

**Development Paper****COLREG (1972), A need for further review with special reference to the Overtaking vessel, Safe speed and Close-quarter situation****Abstract**

Since the earliest times, the sea has always been synonymous with insecurity for those who venture on to it. The maritime trade was mainly the preserve of adventurers. Seaborne transport developed in such a laissez-faire way that many accidents of which bold navigators were victims were soon accepted as part of the natural course of things. The infirmity of the human factor, in the face of the unlimited, inexhaustible and indefinable sea, confers on the effort of navigation the character of a bold venture, which may succeed and prove quite profitable, but which can also fail and cause irreparable losses. (Boission, History of safety at sea).

This paper investigates the reduction of collision risks at sea using IMO's (International Maritime Organisation) International regulation for preventing collision at sea 1972 with amendments. A study of recent collisions in relation to the existing 1972 collision rules endeavours to predict the impact of such collision rules. This paper also suggests some implementation of the existing rule and development of model course based on the research evidence of collision cases and wish to propose to MSC (Maritime Safety committee) of IMO (International Maritime Organisation) for the development of a new model course related to the 1972 convention on the international regulations for preventing collision at sea (COLREG). The aim is to help to improve the safety at sea working towards "zero collision"

Introduction

The history of navigation since ancient times shows that the needs of safety came only gradually to the fore, in the wake of accidents and disasters, bringing about huge changes in the individual and collective behaviour of those engaged in maritime activities. For the safety at sea and to avoid collisions, several attempts have been made to improve the collision regulation. However, a recent study of the existing 1972 collision rules by C4FF in collaboration with five other European countries, in their research project ACT, (Avoiding Collisions At Sea) revealed some very interesting outcomes and endeavoured to predict the impact of such collision rules. ACT project's research finding suggests inconsistent in the level of navigators understanding and interpretation of COLREGS rules. There is always a question mark how Maritime education institutions teach COLREG competency to their students. Furthermore, the research indicates the level of competency varies significantly across institutions in a given country and this is even more inconsistent across EU. Despite making several changes in COLREG, over the last half-century, despite improvements in navigational aids such as ARPA, ECDIS, AIS and automation, attempted to raise the standards of training through various STCW conventions, collisions still occur. Many studies and accident reports indicate that the accidents are caused by either human error or are associated with human error as a result of inappropriate human responses. Collisions commonly represent the majority of these accidents.

The research finding of ACT project also revealed two generic problems with Colregs. Firstly, there is no common interpretation of COLREG rules that are widely used, where navigators could have the same understanding. Secondly, it is difficult to apply COLREGS rules in different locations and situations at sea. To remedy the first problem, there needs to be a common interpretation which is used by countries taking into account where and how those rules should be applied. (C4FF - U. Acar et al, 2011)

“A study of the 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 paper by Ziarati (2006) 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 (Ziarati, 2006) clearly indicates that the causes of many of the accidents at sea are due to deficiencies in maritime education and training of seafarers or disregard for current standards and regulations. Ziarati (2007) the outcome of this latter study has recently been validated by U.Acar et al (2011). Several of Ziarati’s recommendations have been led to the identification of skill gaps (www.maidr.pro and (www.maredu.co.uk)”

Based on the research evidences, PRU (Piri Reis University) in Turkey, suggested to MSC (Maritime Safety committee) of IMO(International Maritime Organisation) the proposal (93/20/3)for the development of a new model course related to the 1972 convention on the international regulations for preventing collision at sea(COLREG). In November 1981, IMO's Assembly adopted 55 amendments to the 72 COLREGS with a set of thirty eight internationally agreed rules which became effective on June 1, 1983. The IMO also adopted 9 more amendments which became effective on November 19, 1989.

The International Maritime Lecturers Association (IMLA) also commented on the development of a new model course related to COLREG to MSC vide proposal 93/20/7. The document provides comments on document MSC 93/20/3 of PRU (Piri Reis University), Turkey and proposing the development of a new model course related to the Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREG).

IMLA proposes that the effectiveness of the COLREG's requirements that have already been included in the existing model courses, which have been revised and updated consequent to the 2010 Manila amendments, the intent of IMO model courses, the potential reasons related to the "COLREG specific" maritime accidents, as well as the revision of guidance for model course development, updating and validation processes which is on the agenda of the HTW Sub Committee and in progress, should also be considered.(IMLA Newsletter Volume 1 June 2014.

The outcome of ACT project and consequently developing e-learning model course based on real life accidents and near misses may be very useful and considered appropriate for IMO model course development.

Earlier Law: Overtaking vessel

The rule regarding overtaking vessel had been implemented several times, yet, mariners find it difficult to determine with certainty and have doubts when a vessel is actually overtaking. An example of chronological changes of overtaking rule will justify the statement made.

The International rules with regard to overtaking vessel practically started from sailing ship days where a vessel astern in an open sea and in good weather is sailing faster than one ahead and pursuing the same general direction, if both vessels are closed hauled on the wind, the vessel astern as a general rule is bound to give way or adopt to the necessary precautions to avoid collision. The approaching vessel when she has the command of her movements takes upon herself the peril of determining whether a safe passage remains for her or must bear the consequences of misjudgement in that respect'(Betts J in the Rhode Island 1847, Clifford, J in Whitridge v Dill 1859- American law of collision)

In 1st June 1863 a modified act pertaining to collision regulation was adopted by British ships and the same act was approved by the French Government for French ships when beyond the limits of French jurisdiction. The United States adopted the same act in April 24, 1864.

Article 17 of the said act & Rule 22 of US act related to vessels overtaking other vessels states "Every vessel overtaking any other vessel shall keep out of the way of the said last mentioned vessel"

In 1st September 1868, certain additions to the collision regulations were made and were adopted by ships of the 16 countries.

The Article 20 of the said act stated "Notwithstanding anything contained in any preceding articles, every ship whether a sailing ship or a steamship overtaking any other, shall keep out of the way of the overtaken ship"
In 11th August 1884, some more amendments to the collision regulations were made and in 1889 regulation recommended by Washington conference made several amendments to the regulation, particularly definitions of several terms used in the earlier rules.

The act of August 19, 1890 (USA), the international rules added the definition of an overtaking vessel and also provisions that the overtaking vessel remains such until finally past and clear.

Article 10 of 1897 rule replaced the article 11 of 1884 rule and extended it so that "the white light to be shown from the stern of vessel being overtaken could be a fixed light"

The article 24 of 1910 amendments was identical with the article 24 of the regulation of 1897. It corresponded with article 20 of 1884 and article 17 of 1863. The 1897 and 1910 wording differs from that of 1863 and 1884, but the effect seems to be precisely the same. The opening word of the rule "Notwithstanding....." were originally inserted in the regulations of 1880.

The collective analysis of collision has been a long standing practice but in some instances the collision and presentation of the statistics appear to have been made to comply with "an act of parliament" rather than to provide information to prevent further collision.

The rules were reviewed and amended in 1964, with relatively minor changes made since 1910. It is apparent that the wordings of the rule for overtaking vessel (rule 24(a), & (b) of 1965 regulation was identical with that of the first paragraph of article 24 of 1910 rule 24(c). However, it differs considerably from the third and last paragraph of the article in the following words. "As by day the overtaking vessel cannot always know with certainty whether she is forward or abaft this direction from the other vessel, she should, if any doubt, assume that she is an overtaking vessel and keep out of the way"

The changes are that "As by day was changed to "if cannot always know with certainty" was changed to "cannot determine with certainty" she should if in doubt, assume," changed to "she shall assume"

Subsequently, in 1972 rule, the wording had changed further but the meaning still remains unchanged. The international regulation of 1972 rule, requires an overtaking vessel to keep out of the way overtaken vessel and defines an overtaking vessel is one "coming up with another vessel from any direction more than two points abaft her beam, that is in a position from which, at night, she would be able to see only the stern light of that

vessel but neither of her sidelights.. It also provides that, in case of doubt she should “ assume that this is the case and act accordingly and no alteration of bearing shall convert an overtaking vessel into a crossing vessel or relieve her of the duty of keeping clear of the overtaken vessel until she is finally past and clear”.

Instead of cannot determine with certainty” had become “if in any doubt” and instead of “keep out of the way” had become “act accordingly. The rule does not mention clearly about a stationary vessel being overtaken. Therefore, technically a stationary vessel underway may never be an overtaken vessel but approaching vessel must avoid her. Similarly, a vessel while steering ahead when actually moving back because of current will not be considered as an overtaken vessel under the meaning of these rules. Also, an overtaking sailing vessel must keep out of the way of a power driven vessel by definition.

Also, under the present 1972 rule with amendments, it is not yet clear whether a not under command vessel overtaking another vessel, still had a duty to keep out of the way of other vessel. As further rule 18 defines the responsibilities between vessels and expects a not under command overtaking vessel to keep out of the way of the overtaken vessel even though Rule 3 specifically states that the term “vessel not under command” means a vessel which through some exceptional circumstances is unable to manoeuvre as required by these rules and is therefore unable to keep out of the way of another vessel.

It is also implicit that, overtaking situation in a narrow channel or fairway have been defined in section 1, rule 9(c), conduct of vessels in any visibility and it is dependent on rule 34 (c i), which refers to vessel in sight of one another. The rule states that in a narrow channel or a fairway “the vessel intending to overtake shall indicate her intention by sounding on her whistle. The vessel to be overtaken if in agreement shall sound on her whistle as per rule 34 (c ii).

If, for any reason an overtaken vessel does not reply by sound signal (Rule 34 c ii) to express that she is in agreement with overtaken vessel , then as per rule 9 e (i), the manoeuvre should not be attempted by the overtaking vessel. Therefore, it is clear from the rules that a slow vessel could hog a channel by refusing permission to be overtaken. Perhaps, one could argue that the overtaken vessel should keep to the starboard, in the outer limit of the channel in that case no further action should be required to permit safe passing, therefore, no permission to overtake is required.

Also, there are two terms are used throughout the Rule that are not defined properly. They are "narrow channel" (namesake of the Rule) and "(narrow) fairway." We must assume that the drafters of the rules either believed their meanings to be obvious or else were not able to formulate suitably concise definitions.

“Rule 9 applies only on waters described by the two terms. What is "narrow" depends on the type of vessel and the circumstances. A "channel" is a natural or dredged lane restricted on either side by shallow water; it is often marked by buoys. A "fairway" is generally in open water, and the water on either side is not much shallower than within the fairway. Fairways are used to route vessels away from natural hazards, oil platforms, mines, or smaller vessels. Fairways should be differentiated from the lanes in traffic separation schemes; vessels in the latter should follow Rule 10 rather than Rule 9”. (*Handbook of the Nautical Rules of the Road* by Llana & Wisneskey)

Safe speed:

An elusive factor the misjudgement of visibility contributes mis-interpretation of the rule particularly at night when the visibility is hard to estimate and one which may vary in a short space of time.

In 1972 rule, the word 'safe speed' was introduced to replace the word 'moderate speed' of 1965 rules and more guidance has been provided as to how this should be interpreted. But, it appears from some of the conditions laid down in determining the safe speed, which might require a vessel to go at speed less than her full speed even in clear visibility. From the mariners' point of view where safety at sea can only be relative, the word "safe" itself is an obsolete term; because, there could be no speed which is absolutely safe when an encounter does take place. A mariner can only say a speed is safe after leaving the region of poor visibility and when there was no collision. The word "safe speed" did not relieve a mariner his responsibility under the meaning of these rules. In fact, changing the term moderate to safe, it made the rule worse than before. Under the 1965 rule, the "moderate" speed has been justified in the court of law under certain circumstances where as it seems difficult to interpret in the court a "safe speed" whenever two ships have been in collision even though their speed might have been moderate. Perhaps interpretation of the word could only be judged until they have been clarified by court decision. It will be time consuming for lawyers and mariners and will continue to face the difficulties of making his judgement

In 1972 rule 19 , has replaced rule 16 of the 1965 rule and part (b)of the rule 19 refers to the fact that the restricted visibility has to be taken into account when determining a "safe speed" and power driven vessels should have her engine on "stand by".

Close quarter situation:

Close quarter situation too like "moderate speed" depends on circumstances of the case because no definite distance has been defined. Depending on the observing vessel's manoeuvrability many Masters consider different distances ranging from one to five miles to be the limit of close quarter. Perhaps, even less in a narrow channel. In 1972 rule 8 (c), states that " if there is sufficient sea room, alteration of course alone may be the most efficient action to avoid a close-quarter situation provided that it is made in good time, is substantial and does not result in another close-quarter situation"

It means if the sea room is restricted due to navigational dangers or traffic density, a large enough alteration of course may not be possible and a substantial alteration of course may make the situation even worse than before when vessels were not in collision course. Further rule 8 (d), emphasises the effectiveness of any action shall be carefully checked until the other vessel is finally passed and clear. The concept of 'close-quarter situation' and 'safe passing distance' is quite difficult to formulate. Their extend would depend on various factors such as weather condition, state of visibility, type of vessel and its manoeuvrability.

Similarly, what is a safe distance to pass would depend on relative speed and direction in which the vessels are passing each other. For instance it may be quite safe and reasonable for an overtaking vessel to pass one or two miles off, where as it may be unsafe and unreasonable for a vessel to pass a mile or two off when passing on reciprocal course with speed. Therefore, mare intuition and the experience of the Master are good enough in deciding a close-quarter situation and safe passing distance.

Paragraph (d) of rule 19 of 1972 rule, refers to ships which have their radar in working order makes it compulsory for those ships to use radar for determining a close-quarter situation. However, rule 19 (a), (b), (c)

is more comprehensive. It applies not only to vessels navigating in restricted visibility but also to vessels navigating near such area. This clears up the ambiguity of sounding a fog signal on approaches to fog bank. This rule also requires the engine should be ready for immediate manoeuvre and places more emphasis on the prevailing circumstances and condition of restricted visibility but does not give positive direction on the course of action.

Conclusions

The ACT project on COLREG will help to overcoming the knowledge deficiency in application of the Collision regulations. The real life scenarios extracted from accident case studies to develop the e-learning model course on COLREG will improve learning and the practical ability to use COLREG effectively by all mariners. It is expected that the on-line model course on COLREG will be recognised by major awarding bodies such as Edexcel/BTEC, accredited by a major chartered professional institution such as IMarEST (and/or Nautical Institute) and will be endorsed by major licensing authorities such as MCA and also will gain worldwide recognition for the intended E-COLREGS course.

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