evident as ISM regulations were brought directly to the Diplomatic Conference of SOLAS without going through usual process or normal procedure. It is interesting to observe that while other amendments adopted at SOLAS Conference in May 1994 (Article VIII, Chapter XI, etc.) were duly perused and approved at various forums including the MSC, only those amendments related to Chapter IX were directly put up to the Conference by the Correspondence Group for consideration and adoption. This surely expedited the process of approval and adoption.

Some other aspects about the new regulations could also be observed through this study. Interestingly, some member states were not clear or skeptical whether companies located outside a flag state will be under jurisdiction for audit and certification and how effectively they can be subjected to audits. Challenges expected in implementation were also brought out with lots of deliberations about the date of implementation or suggestions about phased implementation.

The industry initially was also reserved about the necessity of new provisions and introduction of safety management and its verification by Administrations, however, later, they also agreed for its implementation. Incidentally, ICS and ISF proactively worked towards development of guidelines on this subject for the industry to implement ISM Code even while the deliberations were progressing on the final draft of the regulations at IMO.

The need for verification of compliance of the safety management regulations by a company and their ships was also highlighted subsequently in ‘Scandinavian Star’ incident investigation and accordingly provisions were developed to address this.

## Conclusions.

The development and implementation of the maritime safety management regulations at IMO was a significant contributor in improving maritime safety. The role of the companies in safe management of ship operations was greatly enhanced through mandatory provisions in SOLAS.

The historical insights into the designing of these regulations at IMO reveals an initial cautionary approach later getting a momentum towards consensus for necessity of mandatory provisions with verifiable evidence and enforcement. The prominent role played by the UK and the Nordic countries in bringing into focus important nuances in these regulations and swiftly processing them for early adoption and implementation is also evident. The narrative and summarized content of this study is also useful for detailed study for future studies on the subject.

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