

Naydenov E.V.

**STEERING
AND SAILING RULES
(SSR)**

New Colregs

Moscow
2015

УДК 656.612

ББК 39.4

N 20

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N 20 Steering and Sailing Rules (SSR). New Colregs/

Naydenov E.V. – М: Книга по требованию, 2015 – 64 pages.

ISBN 978-5-519-14620-3

УДК 656.612

ББК 39.4

ISBN 978-5-519-14620-3

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Synopsis

Conditions of collision avoidance actions at sea have changed greatly.

Traffic has grown, ships have increased in dimensions (and therefore difficulty in maneuverability comes as a fact), the ship's crew has thinned down. All these factors lead to decreasing of navigation safety. Besides modern equipment is able to substitute a navigator while solving tasks of collision avoidance.

INTERNATIONAL REGULATIONS FOR PREVENTING COLLISION AT SEA, 1972 (the COLREGs 1972) were developed to the conditions of the last century, they become out of date and are in great demand to be essentially changed. These changes are necessary to solve the aim of safety navigation and to take drastic measures in revision the problem of collision at sea.

The given work analyses the required changes of the old Regulations and offers the new edition of the COLREGs. Captain Naydenov E. offers a variant of New Rules "**Steering and Sailing Rules**" (SSR) which are based on the principals of coordinated passing method.

The book is necessary for:

Mariners, Navigators, Ship-owners, Shipbuilding Industry specialists, Sea Device Designers, Marine Law Specialists, Yacht-Clubs, River Navigators, Navy, Fishing vessels Designers, Staff of Maritime Safety State Departments, Teachers and Cadets of Maritime Institutes and Maritime Colleges, Mathematician-designers of navigation algorithms and software, Classification and Insurance societies.

Please all remarks and proposals concerning **Chapter 6** would You like to send to adress:Seamen1940@gmail.com

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Translator

Аннотация

Современные условия встреч судов в море значительно изменились. Возросла плотность и интенсивность движения, увеличились размеры судов и, соответственно, ухудшилась их маневренность, уменьшился экипаж, обеспечивающий безопасное судовождение. Появилась судовая техника, способная заменить человека при решении некоторых задач расхождения судов в море.

Разработанные для условий прошлого века МЕЖДУНАРОДНЫЕ ПРАВИЛА ПРЕДУПРЕЖДЕНИЯ СТОЛКНОВЕНИЙ СУДОВ В МОРЕ, 1972 г. (МППСС-72) устарели и требуют нового подхода к решению задачи безопасного расхождения и их радикального пересмотра в соответствии с современными обстоятельствами плавания и предупреждения столкновений судов.

В данной работе рассматривается обоснование необходимости изменений МППСС-72 и предлагается текст Новых Правил. Капитан Найденев Е. предлагает вариант новых Правил **“Steering and Sailing Rules” (SSR)**, которые базируются на методе согласованного расхождения.

Книга необходима:

Судоводителям, судоходным компаниям, судостроителям, проектантам и разработчикам морских приборов, яхтсменам, специалистам по морскому праву, военноморскому флоту, рыбакам, речникам, отделам безопасности мореплавания государственных морских министерств, преподавателям и кадетам Морских учебных заведений, разработчикам алгоритмов и программ для морских приборов, классификационным и страховым обществам. Книга опубликована на русском языке.

Пожалуйста, все замечания и предложения по тексту Правил (**Chapter 6**) просим направлять по адресу: Seamen1940gmail.com

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Переводчик

Chapter 1

**CONCEPTION OF PROBLEM OF THE
PASS BY VESSELS AT SEA**

COLREGs-72 [2] is subjected to fair criticism. They lag behind the current level of technology, the size of ships and intensity of traffic. There is a need of radical changes.

The process of assessing convergence and control of marine object's movement at the risk of collision is different from processes on other modes of transport. Railroad tracks, highway, air corridor, the specific location of the meeting and the location of the maneuvering considerably reduces the uncertainty of choice of the quantitative values of the beginning and ending and the type of maneuver of safe passing at these kinds of transport. On the ground the vehicles can forecast the manoeuvre of oncoming vehicle object. At sea this is not possible. At the dangerous meeting in the most cases there is a high uncertainty selection of the passing parameters. This situation complicates the discrepancy not only for the vessel which according to the Rules must give way and even for vessel which has the right to decide whether the required maneuver as well as to choose the type of maneuver, the time and distance of the start of the manoeuvre. Figuratively speaking, the absence of "roads with traffic road-signs" at sea would restrict the possibility of almost unlimited choice of the vessel's conduct when passing at sea and would provide the uniformity assessment of convergence leads to significant uncoordinated actions of captain's decisions.

Therefore this situation gives rise to illegitimate blame in most cases for a person. Whatever skills were the naviga-

tor, a huge uncertainty in the evaluation convergence of vessels remains, and will remain in future. To solve the problem of single-valued assessment of passing situation with significant uncertainty estimated parameters is impossible for person. The proof of his postulate is a significant reduction number of collisions after the introduction of the traffic separation systems (TSS) in the narrow waters and in areas with a high density of navigation. Limited “corridors directions” in the TSS etc. concerted of convergence parameters, greatly reduced the uncertainty in option of the courses of ships thereby reducing the amount of hazardous encounters.. The complete absence of quantitative characteristics of the Rules also confirms the correctness of the above said position's as the problem of usage of numbers everywhere i.e. all vessels and for all the seas is extremely a complicated task while assessing the situation of convergence vessels and decision-making is for only a person. The problem in full or partial replacement of human by technical means has ripen issue full or partial replacement of human by engineering on the assessment of the situation of convergence of vessels and expression processing decisions on the divergence and so there is a great need for a radical change in the Regulations..

The problem of the following COLREGs-72 is discussed in the marine literature. Captain E R Klimov in his book [1] summarizes in details the arguments for the creation of new rules that reflects changes of marine life navigators and vessels passing. The book shows the good factors that are incompatible with current Rules..

The author refers appearance of the following:

- Ships with unusual maneuvering characteristics;
- High-speed vessels;
- New technical equipment on the bridge;
- Man-made objects, mainly oil platforms;
- As well as the increase in the density of traffic..

The author writes justly:

“The International Maritime Organization seems not to notice that an environment in which some of the rules of

COLREGs-72 are violated everywhere (Rule 5) in the other case Regulations do not work (Rule 6) there is urgent need to line with the realities that takes place at sea and in the shipping industry to-day.

The more the revision of the Rules delayed the more changes will have to be included in them the more confusion will be in the minds and actions of those who would have to work with the revising rules.

Since COLREGs-72 July 15 1977 came to force and up to nowadays they were subjected to proofreading the latter of which was made in 2009. All entered proofreading over the years however did not reflect the challenges made for us by time. Perhaps, only the appearance of the Rules of this un-usual aircraft machine as winged made some novelty but it did not have the principle fundamental importance. Just another aircraft apparatus capable of moving in the water, has become more.

Work on the revision COLREGs-72 should include composition integrated approach. Only considering all factors on which the possibility of establishing such order at sea would provide reliable security for human health, the environment and property we can talk about the effectiveness of Rules.

New COLREGs is required to-day. It is necessary to look for new approaches to the prevention of collisions of the sea Maritime community in these conditions. Requires the development of new Rules just as it was with respect to COLREGs-72 when they had to replace Golregs-60 being in force. In connection with above said great deal is to be changed. To this must be a lot changed. To ensure that new Rules work and help to maintain the required level of security at sea in the present conditions. An integrated approach should be worked out on their creation. A list of special questions to be taken into consideration while working on new concept of the Rules could be as following: the human factors in ships logistics, traffic organization". Author names other navigators who have the same opinion.

Given author's arguments do not require special comments. They all have to be agreed. But apart commentaries it needs concrete proposals that are acceptable to the IMO.

It should be noted that the topic of safe passing vessels differed in complexity of solutions, attracted the attention of theorists almost of all kinds – mathematicians, psychologists, linguists and apparently coming soon dissertation on this subject where the authors can be philosophers and even theologians. However practically today the problem is solved at a low level as in the technical means as in different documents and in making recommendations for COLREGs-72.

Proposed for automation the process of mathematical models have limitations or assumptions that are not compatible with reality. Almost all theoretical calculations concerning option of safe passing maneuver do not apply in the real life and do not be applied without the participation of navigators in the development themselves with good seamanship and taking over responsible decisions when assessing the situation of dangerous passing of vessels and safe option of passing. In practice the decision is still personally made by captain who is able to cover all the variety of factors vessels passing at sea.

Chapter 2

**PRACTICAL EXERCISES IN PASSING
BY SHIPS**

In many cases, the vessels pass more reliably using only technical means (radar, ARPA, AIS, VHF, etc...) instead of following the Regulations. The main reason is the awkwardness and no uniqueness COLREGs-72. For example the Rules of maneuvering (Regulation №13-19) is written in 6 pages and comments are there lack 300 pages.

Crews communicate with each other and using additional information obtained from the technical means coordinate their passing actions regardless of the Regulation. Such a practice is quite satisfactory provided of overlap by agreement and action in accordance with the requirements of Rules. But when actions do not coincide with Rules the captains have risk: in case of collisions they are fairly accused of violating the laws and attract administrative or criminal liability.

However sometimes captains believe that despite of the risk it is easier and simpler to coordinate among themselves about their actions in the discrepancy passing instead of performance of cumbersome Rules in many cases. These violations COLREGs-72 is practical part of our life. Therefore now the need comes to a head to simplify and to specify Rules i.e. adjustment of Rules under modern real practice.

One of the main ways to solve this problem is to use signals to co-ordinate the actions of the vessels passing.

In present day Rules informational signaling system is used (Rule 9, Rule 34 and etc.) and this practice can be expanded. Signaling information may also be applied to the entire process of vessels passing – *Method passing coordinated.*