



SUB-COMMITTEE ON STANDARDS OF
TRAINING AND WATCHKEEPING
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Agenda item 5

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FOLLOW-UP ACTION TO THE 1995 STCW CONFERENCE

Conflicting action in collision avoidance

Submitted by Friends of the Earth International

SUMMARY

Executive summary: This paper is intended to supplement the report from NAV 47 concerning conflicting actions in collision avoidance. In particular it notes that, in most ship collision cases involving conflicting action, there would have been a safe (if sometimes close) passing if neither ship had made a manoeuvre. In this context, the paper draws attention to some historical developments which have relevance to current training for collision avoidance. Some well documented, and instructive, examples of ship collisions are listed at annex.

Action to be taken: Paragraph 11

Related document: NAV 47/13, paragraphs 12.50 to 12.52 and annex 21

INTRODUCTION

1 Friends of the Earth International have an interest in collision avoidance since ship collisions have, in the past, caused significant pollution of the marine environment.

2 At the NAV 47 meeting in July 2001, FOEI supported the excellent note prepared for the STW Sub-Committee by the Working Group on Ship's Routeing and approved by the Sub-Committee. The note concerned conflicting action in collision avoidance. In plenary, at NAV 47, FOEI indicated their feeling that the content of the note could usefully be amplified to take account of the fact that some 80% of ship collisions would not have occurred if neither ship had made a manoeuvre. This tendency for ships to manoeuvre from safety into danger has been recognised since the 19th Century, and the lessons learned are still relevant to the teaching of collision avoidance and the problem of ships taking conflicting action.

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EARLY EXPERIENCE

3 In the nineteenth century, for about 20 years, there was only one important COLREG. This stated that, if two ships are approaching to involve risk of collision, each should alter course to starboard. This was an excellent rule for precise collision situations. It would avoid collision if only one ship took action and it would avoid conflicting action if both ships took action.

4 The problem arose when the situation was not a precise collision encounter but a close (usually starboard to starboard) passing. One ship would accept the passing as safe, and the other ship would alter course to starboard, thereby creating a collision. In a subsequent court of law, the ship which took no action would be held to blame since its plea that there was initially no risk of collision was clearly contradicted by the fact that there was one. After a number of judgements of this kind, ships, "to be on the safe side", began altering course to starboard when faced with larger and larger passing distances, and more collisions ensued.

NEW COLREGS

5 By 1863, the situation had become so serious that new COLREGS were introduced as a matter of high priority. The Government of France had proposed the principle that one ship should be allocated right of way and the other should be required to take action. This was adopted in the case of crossing and overtaking encounters and, for these situations, the benefits were immediate. The same principle could not be applied to ships meeting end-on because that situation is symmetrical and there is no way of distinguishing between the two ships so that they can be allocated different responsibilities.

6 Subsequent to 1863, collisions between ship meeting end-on or nearly end-on continued to occur at an unacceptable rate. The problem of ships altering course in what would otherwise have been safe passing situations was addressed in 1868 by introducing additional "explanatory clauses" to the end-on rule. These explained when the rule should be applied and, more importantly and at greater length, they explained when the rule should **not** apply. Their text was as follows:

This rule only applies to cases where ships are meeting end on, or nearly end-on in such manner as to involve risk of collision, and does not apply to two ships which must, if both keep their respective courses, pass clear of each other.

The only cases to which it does apply are, when each of two ships is end on, or nearly end on, to the other; in other words, to cases in which, by day each ship sees the masts of the other in a line, or nearly in a line with her own; and by night, to cases where each ship is in such a position as to see both the sidelights of the other.

It does not apply by day to cases in which a ship sees another ahead crossing her own course; or by night to cases where the red light of one ship is opposed to the red light of the other, or where the green light of one ship is opposed to the green light of the other, or where a red light without a green light, or where a green light without a red light, is seen ahead, or where both green and red lights are seen anywhere but ahead.

The lesson that ships should not alter course out of safety into danger had been so well learned that the United Kingdom Government pamphlet containing the COLREGS carried the slogan "The reckless use of alterations of course to starboard leads to collision."

SUBSEQUENT DEVELOPMENTS

7 From 1868 onwards, the COLREGS did not change in general principle until 1972 but, in the 1950s, a Norwegian underwriter, Thorolf Wikborg, drew attention to the fact that the great majority of collisions resulted from cases where ships were initially meeting end on or nearly end on. During the 1960s attempts were made to devise improved COLREGS to address this problem, but no consensus was achieved. It was not until traffic separation schemes were introduced by the IMO (then IMCO) that a real reduction in the number of end on collisions was achieved.

8 Meanwhile, in 1972, the COLREGS underwent a major revision. The term "end on" was replaced by the term "reciprocal courses" and, amongst other changes, the "explanatory clauses" were dropped. This may have been because the drafting group at the time was unaware of the reason for their introduction.

CONCLUSION

9 Bearing the above information in mind, it may be that the STW Sub-Committee will recognize the importance of training watchkeepers so that they are less likely to convert passing situations into collisions. The principle contained in the old "explanatory clauses" could form the basis of such training, as it did for over 100 years up to 1972. In the longer term, if the problem of conflicting action persists, an updated version of the "explanatory clauses" might be reintroduced into the COLREGS.

EXAMPLES

10 Four, well documented, and instructive examples of ship collisions are listed in the annex. All of these cases are described and analysed in the book, *Collisions and their Causes*, written and published in 1997 by the late Captain Richard Cahill, Austin, Texas, and soon to be published by The Nautical Institute.

ACTION REQUESTED OF THE SUB-COMMITTEE

11 The Sub-Committee is invited to take note of this information when considering recommendations for the training of watchkeepers in collision avoidance procedures.

ANNEX**EXAMPLES OF COLLISIONS**

Chitose Maru/Marie Skou	1968
Genimar/Larry L	1972
Hellenic Carrier/Lash Atlantico	1981
Potomac/Banglar Baarni	1982

The following plots of these collisions are based on those produced by Captain Cahill in his book *Collisions and their Causes*, with the addition of dashed lines to show the tracks which would have been followed if no alterations of course had been made. The plots are reproduced, by kind permission of The Nautical Institute, from an article in the October 2001 issue of the magazine *Seaways*.



