

'Radar and Rule of the Road'

from Captain G. Swallow, R.N.

THE amendments and additions to the existing (1960) Regulations for Preventing Collisions at Sea which were offered in the *Journal*, 20, 103, by Captain Burger and Captain Corbet have been studied with interest. While clearly we have the same objectives at heart it will be seen from the comments that follow that the proposals are virtually unacceptable.

Rule 16 (b)

It is felt that the proposed re-wording is inappropriate as the words 'hearing, apparently forward of her beam' and 'the position of which is not fully ascertained by sighting' do not make sense in one sentence. Moreover, the proposed addition of the word 'particular' before 'caution' is not likely to deter the delinquent any further than the original wording.

It is agreed that the present wording of Rule 16 (b) may leave something to be desired in the interpretation which can be put on 'ascertainment of position'; this has in fact been evident by some of the different interpretations which have been given by the Courts.

In the *Nippon Yusen Kaisha v. China Navigation Co.* case of the pre-war era (1935), Lord MacMillan said, 'In order that the position of a vessel may be ascertained by another vessel within the meaning of the Regulation she must be known by that other vessel to be in such a position that both vessels can safely proceed without risk of collision'.

Even before that date, in the 'Aras' case (1907) the Court put a question to the Elder Brethren which indicated the basis for ascertainment:

'were the indications such as to show her Master distinctly and unequivocally that, if both vessels continued to do what they appeared to be doing, they would pass clear without risk of collision'.

Coming to more recent times in the 'Gunnar Knudsen' case (1962), Mr. Justice Hewson observed, 'It needs much more than a distance and bearing at a particular time. The minimum amount of knowledge required is that you must know the other vessel's course and speed and, it may even be, her probable future course and speed'.

The Rule could be strengthened by amending the relevant part of line two of Rule 16 (b) to read, 'the position, course, speed and probable future intentions of which are not fully ascertained, shall, &c.' or alternatively para (3) of the Annex to the Rules could be amended to include the sense of the above.

Rule 16 (c)

Paragraphs (i) to (vi) inclusive are not acceptable either in principle or in certain of their details. Taking the principle first it is realized that paragraph (i) to (v) are applicable to two-ship situations, while paragraph (vi) is applicable to multi-lateral situations, and it is appreciated that any rules designed solely for the former can be considerably more rigid than those designed for the latter. But

surely it is the multi-lateral situation which is so frequently liable to be encountered and therefore should be the only realistic basis on which the Rules should be framed. While the Rules must be clear with regard to responsibility, there must be an essential element of flexibility in their interpretation.

As far as the details of these paragraphs are concerned, the expression 'by radar' has been inserted in paragraphs (i) to (v). This seems unnecessary; while normally, of course, radar provides the principal means of non-visual or non-aural detection, there are other means available.

There is another small detail and that is, it is not understood why paragraphs (i), (ii), (iv) and (v) refer to another vessel which is neither in sight nor heard, while paragraph (iii) refers only to another vessel which is not in sight.

Clauses c(i) and c(ii) make rigid proposals based on a right ahead assumption. It is presumed that this means an echo whose bearing is identical with own ship's course because otherwise such precision is difficult to establish especially when yawing. While there can be no doubt that a substantial and early alteration to starboard is frequently the most prudent course of action, the present wording in para (6) of the Annex to the Rules is preferred to these rigid proposals.

In c(i) what does a vessel do when the circumstances of the case do not admit of an alteration to starboard? Moreover, in this paragraph the expression 'to put the other vessel right astern' means to reverse your course and go back on your tracks. Is this realistic in a Regulation?

The proposed Clause c (ii) seems totally unnecessary. In an overtaking case many hours may elapse before the range has closed sufficiently to necessitate avoiding action and in that interval much may have occurred; even the visibility may have improved. Rule 24 as it stands is admirable in this context.

It is not intended to comment in detail on the other proposed clauses except to say that what has already been stated above applies in principle where appropriate. Clause (vi) is, however, almost identical to the existing Rule 16 (c). It gives complete flexibility and would seem to be at marked variance with and virtually to nullify all the foregoing proposals.

from Captain J. F. Kemp

CAPTAIN Burger and Captain Corbet have made an attempt to provide guidance for ship navigating in fog when radar contact has been established before visual or aural contact. The present (1960) Regulations provide only vague guidance under these conditions, which many people think is when guidance is most needed. I commend the intention behind Captain Burger's and Captain Corbet's suggestions, but for several reasons I do not think they are sufficiently practical.

One criticism is that Captain Burger and Captain Corbet have effectively produced complete a new set of steering and sailing rules for use in poor visibility, and that these are not always compatible with the clear weather rules. It is important that they should be, because transition can occur suddenly and also, in marginal conditions, one party may consider that the visual rules apply and the other that the fog rules apply.

A second criticism is that the criteria for deciding what action to take under the suggested rules depends upon the measurement of rates of change of bearing and rates of change of distance. These are quantities which cannot be obtained accurately from a PPI screen, as many Masters and officers have found to their cost. (J. S. Morrel, *The physics of collision at sea*. This *Journal* 14, 163.)

Thirdly, the suggested rules are too detailed and complicated. To be flexible, rules should only indicate the broad principles of disengagement and should specify particular action as little as possible. To be useful, rules should be as simple as possible so that they can be used with facility and confidence by officers subject to fatigue and stress.

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The general principles on which Captain Burger's and Captain Corbet's suggestions are based are sound enough, but their rules are not in a sufficiently practical form. In many cases very large alterations, of course, are called for which might not be possible in confined waters, and which many Masters would be reluctant to make even if sea room were adequate. A last point is that many mariners might interpret the suggested rules as confirming what they already feel, that the mere fact of presenting their port side to an approaching threat at least puts them in the right, even though it might not prevent a collision. There is, in fact, no magic in presenting one's port side to a threat unless the velocities of the parties to the encounter are known to be such that this action will be effective in avoiding collision. A hole on the port side will cause a ship to founder just as quickly as a hole on the starboard side.

from Commander P. C. H. Clissold, R.N.R.

IN a set of rules designed for ordinary people, brevity and simplicity are desirable qualities. Ships are already warned about excessive speed and there seems no reason to bring a ship on a reciprocal course which is ahead of you right astern, so that paragraphs (i) and (ii) could be combined and would then read:

'(i) A power-driven vessel which detects, by radar, the presence of another vessel, which is neither in sight nor heard, right ahead on a steady bearing, shall, if the range is decreasing and the circumstances of the case admit, alter course to starboard to put the other vessel on the port side. The power-driven vessel should then continue to navigate with particular caution until danger of collision is over.'

The whole case can be put more concisely and, surely, sufficiently by adding to Rule 16 a new paragraph (d):

'(d) A power-driven vessel which detects the presence of another vessel forward of her beam before hearing her fog signal or sighting her visually, when taking action to avoid a close-quarter situation shall not alter course to port.'

Perhaps to this should be added:

'if the range of the other vessel is less than 5 (?) miles'.

Section (6) of the Annex should then be deleted.