

# A Study on Ship Crews Safety and Manning

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**Abstract – Modern shipping is a highly international, multicultural and technological industry with strong demands on economic efficiency and profitability. The ship crews are multinational and a growing number of crew members come from emerging seafaring nations. Despite advances in technology, some 80 % of all accidents are, according to studies, caused by human error. This literature review focuses on safety issues related to the crews and gives examples of what kinds of errors are the most common to happen. Intercultural cooperation, communication, fatigue and the language skills of a seafarer are the most important issues that contribute to maritime safety on the individual level. The results show that more training in understanding other cultures is needed. Also improvements in teaching English to seafarers are suggested.**

**Keywords: Ship Crews, Safety, Manning, International, Technological, Industry, Economic, Profitability, Growing, Seafaring Nations, etc.**

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## INTRODUCTION

Manning can be referred to the minimum number of personnel needed to operate a ship safely according to the technical, managerial and legal requirements. This number, which forms the basis of demand of manpower, varies for different ship types, ages, and degrees of shipboard technology and qualifications of crew (Evans, 2005). The average number of seafarers working on each ship in a fleet is described as the manning level of the fleet for that company (Holt, 2008).

In the maritime sector, human error is mentioned as a factor in 90% of collisions at sea, and in 75% of shipboard fires and explosions. If this unpredictable type of human error is to be avoided, it is essential that the individual crew take responsibility for his own actions. To be safe the individual crew must understand the limitations under which he is working, and because it is easy to make mistakes, he must be willing to have his actions verified and checked either by himself (a vital habit) or by somebody else (good management) (Hoyland, 2006). A tragedy or terrible accident is never wanted. But, in reality they do happen. They are not intended to, but they do happen. Sometimes, it is the management fault, and sometimes it is the crew's fault (Kundu, et. al., 2007).

The shipping company must ensure that their crews are properly trained and experienced to be at sea, onboard a ship. A ship should never sail with a crew of students i.e. seafarers without the requisite knowledge and competence. The crew is

responsible for the ship, and the passengers. And the captain is responsible for all of them. The US Coast Guard says there have been over 30 accidents, involving ships, and shipping, in the last two years. According to them, this number should be much lower. They are calling it too many accidents, in a short period of time; many of these accidents could have been very much avoided.

Describing the potential hazards of seafaring, the Director-General of the ILO, Michel Hansenne stated that, "The dangers to which ship owners and governments are exposed are financial or political in nature, but seafarers are exposed to physical risks which threaten their very lives. Since 1994, 180 ships of more than 500 tons have been lost at sea, causing the death of 1,200 seafarers and many passengers. In the first six months of 1996, twice as many human lives were lost at sea than in the whole of 1995."

The Director-General also commended on the changes in the working lives of ship owners and seafarers` during the last 25 years, to include increased competition forced them to seek the lowest possible operational costs by re-registering their ships in the so-called "open" registers which tend to be more permissive on issues of taxation, safety, manning, licensing, inspection and management (Pestana, 2007). The increased use of manning agents according to him has contributed to making the legal and economic framework of the shipping sector ever more complex.

## REVIEW OF LITERATURE:

The International Labour Organization was created in 1919 to advance the cause of social justice and thus contribute to the establishment of universal and lasting peace through the promotion of social and economic well-being of the world's people by decent living standards, satisfactory conditions of work and pay, and adequate employment opportunities.

The aims and purposes of the organization were reaffirmed in the 1944 Declaration which lays guiding principles such as: labour is not a commodity; freedom of expression and association are essential to sustained progress; poverty anywhere constitutes a danger to prosperity everywhere; all humans beings, irrespective of race, creed or sex, have the right to pursue both their material well-being and their spiritual development in conditions of freedom and dignity, of economic security and equal opportunity.

Workers in few sectors experience the hardship and danger, which have been staple of the seafaring profession from time immemorial (Riel, 2010). The practice of drugging and kidnapping persons to press them into service as seamen, and the involuntary return to the ship of deserters are ancient forms of forced labour which still occur today in certain regions of the world. When compounded with beatings; withholding of provisions and medical care; unsanitary shipboard living conditions; refusal by masters or port authorities to allow shore-leave; under-payment or non-payment of wages; coercion; swindling; and abandonment in foreign ports, the downside of the seafaring profession is rather grim. For these reasons, numerous charitable and religious organizations, to succor seafarers, have existed since the early 19th century. The noble aims and important work of these institutions, particularly as concerns the dignity and social welfare of seafarers, cannot be overstated (Roger, 2008). The protection of seafarers' rights, however, remains a question of law and not of charity. At the end of the last century working conditions for seafarers are significantly better than they were when the ILO began its standard-setting activities in 1919. Some of this progress is clearly a result of the profound technological changes that have taken place in the maritime sector, although not all technological changes have necessarily improved the quality of life of seafarers. Technological advances in modern ships have blurred traditional distinctions, such as between engine and deck work, thus reducing manning and creating a need for polyvalent personnel.

An industry that was once labour intensive has become increasingly capital intensive. Modern freight-handling techniques, for example, have considerably reduced the turnaround time for many ships in port, resulting in less shore leave for

seafarers and more time spent at sea. With regard to labour standards, the improvement in the working conditions of seafarers, however, must be understood in terms of the tripartite structure of the ILO. Workers (seafarers), employers (ship owners) and Governments participate in the elaboration and adoption of maritime standards, along with a standing bipartite (ship owners and seafarers) Joint Maritime Commission which advises the Governing Body of the ILO on maritime issues. A significant feature and key to understanding maritime labour standards is both the ethos and the specificity of this sector within the ILO itself. From the outset (1920), the ILO has dealt with purely maritime questions separately. Consequently, the ship owners and seafarers themselves, i.e., the people who have first-hand experience of the sea and often share the same concerns as to the vital questions of safety of life at sea and protection of the marine environment carry much of this work out (Rodger, 2008).

Given the cost of a single accident at sea in human, economic and environmental terms, the common interest often prevails. Serious problems remain concerning the recruitment of seafarers, particularly from developing countries, where people are fleeing the worst forms of poverty and become victims of unscrupulous recruiters. They go to sea with little or no understanding of the terms and conditions of their service, or the rights and protection to which they are entitled under applicable national and international law. Numerous ILO Conventions and Recommendations, some dating from the 1920s, protect seafarers' human rights in the workplace. Some of these instruments (freedom from forced labour, protection of the right to form and join trade unions and to bargain collectively) are fundamental rights, which extend to workers in most sectors.

**Concerning the Recruitment and Placement of Seafarers:** This is necessary to avoid different interpretations and implementations of its provisions by the various member states, thus defeating the international nature of the convention. These include:

- (a) "competent authority" means the minister, designated official, government department or other authority having power to issue regulations, orders or other instructions having the force of law in respect of the recruitment and placement of seafarers;
- (b) "recruitment and placement service" means any person, company, institution, agency or other organization, in the public or the private sector, which is engaged in recruiting seafarers on behalf of employers or placing seafarers with employers;
- (c) "ship owner" means the owner of the ship or any other organization or person, such as the manager, agent or bareboat charterer, who

has assumed the responsibility for operation of the ship from the ship owner and who on assuming such responsibilities has agreed to take over all the attendant duties and responsibilities;

- (d) "Seafarer" means any person who fulfils the conditions to be employed or engaged in any capacity on board a seagoing ship other than a government ship used for military or non-commercial purposes.

Empowers member state to enact a national policy for the operation of a free public recruitment and placement service to meet the needs of her seafarers and ship owners, however this can be operated by the Government or private organizations. In the case of the private recruitment and placement services, they must operate within the territory of a member and conform to the laid down regulations on licensing or certification. To avoid conflicts of interest, a member state is advised that in case of any modification in the established system, due consultation must be done with representative organization of ship owners and seafarers.

**The Principles of Safe Manning:** According to IMO Resolution A.890 (21), 1999; safe manning is a function of the number of qualified and experienced seafarers necessary for the safety of the ship, crew, passengers, cargo and property and for the protection of the marine environment. This is part of the provisions of SOLAS regulation V/13 with respect to the issue of an appropriate safe manning document or equivalent as evidence of minimum safe manning. The purpose being that international acceptance of broad principles as a framework for administrations to determine the safe manning of ships would materially enhance maritime safety and protection of the marine environment (Schinas, 2008). It is strongly recommended that Governments, in establishing the minimum safe manning levels for ships flying their countries' flag, observe the Principles set out and take into account the Guidelines. Governments is further advised, when exercising port state control functions under international conventions in force with respect to foreign ships visiting their ports, to regard compliance with such documents as evidence that such ships are safely manned.

Every company is expected to ensure that the master, officers and ratings do not work more hours than is safe in relation to the performance of their duties and the safety of the ship. Manning levels should be such as to ensure that the time and place available for taking rest periods are appropriate for achieving a good quality of rest. A record of the actual hours of work performed by the individual

seafarers should be maintained on board, in order to verify that the minimum periods of rest required under relevant and applicable international instruments in force have been complied with. The Administration may require the company responsible for the operation of the ship to prepare and submit its proposal for the minimum safe manning level of a ship in accordance with a form specified by the Administration for evaluation and approval (Shunsuke, 2007).

**Guidelines for International Compliance:** To ensure that the provisions of this convention are strictly adhered to, the conference adopted the new Seafarers' Hours of Work and the Manning of Ships Convention, 1996 which establishes specific daily and weekly limitations on hours of work, or, conversely, daily or weekly minimum rest periods for seafarers with the aim of preventing fatigue associated with excessive work. It calls upon member States, which ratify it to acknowledge that normal hours of work shall be based on an eight-hour day with one day of rest per week, and then provides that maximum limits shall not exceed 14 hours per day and 72 hours in a week. Alternatively, member States may define working time through a minimum of ten hours of rest per day or 77 hours in a week. These limitations are to be posted in an easily accessible place on board the ship. Records of daily working hours or periods of rest are to be maintained, and the competent authority is to examine and endorse these records at appropriate intervals in order to monitor compliance and, if the records indicate infringements of the provisions governing hours of work or rest, require measures to be taken to avoid future infringements.

The new Convention has also been included in the Protocol to the Merchant Shipping (Minimum Standards) Convention, 1976, which means that, following sufficient ratifications, this instrument may also be subject to port State control. The accompanying Recommendation, which focuses on compensation for overtime and other wage issues, is a comprehensive instrument, which will serve to clarify wage issues for seafarers and ship owners. It retains the ILO minimum monthly basic wage figure for able seamen, a figure which has long served as an international benchmark for the industry. International provisions for labour inspection on board of ships were strengthened by the adoption of the Labour Inspection (Seafarers) Convention, the first international convention on maritime labour inspection. The Preamble of the Convention states that these measures only apply to flag State control.

**Human Rights and Maritime Labour Standards:** The ILO is recognized by the United Nations as an organization having competence with respect to the protection and preservation of the marine

environment. However, the idea that maritime labour standards are part of what is now called the "marine environment" can be found in the earliest ILO maritime instruments. Unfortunately, the catalyst for the elaboration and adoption of international maritime standards was the disaster in 1912 of the White Star Liner Titanic -- a state-of-the-art ship that sank due to human navigational error, resulting in the death of more than 1,500 passengers and crew. Given the primacy of travel by sea and the vital communication link provided by the maritime sector at the beginning of the century, the pressure of public opinion forced the international community -- in the pre-war period when nearly all international legislative activity had ceased -- to take up the urgent, compelling, and universal cause of safety of life at sea.

**Ship Owners Perspective on Existing Regulations:** The group noted that this was the first time that a commission had powers to consider a new cycle of ILO maritime activities without future priorities guidance by the International Labour Conference adopted resolutions. It was a welcome development, as it would allow the commission to step back from specific issues and consider wider, more fundamental things about the system of regulation of labour standards in the maritime sector. For this reason, they recommended that issues concerning the review of relevant ILO maritime instruments be given priority. The ship owner members expressed concerns over the frequency of full sessions of the commission. They noted that the last was held nearly ten years ago, which is too long a gap for the maritime sector, where the pace of change was accelerating and new challenges and opportunities faced ship owners and seafarers alike. They firmly believed that maritime labour affairs should be discussed in, and regulated by, the ILO. However, if the ILO's maritime machinery cannot provide the forum for timely debate on issues, then another international body be mandated to do so.

The body further stressed that the Governing Body should be directed to convene a Maritime Session of the Conference for the purpose of developing new standards without any form of distractions. In the longer term, the unique role of the JMC as the principal forum for social dialogue on a wide range of issues had to be preserved. They reiterated the need for sufficient resources to undertake the envisaged work as effectively as possible, and her desire to assist at any time, because in the maritime industry international meetings are vital and failure to obtain sufficient resources from the ILO can lead to the social partners taking social dialogue and standards setting in the industry elsewhere (Smith, 2005). On the need for the review of relevant ILO maritime instruments, the group stated that many ILO instruments were outdated, deficient and not reflective of modern practice; many contained technical detail that discouraged ratification and

were thus ineffective. However, existing instruments did not cover many issues, which had become relevant. Hence, the ILO should take action to maintain its role as the pre-eminent body in matters relating to international maritime labour standards. They further stated that governments were suffering from regulatory overload so the traditional approach of developing specific standards to address specific problems was not workable. Government's preferred international instruments, which covered all majors' issues and were consistent with the existing regulations of major powers, yet included a mechanism, which permits minor powers to accept them.

## CONCLUSION:

In this review, a large number of studies concerning maritime safety issues related to the crew have been cited. A large consensus exists on that the human element directly referenced to as the crew is the main factor causing accidents. Scholars also agree on the fact that the human element is most often caused by issues related to communication and lack of situational awareness. But when going deeper to the analysis of what is causing these communication failures, the results seem to be somewhat contradictory. The Sea is, according to the Environment Commission HELCOM, one of the most intensely operated seas in the world and the amount of traffic is expected to grow in the near future. The sea with rocky coasts, causing more challenges to navigation. Considering that about 80 % of the ships have multicultural crews, in total there are up to 1600-1800 ships with multicultural crews. The question remains if this creates a risk to maritime safety, and how multicultural crews should be taken into consideration in the mitigation of potential risks. Not only is the area of dense traffic and vulnerable environment, but also the only sea where a great number of ports are annually surrounded by ice. This is a challenge for navigators entering the area, especially for crews not familiar with winter navigation. Examples of damages have been reported as damages to hull, or propulsion and grounding, or collision due to avoiding ice and loss of stability due to ice.

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