

COLLISIONS AND GROUNDINGS - MAJOR CAUSES OF ACCIDENTS AT SEA

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A careful study of the accident reports reveals that 85% of all accidents are either directly initiated by human error or are associated with human error by means of inappropriate human response (Ziarati, 2006). This is in line with the findings of a recent paper (IMO, 2005) that 80% of accidents at sea are caused by human error. Turkish Government is also aware that collision is the most common type of accident in Turkey and this was again confirmed by the latest data published by the Main Search and Rescue Coordination Centre of Turkey in 2009. Collision amounted to 60% of all accidents if grounding and contacts are included.

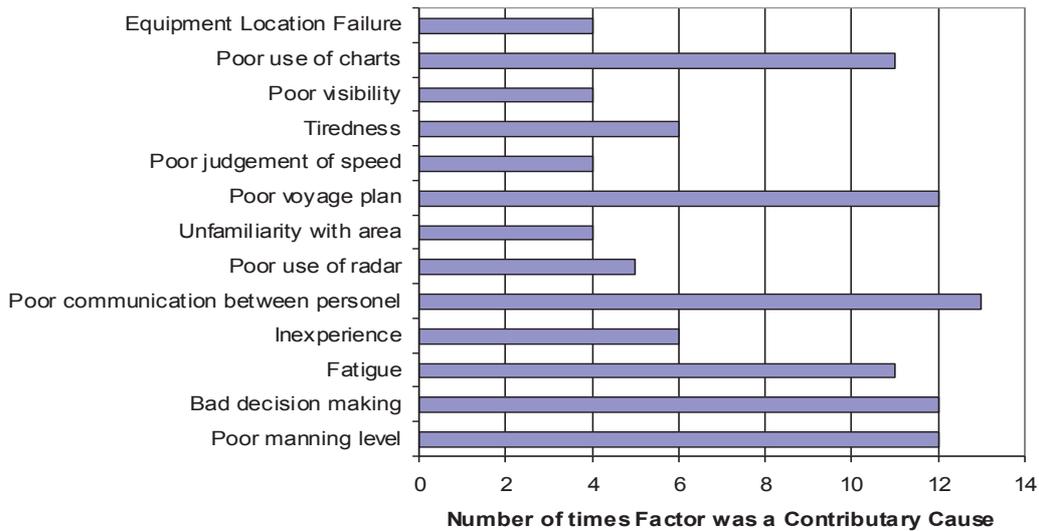
The research shows that mistakes are usually made not because of deficient or inadequate regulations, but because the regulations and standards, that do exist, are often ignored. The IMO MSC (Ziarati, 2006) clearly indicates the causes of many of the accidents at sea are due to deficiencies in maritime education and training (MET) of seafarers or disregard for current standards and regulations. Ziarati also reports (2007) that majority of accidents and incidents are related to collisions or groundings.

The International Regulations for Preventing collisions at Sea 1972 (Colregs) are rules to be followed by Deck/Navigation officers. It was initially designed to update the Collision Regulations of 1960 and entered into force in 1977. The last amendments were made in 2007. It is one of the most important International Conventions that all seagoing officers must have full knowledge of it before taking charge of a ship. However, a case law (MARS, 2005) indicate that many of the basic principles of collision avoidance are improperly understood /applied. It is also a common practice to use VHF Radio in collision avoidance procedures although not being part of the Colregs (MAIB, 2001; Ziarati, 2007).

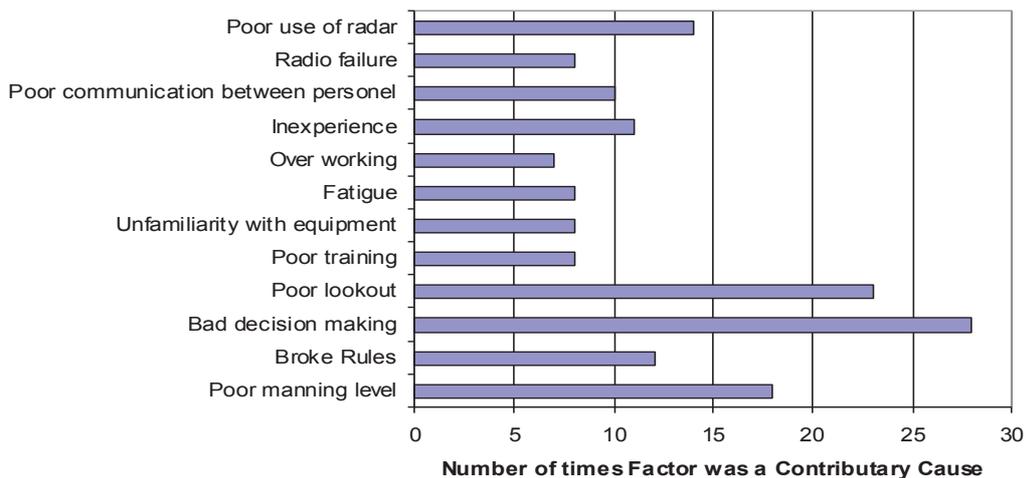
The project aims to transfer innovation from existing novel products and practices developed in the UK ('Rule of the Road' exercises and e-assessment) and Slovenia (e-learning) to other partners in the project with the intention of improving the existing knowledge and VET training practice of Deck officers and raise awareness on the correct application of International Regulations to prevent collisions at sea (Colregs). The main aims of the project are to:

1. Promote and identify VET key competencies in collision avoidance,
2. Improve systems for VET quality assurance through the transfer of innovation from the outcomes of the two successful Leonardo projects, EGMDSS and MarTEL, and
3. Involve shipping companies including the smaller ones to interpret Colregs correctly and through MET institutions to promote correct application of Colregs.

Common Factors in Groundings



Common Factors in Collisions



Figs. 1 and 2. Common Factors in Collisions and Grounding (Source: Ziarati, 2007)

The partnership is composed of major MET centres in several EU countries (Holland, Poland, Finland, Slovenia, UK and Turkey) with considerable Leonardo experience. The partners have been involved in Leonardo e-learning projects (E-GMDSS 2006-08, E-GMDSS 2008-10 and MarTEL 2007-09). The main tangible outcome is an online and novel learning and assessment platform facilitating the correct application of Colregs leading to substantially reduced accidents at sea. Impact will be substantial as it concerns the training of all Deck cadets and officers and an up-dating course for those already working in the sector.

Why this project is important

The International Regulations for Preventing Collisions at Sea 1972 (Colregs) are a set out of the rules to be followed by Deck/navigation officers at sea. It was initially designed to update the Collision Regulations of 1960 and entered into force in 1977. A series of amendments have been made in 1981, 1987, 1989, 1993, 2001 and 2007. It fundamentally prescribes the conduct of vessels underway; specify the display of internationally understood lights and collision avoidance actions in close quarter situations at sea. It is one of the most important International Convention that all seagoing Officers must have full knowledge, and the implementation skills, before taking charge for Bridge navigation duties. However, a case law, (MARS 2005) indicate that many of the basic principles of collision avoidance are improperly understood. It is also a com-

mon practice to use VHF Radio in collision avoidance procedures although it is not prescribed or stated in the Colregs (MAIB, 2001, Ziarati, 2007).

A careful study of the accident reports reveals that 85% of all accidents are either directly initiated by human error or are associated with human error by means of inappropriate human response (Ziarati, 2006). This is in line with the findings of a recent paper (IMO, 2005) that 80% of accidents at sea are caused by human error. The earlier paper notes that mistakes are usually made not because of deficient or inadequate regulations, but because the regulations and standards, that do exist, are often ignored. The (IMO MSC, 2006; Ziarati, 2006) clearly indicates the causes of many of the accidents at sea are due to deficiencies in education and training of seafarers or disregard for current standards and regulations.

There is a clear indication that Collision regulations are either not understood or ignored although it is a primary set of rules for taking actions to avoid collisions. A common interpretation of Colregs from the perspective of seafarers will be promoted in this project and translated and transferred to MET partners in the project in the first instance and later throughout the EU and worldwide by engaging major awarding, accrediting and licensing authorities and well as bodies such as EMSA and IMO. An existing e-learning (www.egmdss.com) and e-assessment (www.martel.pro) will be adapted for delivery and assessment of the intended course which will also be used as an updating/refresher course for Deck officers working in the sector.

The research, as shown in Table 1, shows that almost half of the seafarers are ignorant to COLREG. All in all, these answers confirm the current suspicions engendered by MARS and other sources that the Colregs are often misunderstood, misinterpreted or just plainly ignored on frequent occasions. Although what proportion can be set against each possibility remains open to argument.

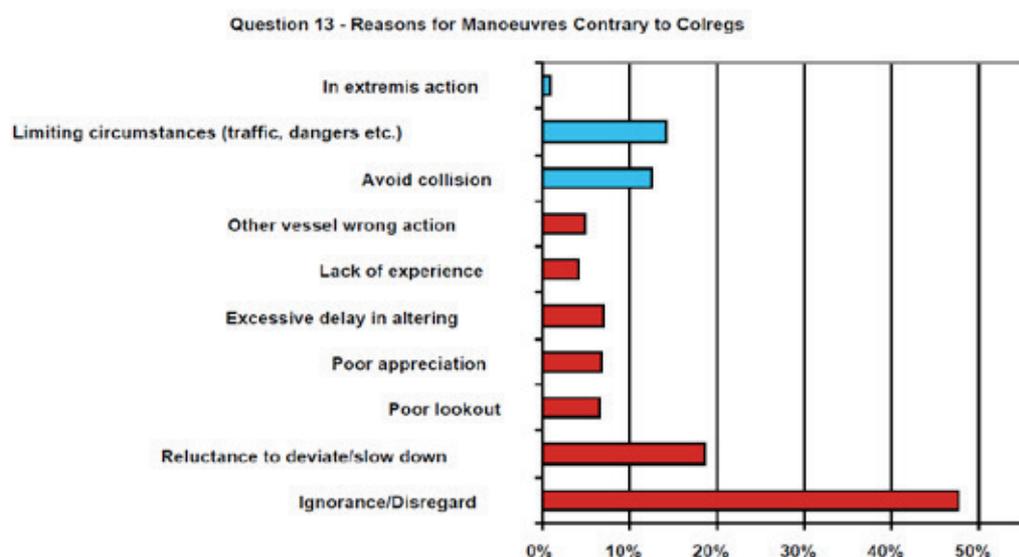


Table 1. Improving the application of Colregs - Captain R. J. Syms, FNI

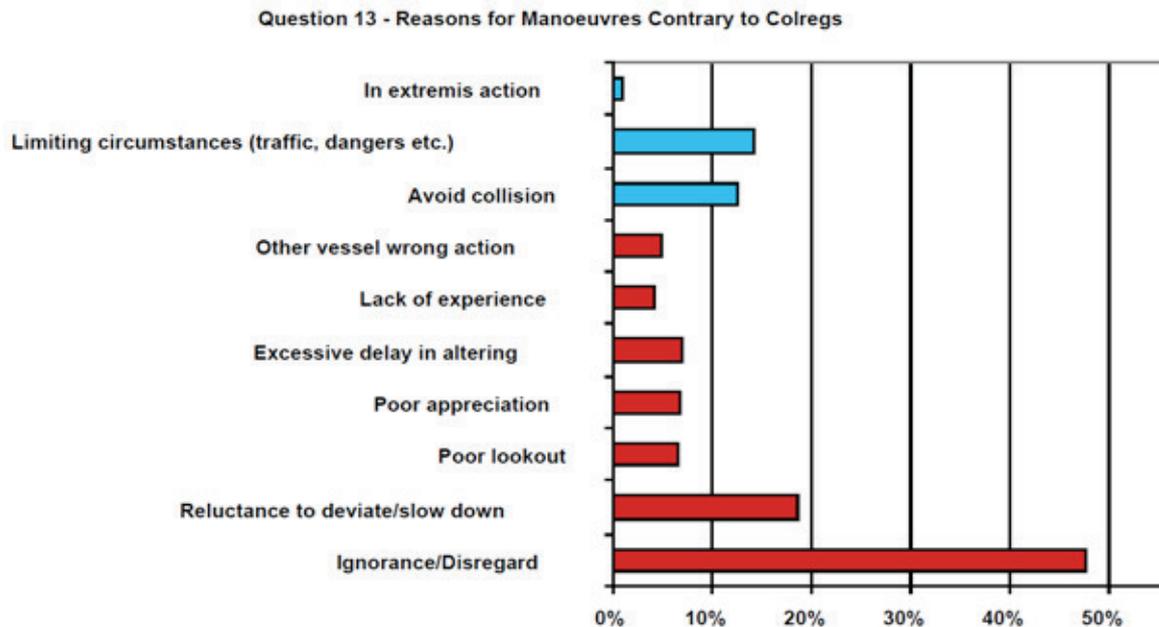


Table 2. Improving the application of Colregs - Captain R. J. Syms, FNI

A survey (Table 2) was also conducted by the Australian Maritime College to test mariner's clear understanding of Colregs

The project will increase cooperation between the training institutions and several social partners because of the labour market needs on overcoming the knowledge deficiency in application of the Collision regulations. Improved learning will be achieved by using real life scenarios extracted from accident case studies for the development of the intended course.

The online course is intended to be recognized by major awarding such as Edexcel/BTEC, accredited by a major chartered professional institution such as IMarEST (and/or Nautical Institute) and endorsed by major licensing authorities such as MCA. The course will also be used as a refresher course for officers working at sea and ports. In parallel, an assessment method (criterion referencing) based on an early system developed as part of the Leonardo SOS (2005-07) which received recognition from Edexcel/BTEC and IMarEST as well as MCA will be established to ensure safe application of Colregs at sea and worldwide recognition for the intended E-COLREGS course in a similar manner to Turkey well known Safety On Sea (SOS) programmes/courses.

MAIN REFERENCES

Ziarati, R., "Safety At Sea – Applying Pareto Analysis", Proceedings of World Maritime Technology Conference (WMTC 06), Queen Elizabeth Conference Centre, 2006.

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