

Geneva, March 26th, 1936.

LEAGUE OF NATIONS

ORGANISATION FOR COMMUNICATIONS AND TRANSIT

UNIFORM SYSTEM OF MARITIME BUOYAGE

REPORT BY THE SMALL COMMITTEE

In conformity with a resolution adopted by the Advisory and Technical Committee for Communications and Transit on November 9th, 1935, a Committee of Experts was set up, selected in principle from among the members of the Preparatory Committee on the Unification of Buoyage Rules, which met in London from July 17th to 22nd, 1933. This Committee was instructed to frame a new text of the draft Agreement and Rules drawn up by the Preparatory Committee,¹ having regard to the amendments and modifications proposed by the Governments. The Committee of Experts met in London from February 10th to 14th, 1936.

In order to fulfil its mission, the Committee has endeavoured to take into account, and to reconcile as far as possible, most of the observations submitted by the States (see Annex 1) which were invited to express their opinions on the draft Agreement and draft Rules drawn up in London in July 1933. It also examined certain observations made by the Chinese Maritime Customs Service (see Annex 2).

DRAFT AGREEMENT.

In the draft Agreement,² the Committee has thought it necessary to recommend the *rapid* completion of the measures that are to be taken to give effect to the draft Rules; nevertheless, it has retained the lengthy maximum time-limit of ten years which was previously prescribed (Article 1, paragraph 1).

Though it has not amended the provisions of Article 7 relating to the method by which accessions are to be notified, the Committee expresses the hope that such notifications may be accompanied by copies of the national buoyage regulations issued by the country in question in application of the unified Rules. The Committee further hopes that the Secretary-General of the League of Nations will, for purposes of information, communicate such national regulations, together with illustrative diagrams, to the other contracting countries (including those which have deposited ratifications or accessions which have not yet become operative). A sufficient number of copies should be transmitted to the Secretary-General for this purpose.

In Articles 5 and 7, the Committee has raised from five to ten the number of Governments whose acceptance is required before the Agreement can enter into force. This change is intended to ensure that States shall not be bound by the Agreement, nor be under any obligation to adopt measures in application thereof (and such measures may be far-reaching in scope), unless they are certain that the Rules will be applied by a sufficient number of countries.

Some countries may desire to make the validity of their acceptance subject to the establishment of an analogous system by a few other countries whose position from the maritime point of view is similar to their own, or with whom they are particularly anxious to have a system in common. In such cases, however, it may be thought sufficient if the other countries concerned are, in fact, carrying out the essential features of the Agreement, even although they may not have formally acceded to it. The first-mentioned countries will then be able to inform the Secretary-General of the League of Nations that they withdraw their reservation relating to the other countries concerned, and their acceptance will thus become fully effective. This procedure is thought likely to increase the probability of the rapid and practical application of the Agreement embodied in the last part of Article 10.

Finally, Article 8 of the draft Agreement has been amended in order to meet the wishes of certain countries in regard to future technical development or new inventions, the benefit of which might be withheld for too long a period if their utilisation were prevented by an international Agreement in which no change could be made for many years.

¹ Document C.465.M.238.1933.VIII.

² Document C.128(a).M.67(a).1936.VIII.

The Committee desired, however, to avoid the possibility of a premature amendment of the Agreement, for reasons other than those given in the preceding paragraph, before it had been sufficiently fully applied ; for such a possibility, with the accompanying threat of instability, might alarm countries which are anxious to ensure, through their accession to the Agreement, the lasting uniformity of the buoyage system.

DRAFT RULES.

This, too, is the progressive spirit which led to the adoption, in the latter part of Articles 10 and 16 of the draft Rules annexed to the draft Agreement,¹ of the provision that, in the marking of the sides of a channel under the lateral system, or the marking of natural dangers under the cardinal system, rapid-flashing lights (sometimes known as scintillating lights) are placed in the same category as single-flashing lights, of which they may be regarded as constituting the extreme case.

With regard to miscellaneous marks, a new article (Article 22) has been introduced for the purpose of prescribing the type of mark to be employed for the indication of areas used for naval, military or air force practice purposes. It is important that, as requested by certain countries, steps should be taken as soon as possible with a view to preventing at this early stage the employment of varying methods for this purpose. In this connection, approval is given to a white mark with a blue cross, to which may be added an inscription indicating that the adjacent area may be dangerous.

In the matter of lights on wreck marks, an attempt has been made in both systems to obviate any serious risk of confusion with buoyage lights properly so called that may show the same green colour.

It will be noticed that the Committee has thought it sufficient, as it is certainly much simpler, to provide that, in the cardinal system, the marking of wrecks should be confined to the two opposite quadrants, east and west (Article 26). This is the practice commonly followed in certain countries which use this system. As wreck marks may be placed near the boundaries of the quadrants in question, it will always be possible by their position to give a sufficiently approximate and effective indication of the bearing of the danger in cases where only a few distinctively coloured characteristics are available.

In such cases, however, the addition of topmarks is particularly valuable for the purpose of obviating any risk of confusion with the lateral system for the marking of wrecks. This addition has accordingly been made compulsory.

The position of Article 28 (Topmarks) has been changed, and it has been amended so as to show, in the first paragraph, one of the purposes for which topmarks are employed and one way in which they may be used in more or less difficult circumstances.

Article 29, which relates to fixed lights, has been redrafted so that the recommendation in respect of such lights relates only to cases which are of real importance and in which the application of the rule would be easy and would not entail undesirable consequences.

The wording of Article 30 has been amended in order to provide for an exception in such very special cases as may naturally arise—*e.g.*, in inland channels or at the entrance to certain harbours. This article cannot justify any violation of the fundamental rules applicable in such simple cases as usually arise—*e.g.*, the entrance to harbours that open directly on to the sea. The article must, on the contrary, serve to enable responsible authorities to adopt such solutions as give the greatest security compatible with particular situations. The fundamental rules concerning lighted marks must not, however, be wrongly and unnecessarily extended to all cases of shore lights or lights placed on fixed supports in respect of which there is no real possibility of interference with the system of lighted marks properly so called.

The same considerations underlie the wording of Article 31, which relates to a leading light or lights, and to coloured sectors in regard to which the recommendation made is to the effect that in any particular region a uniform rule should be followed in cases where it is not possible to observe fully the fundamental rules concerning lighted marks.

In order to meet various objections that have been put forward concerning the work of unification which is now being undertaken, the Committee ventures, in conclusion, to point out that :

1. The Rules now proposed for adoption by States would not have the effect of compelling any State to employ all the modes of marking referred to therein, or even any they do not at present employ. The Rules simply indicate the characteristics that should be adopted for those marks which are already used, or may in the future be used, on the coasts of any particular country in order to meet fresh needs which may arise quite apart from the Rules themselves.

2. The wording of the two documents—as will be clear if they are carefully studied—has been made as elastic as possible as regards both individual articles in the Rules and Article 2 of the Agreement. The object has been, not only to pay due regard to various special situations which exist or may arise in the future, but also to facilitate the achievement of adequate uniformity wherever, from the point of view of security, such uniformity is both desirable and possible.

The Committee was constituted as follows :

Chairman : Sir John BALDWIN, K.C.M.G., C.B., formerly of the Foreign Office and former Chairman of the Advisory and Technical Committee for Communications and Transit.

United Kingdom : Captain A. H. RYLEY, Elder Brother of Trinity House.

¹ Document C.128(a).M.67(a).1936.VIII.

Spain : M. R. ENAMORADO ALVAREZ-CASTRILLON, Engineer, Secretary of the Lighthouse Commission.

France : M. A. DE ROUVILLE, Chief Engineer for Bridges and Roads ; Director of the Central Lighthouse and Buoyage Service.

Italy : Count F. CAPPONI, Commander, Naval Attaché at the Italian Embassy in London.¹

Netherlands : M. VAN BRAAM VAN VLOTEN, Chief Engineer of the Technical Lighthouse Service.

Sweden : M. E. HÄGG, Director-General of the Royal Administration of Pilotage, Lighthouses and Buōys.

Secretary : Mme. E. LEHMANN, Member of the Communications and Transit Section.

¹ Count Capponi made a statement before the Committee, the text of which is attached (see Annex 3).

ANNEX 1.

OBSERVATIONS OF GOVERNMENTS ON THE REPORT OF THE
PREPARATORY COMMITTEE FOR THE UNIFICATION
OF BUOYAGE RULES.

[C.C.T.594.]

[Annex 3 to document C.458.M.240.1935.VIII.]

September 27th, 1935.

The Advisory and Technical Committee for Communications and Transit, after taking cognisance of the replies of the Governments to Circular Letter 310.1931.VIII, set up a Preparatory Committee to carry on the work of the Conference held at Lisbon in 1930 with regard to the unification of the buoyage of coasts. The Preparatory Committee, which met in London from July 17th to 22nd, 1933, drew up a report, to which was attached a draft agreement and rules regarding a uniform system of buoyage.¹

At its eighteenth session, the Advisory and Technical Committee examined the results of the Preparatory Committee's work and, considering that this work had brought about the possibility of an agreement on the subject among a large number of countries, it decided to submit the draft agreement to the appreciation of the Governments which had been invited to the Lisbon Conference. In response to this decision, the Secretary-General of the League of Nations forwarded the above-mentioned documentation to the Governments in question. The following States have transmitted their observations on the report: Union of South Africa, United States of America, Australia, United Kingdom of Great Britain and Northern Ireland, Bulgaria, Canada, Chile, China, Denmark, Free City of Danzig, Egypt, Spain, Estonia, Finland, France, Irish Free State, Iceland, Italy, Japan, Latvia, Lithuania, Monaco, Norway, Netherlands, Poland, Roumania, Sweden, Union of Soviet Socialist Republics, Yugoslavia. A summary of these observations will be found below.

UNION OF SOUTH AFRICA.

In a letter dated October 15th, 1934, the Government of the Union stated that, as buoyage on the South African coasts was practically negligible, the Union Government had no observations to offer on the matter.

In regard to the question whether the Union Government would be prepared to conclude with other Governments an agreement for the unification of buoyage based upon the draft agreement and rules drawn up by the Preparatory Committee, the Union Government would prefer to defer its decision until the leading maritime Powers have definitely decided on the advisability or otherwise of adopting the scheme, as they are far more concerned in this matter than the Union Government, for the reasons indicated above.

AUSTRALIA.

I.—In a telegram dated September 22nd, 1934, the Australian Government stated that the draft agreement and rules were under reference with the States with whom compliance with the agreement principally rested. Meanwhile, the Australian Government had no observations to offer.

II.—LETTER FROM THE SECRETARY OF THE INTERTATE CONFERENCE OF AUSTRALIAN HARBOUR AUTHORITIES, MELBOURNE, DATED NOVEMBER 23RD, 1935, TO THE CHAIRMAN OF THE PREPARATORY COMMITTEE ON THE UNIFICATION OF BUOYAGE RULES.

At the seventh Inter-State Conference of Australian Harbour Authorities, held at Melbourne on the 31st ultimo, at which representatives of the Commonwealth and every State in the Commonwealth were present, consideration was given to the adoption of a uniform system of buoyage throughout Australia and the following resolution was carried :

“ That this Conference reaffirms its previous resolution that no further action be taken in this matter pending the receipt of the system proposed by the International Conference.”

To enable delegates to the Conference to give consideration to the matter, particulars respecting the practices in each port in Australia were collated and a comparison made with the proposals contained in your report (document C.465.M.238.1933.VIII). Opinions expressed by delegates were generally in favour of a uniform system of buoyage, but from the terms of the resolution you will note that it was considered inadvisable to proceed any further at present, in view of the prospects of obtaining an international system.

¹ Documents C.465.M.238.1933.VIII and Appendix.

(Communiqué au Conseil et
aux Membres de la Société.)

N° officiel: C.128. M.67. 1936. VIII.
Addendum

Genève, le 15 juillet 1936.

SOCIETE DES NATIONS

ORGANISATION DES COMMUNICATIONS ET DU TRANSIT

SYSTEME UNIFORME DE BALISAGE MARITIME

Rapport du Comité restreint

A D D E N D U M

Page 31, ajouter le texte suivant après l'alinéa relatif à la Pologne:

PORTUGAL

Par lettre du 27 juillet 1934, le Gouvernement portugais a communiqué qu'il ne voit aucun inconvénient à l'adoption du projet d'Accord pour l'unification des règles de balisage, tel qu'il a été publié dans le document C.465. M.238.1933.VIII.

LEAGUE OF NATIONS

ORGANISATION FOR COMMUNICATIONS AND TRANSIT

UNIFORM SYSTEM OF BUOYAGE

Report by the Small Committee

A D D E N D U M

On page 31, add the following text after the paragraph relating to Poland:

PORTUGAL

By letter of July 27th, 1934, the Portuguese Government stated that it saw no objection to adopting the draft Agreement for the Unification of Buoyage Rules, as published in document C.465.M.238.1933.VIII.

UNITED STATES OF AMERICA.

In a letter dated June 18th, 1934, the Government of the United States of America makes the following statement :

The American Government, though appreciating the opportunity to consider the proposals of the Preparatory Committee, is not prepared to approve the draft Rules nor to conclude with other Governments an agreement for the unification of buoyage based on them, for reasons which appear hereafter.

It will be recalled that the American Government, as set forth in its communication of June 28th, 1933, to the Secretary-General, found it impracticable to be represented at the preparatory meeting of experts at London. In consequence, no representative from the western hemisphere, in which a considerable proportion of the buoyage of the world is located, took part in the work of the Committee.

The draft Rules evolved by the Preparatory Committee appear to ignore the present status of world buoyage, as illustrated on the chart of the world presented by the Canadian delegation to the Lisbon Conference on Buoyage in 1930,¹ and the experience of seamen. The draft Rules call for a reversal of a considerable portion of the characteristics of much the greater part of the buoyage of the world. A number of countries, particularly of the American continent and along the western Pacific, with either large buoyage systems or extensive coast-lines, are now using buoyage systems almost diametrically opposed to that proposed by the draft Rules. To modify the present systems, which have been maintained with marked consistency in most of the areas referred to, in order to make them conform to the draft Rules, would involve considerable confusion and more expense than the merits of the new system would seem to warrant. For example, adoption of the draft Rules would require, along most of the coast-line of the American continents, a reversal of the colour of buoys and painted beacons; a reversal of the colour of buoy and beacon, channel and entrance lights; a reversal of the numbering of aids to navigation; the introduction for a number of these countries of the use of spherical buoys (the most costly shape to build); a change in the system of marking dangers, middle grounds and wrecks; and the introduction of a shape distinction for the more expensive types of buoys. In addition to the direct heavy expense of such a programme and the increased cost of maintenance, it is estimated by responsible authorities that the resulting cost of changes that would be entailed in charts and nautical publications for the United States alone would be nearly \$500,000, including the costs to shipowners of replacing charts rendered useless. Though fully cognisant that unification of buoyage will involve expense, the American Government is of the opinion that it can be achieved equally effectively and at less cost and less chart change for nearly all countries than would be necessitated by the draft Rules, the latter appearing to entail practically the maximum of expense and change for the countries of the American continents, as well as for certain other countries.

From the technical standpoint, the draft Rules appear to be based primarily on certain theoretical grounds with respect to the requirements of an incoming vessel. When consideration is given to the extent of the existing buoyage systems developed during more than one hundred years and the extent to which mariners are accustomed to these systems, the comparatively minor theoretical advantages claimed for having a red buoy on one side or on the other side do not seem to form a sufficient ground for the great disturbance in world buoyage and the large expense to many countries which would be entailed by the adoption of the draft Rules, particularly in the absence of any apparent demand from seamen for such action.

Moreover, the draft Rules do not appear sufficiently to recognise that ships must pass through nearly all channels in both directions. As a great variety of situations arise in navigation along the coasts, due to visibility, currents, inside and outside entrances to channels, etc., the entrance to a channel from the sea should not, in the opinion of the American Government, be given the controlling weight which the draft Rules ascribe to it.

The International Marine Conference, held at Washington in 1889, adopted unanimously a report proposing that " buoys defining the starboard hand shall be painted a single red colour. Buoys defining the port hand shall be painted a single black colour, or a parti-colour." A general agreement on this subject was reached among the twenty-eight maritime countries, well distributed throughout the world, which were represented at this Conference. Although this Conference did not call for the formal adoption of its findings, its proposal for the allocation of the colour red was followed in whole or in large part by practically all of the countries represented which were interested in lateral buoyage. At the present time, a considerable degree of uniformity has been reached, it being this Government's understanding that 75 % of the total number of maritime nations, dominions and important political units in the maritime world are following this proposal of the Washington Conference, while half of the remainder use mainly the cardinal system. This is shown graphically on the map already referred to. Estimated by the total number of buoy stations in the world, the percentage of red buoys on the right-hand side is even higher. As to this most obvious feature in buoyage

¹ Document C.163.M.58.1931.VIII, page 65 and map.

systems, the colours of the side channel buoys, a very considerable degree of uniformity now exists throughout the world, and in all of the continents, including Europe, North America and South America.

The Washington Conference was held before the day of lighted buoys, and therefore took no action on this subject. However, for a considerable proportion of the world's buoyage the red light now is also placed to the right, with the red buoy. While there is a region on the continent of Europe, including a number of countries, where the reverse holds true—*i.e.*, the red light is placed on the port side—this is the only important discordance now existing in world buoyage. The American Government believes that the most simple and inexpensive road to uniformity lies in changing the red lights of these coasts to the starboard side, as was unanimously recommended by the Technical Committee for Buoyage at Genoa in 1929, following a visit to North America by a group of leading European lighthouse experts to examine the systems in use there.

However, it is noted that the draft Rules now propose to reverse the action of the Washington International Marine Conference of 1889, as well as the recommendation of the Genoa Technical Committee, both of which, as has been mentioned above, placed the colour red to the starboard side for the entering vessel.

The large degree of uniformity now existing in the world is shown by the comparatively small amount of change that would actually be necessary to bring about substantially complete uniformity. This would appear possible of realisation through a group of European countries placing the red lights on their red buoys, another group of a few countries replacing the red buoys on the right where until recently they had them, and a few countries now in partial conformity systematising the remainder of their buoyage as to colour.

The report of the London Preparatory Committee gives no reasons for the proposed reversal of the position of the colour red, nor for disregarding the recommendations in this respect of the Genoa Technical Committee. This is the principal point under discussion and is one which directly affects the present buoyage for a large proportion of the coasts of the world. The expense, and the departure from present practice and custom as to navigational aids, that would be caused by the proposal in the draft Rules, have been stated above. Notwithstanding these conditions, there appears to be some assumption that the procedure should be for the world to seek out and adopt a theoretically perfect system of buoyage, without regard to the cost or inconvenience that would be caused. All previous discussions have been on the basis of following the preponderance of existing practice so far as it has been found to be satisfactory to the mariner.

Because of this importance attributed to the allocation of the colour red, it is necessary to consider all technical and navigational aspects of the problem that have been brought forward. The authorised combination of red lights on one side and green lights on the other is often overlooked in these discussions. This will be reverted to, but, for the moment, consideration will be confined to the use only of red and white lights to distinguish the sides in lateral buoyage. The United States Government does not consider that it is necessary to have a white light on the right-hand side to enable vessels to direct their course to that side, as it would appear that the red light serves the purpose equally well or better, in view of the fact that it is a more distinctive colour than white and less liable to be confused with other white lights near port entrances. Moreover, under some seeing conditions the red light can be more readily picked up than the white. The principal danger to the incoming ship is the right-hand limit of the entrance or channel, to which side the vessel must keep.

The question of whether red or white is used for the colour of this light has no general bearing on the risk of collision, as during many years there have been no occurrences, to the knowledge of the United States Government, to support the contentions of collision danger that are made. The collision danger, alleged in this connection, seems not to be substantiated in the experience of seamen, mainly because there appears to be no confusion between ships' lights and buoy lights.

With the combination red and white, it is believed the white light with its greater range should preferably mark the left side of the entrance, as that is the more distant side. By this arrangement also the width of the entrance fairway is better defined for the information of the mariner. The navigator should properly have the more distinctive colour, red, on the nearer side which he must approach, and the more powerful light, white, on the farther side. It is understood that navigators who are familiar with this arrangement prefer it and object to a change. Only the first lateral light is concerned in this problem, and a red light in this position can readily be given increased power, if desirable; however, generally this is not necessary, as, leading to important entrances, there usually are principal approach lights, lighthouses or lightships, ordinarily equipped with white lights of long range, and also radiobeacons.

Much of the discussion appears to envisage a combination only of a red light and a white light to mark the opposite sides, and overlooks the fact that a number of harbour and channel entrances in the world, in various countries, are now marked with a red light on one side and a green light on the other side. The green light, with equal illuminant, has slightly less range than the red light; therefore the arguments advanced on behalf of the light with greater range

being placed to the right fail in the locations where the combination of green and red lights is used. An attempt to build a world system, using green for side channel lights, on an original basic system which used green lights only for marking wrecks, seems to have given rise to confusion in this respect.

For any authority which has local preference for the white light to the right, or local objection to using the red light to the right, the situation can readily be met without reversing the position of red, by using the combination white light to the right and green light to the left; the combination of these two colours is provided for in the various proposals and has been shown to be efficient and popular with navigators.

The red light is not assigned the rôle of a danger signal in any of the proposals for buoyage, and it should not be. In buoyage it is not regarded as a signal of danger, in any special sense. The three light colours used in buoyage are all used to indicate dangers as circumstances require. For example, in the draft Rules, one of the uses of colour to indicate danger is the proposal to use green lights for wrecks. There is a marked tendency toward increased use of green lights in lateral buoyage, and theoretically red and green lights on buoys may be equally indicative of danger. It is neither possible nor desirable to ascribe to the colours of lights on aids to navigation the meanings which coloured lights have acquired in land or air transport. In none of the proposals is there provision that a red light is to be either avoided or approached; the same principles in this respect apply to the use of the three colours for lights: they may all warn of dangers according to their use. It is evident that, in any system of light colours on buoys, the navigator must on occasion approach the red light, and navigate his vessel on the side of the channel marked by red lights and red buoys.

A plan of having the red buoy on the same side as the red light of the entering vessel might well have been adopted a hundred years ago when buoyage systems were being developed, but it was not. The point seems to have no practical significance at the present time, for the mariner can just as readily fix in his mind that the positions of red on buoy and ship are in accord when he is going out, as when he is coming in. Within the experience of the largest buoyage systems in the world, it is believed that no seaman has ever considered this matter of sufficient significance to comment upon it. It is fortunate that there is no confusion between ships' lights and buoy lights, and that it is immaterial, from the practical navigational viewpoint, to which side the colour red is allocated, as otherwise it would be impossible to evolve a satisfactory buoyage system. All the relations of ships' lights and buoy lights must be reversed on every voyage, when the ship turns around and goes out to sea. The actual differences between the requirements of the incoming and the outgoing vessel are so immaterial that a system that would be actually dangerous to the former would be nearly equally dangerous to the latter.

After a detailed examination of the reasons on which the draft Rules appear to be based, this Government is of the opinion that they are not adequately supported either theoretically or by the experience of navigators. Whatever weight they may have would not appear sufficient to overcome the objections on account of expense and departure from the tried and simple systems to which mariners are accustomed. No vital principle of good seamanship or of the science of navigation is involved in the problem of the side to which the colour red is allocated.

In support of the above statements, the following official information is submitted. The Panama Canal is marked at both entrances with red buoys and red lights on the right-hand side for incoming vessels. In seventeen years, 65,000 vessels of thirty-three different countries passed through the canal, and the responsible authorities state that no difficulties have been experienced through having red lights on the starboard hand and that no comment has been made regarding this position of the red light. In the official reports, extending over at least fifty years, of vessel accidents in the waters of the United States, there is no record of an accident attributable to the location of red lights on buoys on the starboard hand for the entering vessel. In the United States, red buoys have uniformly been placed on the starboard side for eighty-three years, and red lights for forty-four years, constituting probably the most thorough test ever made in the world of a traffic signal system. There is on record no instance of any confusion or accident due to this position of the red light and buoy, or of any unfavourable comment on it. The steamship owners' associations and mariners' organisations and navigators individually of the United States have uniformly opposed a change with respect to the basic feature of the allocation of the colour red to the right.

Among the technical features of the draft Rules, other than that of allocating the colour red, which present difficulties is the provision that wrecks shall be marked by green intermittent lights on either side of the channel, and therefore, on occasion, on the red side of the channel. For example, the draft Rules propose that a triple-flash green light shall signify a wreck to be left to starboard, a double-flash green light a wreck to be left to port, an occulting green light a wreck to be passed on either side, and a green light of any character differing from the above shall mark the starboard side in the lateral system. Considering the uncertainties in flashing mechanisms, the effect of the rolling of buoys on the appearance of flashes, and the extremely

unfavourable seeing conditions under which navigators must at times proceed, the American Government regards the foregoing complicated use of green lights for purposes diametrically opposite to each other, and conflicting with the use of green lights in the lateral system, as unsuitable for a buoyage system and liable to result in disaster.

Also the draft Rules do not appear to offer an adequate system at night for distinguishing between buoys marking the sides of channels, middle grounds, isolated dangers and mid-channel buoys. Also the draft Rules provide no shape distinction for middle-ground buoys indicating a choice between the two channels, although providing a colour distinction for this purpose.

The draft Rules propose that even numbers shall be assigned to the left-hand side of the channel, although this is not the present practice of any country. No nautical principle is believed to be involved in the question of the allocation of even and odd numbers to one side or the other of a channel, and this Government has no knowledge of a desire on the part of seamen for a reversal in this respect of the system uniformly in use by all countries of the world which follow a system. The question is in itself a minor one, which could readily be decided either way on technical grounds. But, in practice, such a change as is called for in the draft Rules would involve considerable difficulty and expense both as to the marks themselves and as to the charts and publications on which they are represented, and stated advantages of which would appear insufficient to justify the expense and confusion that it would cause, and the departure from the system to which mariners are accustomed.

It should be pointed out that the draft Rules propose a buoyage and lighting system which as a whole has not been tried out in practice and, as to a number of details, is experimental. They also, in the opinion of this Government, depart widely from the degree of simplicity which is so desirable in a plan for aids to navigation, considering the difficult conditions under which navigators are on occasion required to work. The draft Rules appear to be more complex than any system that has heretofore been used for buoyage, and it is to be doubted whether countries and mariners would carry out so complicated a system.

These are additional grounds for proceeding cautiously in the development of a system of aids to navigation, and for basing it on actual trial and the experience of mariners, rather than undertaking to build up a new and theoretical system, without regard for existing progress in the direction of uniformity of buoyage. It is obvious that countries which now have uniformity of buoyage, on a plan found by seamen to be safe and satisfactory, will encounter serious difficulties should they attempt to bring about acceptance of a radically different and untried system, without adequate impelling reasons, and that these difficulties will be great in proportion to the extent and importance of the systems which the countries maintain, and the consistency with which they have adhered to them.

Whatever changes in sentiment may have occurred since the time of the Lisbon Conference, there is no evidence that a reversal of the Genoa Committee report, as now proposed in the draft Rules, is likely to be accepted with any degree of unanimity, or by countries controlling the greater part of the buoyage of the world. Should such be the case, the draft Rules will not approach the end sought—namely, world uniformity of buoyage. Indeed it is possible that they may have the opposite effect, by consolidating fundamentally opposite systems. There is, at the present time, a considerable degree of uniformity of buoyage in the world, and it is possible that a situation might be brought about where there would be less uniformity than there is to-day, and where, in different areas of the world and around the borders of the great oceans, there might result a lack of system and a situation materially less satisfactory than exists at the present time.

In the final paragraph of its report, the Preparatory Committee seems to have envisaged the possibility that, failing general agreement on the basis of the draft Rules, regional conformity might be obtainable. The American Government would be unwilling to concede as yet that substantial world uniformity of lateral buoyage be abandoned in favour of conflicting systems of regional uniformity to which objections are obvious, though, as to cardinal buoyage, the American Government feels that such system or systems as may be used should be a matter for agreement between the countries concerned. The cardinal buoyage system recommended by the Preparatory Committee is not particularly applicable to the coasts of this country and it is doubtful whether the United States would make use of cardinal marking in view of the advantages of adhering to a single simple uniform system. It is felt that the recommended cardinal system is at present of principal interest to a region of Northern Europe and it is understood there has been no tendency to extend the principles of cardinal buoyage outside of this region.

The Government of the United States has taken an active part in previous efforts toward uniformity of lateral buoyage, in view of the great extent of its system of buoyage and coast and channel lighting. In pursuance of this Government's desire to be of all possible assistance in establishing world uniformity of lateral buoyage, there is transmitted herewith a draft system of international uniform buoyage (see Appendices I, II and III), which appeals to this Government as being readily susceptible of adoption by all States concerned. The authorities of this Government were unable to complete the preparation of this draft system in time for the meeting of the Preparatory Committee in London.

Appendix I.

DRAFT OF A UNIFORM INTERNATIONAL SYSTEM OF BUOYAGE.

Based on the present state of world buoyage, and adhering to the recommendations of the International Marine Conference of 1889 at Washington, and of the League of Nations Technical Committee of 1929 at Genoa.

Buoy Colours and Shapes.

Lateral channel buoys ; red, conical, to the right ; black, cylindrical, to the left.

Middle-ground buoys, where the main channel is to the right or the channels are of equal importance, cylindrical shape, black and red, or black and white horizontal bands, with top band black ; where the main channel is to the left, conical shape, red and black, or red and white horizontal bands, with top band red.

Obstruction or isolated danger buoys ; black and red horizontal bands, shape cylindrical or conical ; if distinctive shape is desired, spherical may be used. If desired, there may be a narrow white band, not at the top of the buoy.

Fairway (mid-channel) buoys ; black and white vertical stripes.

Quarantine buoys ; yellow.

Anchorage buoys ; white.

Buoy Numbers.

If used for lateral buoys ; even numbers to the right, odd numbers to the left, increasing from seaward.

Buoy Lights.

Lateral buoys ; ordinary flashing or intermittent lights, or fixed lights where necessary, colour of lights, red or white to the right, white or green to the left. When white lights are used on both sides, an even number of flashes to the right, an odd number to the left.

Middle-ground and obstruction buoys ; lights generally white if to be passed on either side, and otherwise red or green as appropriate to the preferred side for passing ; if distinctive type of light is desired, a quick flashing light may be used.

Fairway (mid-channel) buoys ; lights usually white ; if distinctive type of light is desired, alternate short and long flashes may be used.

Wrecks.

Wrecks are to be marked to show the side on which they are to be passed, by the buoy colour and shape distinctions, and by the light colours, of the lateral system, or by other characteristics not likely to be confused with that system ; if distinctive type of flash is desired, an interrupted quick flashing light may be used. Upper half of buoy body green (optional).

Notes.

Channel sides are defined with reference to a vessel entering from seaward.

These characteristics apply also to minor fixed aids of similar purpose, so far as feasible. They do not, in general, apply to lightships or principal lighthouses.

Shape distinctions are desirable for all buoys but they may be omitted or deferred where not considered practicable for particular types of buoys, such as spar buoys and lighted, bell, and whistle buoys, or the shape distinctions may be indicated by topmarks with shape and colour as prescribed for buoys on the corresponding positions.

Deviations, or further distinctions, are allowed, where necessary, provided they are not likely to be confused with these characteristics, and do not conflict with the general principles of the allocation of characteristic colours, shapes, etc.

Cardinal System.

As agreed upon by the countries concerned, and not conflicting with the lateral system.

Appendix II.

MEMORANDUM ON A DRAFT UNIFORM INTERNATIONAL SYSTEM OF BUOYAGE.

The draft system of uniform buoyage as set forth in the Appendix I is based on a measure of unification of proven acceptability to the mariner which has long been consistently maintained and now exists in the major portion of the territorial waters of the countries of the world.

In its preparation, the following considerations were weighed :

- A system nautically and technically correct and proven to be satisfactory to the mariner ;
- A system already in extensive use, in part or in whole, throughout the world ;
- The use as to colour, location, etc., of the system to which seamen are now most accustomed, and which has been the most thoroughly tested ;
- The least disturbance of existing systems of buoyage, and the least expense in changes required, both to Governments and to shipowners ;
- The minimum of changes in charts and nautical publications ;
- Simplicity, with a minimum requirement for the recognition by seamen of various and complicated characteristics ;
- Distinctiveness of characteristics, with the avoidance of likelihood of confusion ;
- Flexibility, with allowance for meeting local conditions, within reasonable limitations.

It is believed that the system as outlined would require no change from the present practice for considerably more than half of the buoyage and coast lighting of the world, and appreciably less change for all but a very few countries in the Mediterranean area, than would be necessitated by the adoption of the draft Rules of the London Preparatory Committee. Moreover, so far as concerns the uniformity of buoyage now existing in North and South America, and largely in Asia and Australia, no change would be necessary under this draft system. On the other hand, according to statistics presented at the Lisbon Conference, the draft Rules of the London Preparatory Committee, if adopted, would require ten times more change

than would be necessitated under this system. Moreover, this system offers, for optional consideration, important possibilities in the way of technical advance in buoyage, through indicating the rôles of buoys at night by simple and unmistakable flash characteristics, as they are now distinguished by day through colour and shape distinctions. This use of flash characteristics for buoys at night is at present under extensive test in the United States, with satisfactory results.

It is believed that this system is in accord with the decisions of the Washington International Marine Conference of 1889, and in accord with the report of the Technical Committee for Buoyage and Lighting of Coasts at Genoa in 1929, which were both widely representative of the maritime nations of the world. The above Technical Committee, representing ten maritime countries, unanimously adopted at Genoa a report which stated that "the Committee is convinced that the proposals contained in its report now constitute a satisfactory basis for unification of maritime signals". The most important of these proposals recommended by this Committee at Genoa, and the one which received the most careful consideration, was one for retaining the use of the colour red, both for buoys and lights, on the right-hand side of the entering vessel. The printed record of the Lisbon Conference of 1930 shows that the representatives of substantially all the countries of continental Europe concerned in lateral buoyage stated that they were prepared to accept at that time the recommendation of the Genoa Committee. This draft system also agrees substantially with the plan presented by the Japanese representatives at the London Preparatory Committee meeting in July 1933.

Appendix III.

PROPOSAL FOR A UNIFORM INTERNATIONAL SYSTEM OF BUOYAGE.

Based on the Present State of World Buoyage, and adhering to the Recommendations of the International Marine Conference of 1889 at Washington, and of the League of Nations Technical Committee of 1929 at Genoa.

LATERAL CHANNEL BUOYS.

Left side of channel, entering.



Lights, white or green, ordinary flashing or occulting. Odd numbers, if any.

Right side.



Lights, red or white, ordinary flashing or occulting. Even numbers, if any.

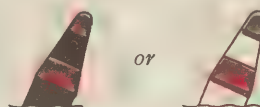
MIDDLE-GROUND OR BIFURCATION BUOYS.

Alternative.



Main channel to the right. Lights, green or white, quick flashing (optional).

Alternative.



Main channel to the left. Lights, red or white, quick flashing (optional).

OBSTRUCTION OR ISOLATED DANGER BUOYS.



Lights, white, red or green, quick flashing (optional).

Alternative.



FAIRWAY OR MID-CHANNEL BUOYS.



Lights, white (usually). Short-long flash (optional).

WRECK BUOYS.

Shape and colour to indicate side on which to pass; upper half green (optional). Lights, interrupted quick flash (optional), light colour to indicate side on which to pass.

CARDINAL SYSTEM.

As agreed upon by the countries concerned, and not conflicting with the lateral system.

His Majesty's Government are strongly of the opinion that diagrams illustrating standard shapes for the marks and topmarks mentioned in the rules should be attached to the rules in their definitive form, so as to prevent misunderstanding of the meaning of the terms used and ensure a reasonable degree of uniformity of shape and colouring. Rigid adherence to the illustrations would not be expected, but substantial conformity should be aimed at. His Majesty's Government suggest that, as, in their opinion, the diagrams attached to the draft rules drawn up by the Preparatory Committee are not entirely suitable for the purpose in view, a small sub-committee should be appointed by the League of Nations to settle the form of these diagrams.

It is suggested that Trinity House types for the lateral system of buoyage might, in the first place, be considered. They would, however, have to be supplemented by others, in order to cover all the marks referred to in the rules. If desired, a set of diagrams would be prepared by Trinity House and forwarded for consideration.

MEMORANDUM ON THE DRAFT RULES CONCERNING A UNIFORM
SYSTEM OF BUOYAGE DRAWN UP BY THE PREPARATORY COMMITTEE.

Rule drafted by London Preparatory Committee, July 1933 (1)	Proposed amendment (2)	Remarks (3)
CHAPTER I.—GENERAL.		
Article 1.—Definitions.	Nil.	Nil.
Article 2.—Buoyage Systems. There are two principal systems of buoyage, the lateral and the cardinal : The <i>lateral</i> system is generally used for well-defined channels ; buoyage-marks indicate the position of dangers in relation to the route to be followed by mariners in their vicinity. The <i>cardinal</i> system is generally used to indicate dangers where the coast is flanked by numerous islands, rocks and shoals, as well as to indicate dangers in the open sea.	Add at the end : “ In this system, the bearing (true) of the mark from the danger is indicated to the nearest cardinal point ”.	The proposed addition will make the nature of the cardinal system much clearer to those who have no knowledge of it. To a slight extent, it duplicates information given in the first paragraph of Article 16, but it is not thought that objection need be taken to this.
Article 3.—Use of Systems.	Nil.	Nil.
Article 4.—Principal Types of Marks. The principal types of marks employed in the lateral and cardinal systems are : conical, can, spherical, spindle, ogival, spar.	Substitute the following article and transfer it to the commencement of “ Chapter II. — Lateral System ” : “ Article 5. — <i>Principal Types of Marks.</i> “ The principal types of marks employed in the lateral system are : conical, can, spherical and spar (which latter includes the spindle type— <i>i.e.</i> , a tapered spar) ”.	See also Article 13. It is considered preferable to describe the principal types of marks separately under each of the two systems instead of in one general article. In the lateral system, it appears to be unnecessary to distinguish between the spindle type and the spar type of mark, and, in the interests of simplicity, it is therefore proposed to include spindles under the head of spars.
Article 5.—Characteristic Shapes of Marks. The characteristics of the principal types of marks are shown either by the shape of the upper part of the body of the mark or by the shape of a superstructure secured to the mark.	Insert the word “ floating ” between the words “ of ” and “ marks ”, and add the following sentence at the end of the article : “ The characteristics of the principal types of fixed marks are shown either by the shape of the body of the	By Article 1, beacons and other fixed marks will be covered by the Rules, but Article 5, as drafted by the London Committee, does not fully take account of this fact.

Rule drafted by London Preparatory Committee, July 1933 (1)	Proposed amendment (2)	Remarks (3)
<p>CHAPTER II.—LATERAL SYSTEM.</p> <p><i>Article 6.—Position of Marks.</i></p> <p>.</p> <p>.</p> <p><i>Article 7.—Shapes of Topmarks.</i></p> <p>The principal shapes of topmarks have the appearance of :</p> <p>A cone, A cylinder, A sphere.</p> <p>Other shapes have the appearance of :</p> <p>A diamond, A St. George's cross, A "T".</p> <p><i>Article 8.—Marking of Sides of Channels.</i></p> <p>Marks on the two sides of a channel are characterised as follows :</p> <p>(a) <i>Starboard-hand marks</i> :</p> <p>Shape or type : Cone, spindle, or spar. Colour : Black, or, for purposes of differentiation, black and white chequers ; or, for spars, for purposes of differentiation or visibility, black with the upper part white. Topmark (if any) : A cone point upwards, coloured black.</p> <p>(b) <i>Port-hand marks</i> :</p> <p>Shape or type : Can, spindle, or spar. Colour : Red, or, for purposes of differentiation, red and white chequers, except in the case of spars. Topmark (if any) : A cylinder coloured red.</p> <p>N.B. — On spars, a broom in the form of a cone point downwards may be used as a topmark instead of a cylinder, but a topmark on the starboard hand shall have the appearance of a cone point upwards.</p> <p>For purposes of differentiating topmarks, the use of a diamond for starboard-hand marks and a "T" for port hand marks is allowed, provided that these alternative topmarks are not used at the entrance of a channel.</p> <p>The use of yellow instead of white in the chequers is permitted in secondary channels (channels which are alternative to main channels).</p> <p><i>Article 9.—Numbering or Lettering.</i></p> <p>.</p>	<p>mark or by the shape of a topmark surmounting the mark."</p> <p>Nil.</p> <p>Substitute the following : "The shapes of topmarks for which definite provision is made in these Rules are : "A cone, "A can, "A sphere, "A diamond, "A St. George's cross, "A 'T'."</p> <p>Substitute the following : "Marks on the two sides of a channel are characterised as follows : "(a) <i>Starboard-hand marks</i> : "Shape or type : Conical or spar. "Colour : Black, or, in the case of conical marks for purposes of differentiation, black and white chequers ;¹ in the case of spars, for purposes of differentiation or visibility, black with the upper part white. "Topmark (if any) : Cone, point upwards, coloured black, or, for purposes of differentiation, a diamond, except at the entrance of a channel. "On spars, a broom in the form of a cone point upwards may be used. "(b) <i>Port-hand marks</i> : "Shape or type : Can or spar. "Colour : Red, or, in the case of can-shaped marks, for purposes of differentiation, red and white chequers.¹ "Topmark (if any) : Can, coloured red, or, for purposes of differentiation, a 'T', except at the entrance of a channel. On spars, a broom in the form of a cone point downwards may be used."</p> <p>Nil.</p>	<p>If the preceding article is transferred to Chapter II, as proposed, this article should be renumbered "4".</p> <p>Nil.</p> <p>The article in its revised form in column (2) sets out all the shapes of topmarks which are definitely authorised or required by the Rules, whilst at the same time indicating that the use of other forms of topmark is not prohibited in special cases.</p> <p>The references to the spindle type of mark have been omitted (see Article 4, second paragraph of Remarks), and the whole article has been re-drafted with a view to greater clarity. No alteration has been made in any of its provisions, except as regards the spindle shape.</p> <p>Nil.</p>
	<p>¹ The use of yellow instead of white in the chequers is permitted in secondary channels (channels which are alternatives to main channels).</p>	

Rule drafted by London Preparatory Committee, July 1933 (1)	Proposed amendment (2)	Remarks (3)
<p><i>Article 10.—Lighted Marks.</i></p> <p>Lights on marks on the two sides of a channel are differentiated by colour or by rhythm where preferred or by a combination of both colour and rhythm—viz. :</p> <p>(a) Starboard-hand lights : White lights showing one or three flashes or occultations ; green lights of a character not allocated to the marking of wrecks (see Article 23) ; or both white lights and green lights with the above characteristics.</p> <p>(b) Port-hand lights : Red lights showing any number of flashes or occultations up to four ; white lights showing two or four flashes or occultations ; or both red lights and white lights with the above characteristics.</p> <p><i>Article 11.—Middle-Ground or Bifurcation or Junction Marks.</i></p> <p>Marks at the ends of middle grounds have the following characteristics :</p> <p>Shape or type : Spherical, spindle, or spar.</p> <p>Colour : Red and white horizontal bands where the main channel is to the <i>right</i> or the channels are of <i>equal importance</i> ; black and white horizontal bands where the main channel is to the <i>left</i>.</p> <p>Topmarks (if any) :</p> <p>(a) Main channel to the <i>right</i> : Outer end, a cylinder } Painted Inner end, a "T" } red</p> <p>(b) Main channel to the <i>left</i> : Outer end, a cone point } upwards } Inner end, a diamond } Painted (two cones base to } black base) }</p> <p>(c) Channels of <i>equal importance</i> : Outer end, a sphere } Painted Inner end, a St. George's } red cross }</p> <p>N.B.—Where the body of the mark is not spherical, a spherical topmark is placed immediately below the topmarks indicated in (a), (b) and (c), as the case may be.</p> <p><i>Lighted Marks.</i>—The characteristics of lights on these marks shall, as far as possible, be distinctive ; provided that no colours are used other than those prescribed in Article 10 above, and provided also that neither colour nor rhythm, nor combinations of colour and rhythm, shall be such as to lead to uncertainty with regard to the side on which the marks shall be passed.</p> <p>When lights with distinctive characteristics cannot conveniently be adopted, the lights shall conform to the rules prescribed in Article 10 and shall, as far as possible, be differentiated from neighbouring lights.</p> <p><i>Article 12.—Mid-channel Marks.</i></p> <p>.</p>	<p>The words " where preferred " should be transferred from their present position after the word " rhythm " to after the words " colour or ".</p> <p>Under " Shape or type " omit the word " spindle ".</p> <p>Under Topmarks (a), substitute the word " can " for the word " cylinder ".</p>	<p>With regard to the use of single occulting green lights, see Article 23, second paragraph of Remarks.</p> <p>See Article 4, second paragraph of Remarks.</p> <p>This will follow the nomenclature proposed for Article 7.</p> <p>Nil.</p>

Rule drafted by London Preparatory Committee, July 1933 (1)	Proposed amendment (2)	Remarks (3)
CHAPTER III.—CARDINAL SYSTEM.		
Article 13.— <i>Shape of the Body of the Mark.</i> If a distinction as to shape is made between the marks, the shape is as follows : Conical, cylindrical, ogival or spindle.	Amend to read as follows : “ Article 13.— <i>Principal Types of Marks.</i> “ The principal types of marks employed in the cardinal system are : Conical, cylindrical, ogival, spindle, and spar.”	See Remarks on Article 4 (column (3)).
Article 14.— <i>Shape of Topmarks.</i>	Nil.	Nil.
Article 15.— <i>Characteristic Colours.</i>	Nil.	Nil.
Article 16.— <i>Allocation of Characteristics to the Quadrants.</i>	Nil.	Nil.
CHAPTER IV.—MARKS COMMON TO BOTH SYSTEMS AND OTHER MARKS.		
Article 17.— <i>Isolated Danger Marks.</i> Isolated danger marks are used where it is desired to mark a danger which can be adequately indicated by a single mark and may be passed on either hand. These marks are as follows : Shape or type : Spherical, spindle, or spar. Colour : Wide black and red horizontal bands separated, if desirable, by a narrow white band. Topmark (if any) : Spherical painted black or red, or half-black and half-red, horizontally. Light (if any) : Rhythmic, either white or red.	For “ Isolated danger marks . . . spindle, or spar ”, substitute : “ Where it is desired to use a special mark for a danger which can be adequately indicated by a single mark and which may be passed on either hand, the mark shall be as follows : “ Shape or type : Spherical or spar.” Under “ Topmark ”, substitute the word “ sphere ” for the word “ spherical ”.	The amended form of the article in column (2) will indicate more clearly that a Buoyage or Lighting Authority need not mark any danger with an “ isolated danger mark ” unless they consider this method of marking the most suitable in the circumstances of the case. This will follow the nomenclature used in Article 7.
Article 18.— <i>Landfall Marks.</i> Landfall marks serve to indicate the seaward approach to a harbour, river or estuary. These marks are as follows : Shape : Optional. Colour : Black and white, or red and white, vertical stripes. Light (if any) : Rhythmic.	Amend the first paragraph to read as follows : “ Landfall marks serving to indicate the seaward approach to a harbour, river, or estuary are as follows : ” Insert after the words “ Shape : Optional ”, the words “ but must not be misleading, having regard to the Rules for channel marking ”.	Nil.
Article 19.— <i>Transition Marks.</i> Buoys indicating the transition between the cardinal and lateral systems are painted with red and white or black and white spiral bands.	Substitute the following for the words after the word “ are ” : “ as follows : “ Shape : Optional, but must not be misleading, having regard to the Rules for channel marking. “ Colour : Either red and white or black and white spiral bands.”	Nil.

Rule drafted by London Preparatory Committee, July 1933 (1)	Proposed amendment (2)	Remarks (3)
<p><i>Article 20.—Quarantine - Ground Marks.</i></p> <p>Shape : Optional. Colour : Yellow.</p>	<p>Add after " Shape : Optional ", the words " but must not be misleading, having regard to the Rules for channel marking".</p>	<p>Nil.</p>
<p><i>Article 21.—Outfall and Spoil-Ground Marks.</i></p> <p>Shape : Optional. Colour : Yellow above and black below.</p>	<p>Amend to read as follows : " Shape : Optional, but must not be misleading, having regard to the Rules for channel marking. " Colour : Yellow above and black below. " Light : Optional, but due regard should be paid to character of other lighted marks in the vicinity." Insert the following article between Nos. 21 and 22 : " Areas used for Naval, Military or Air Force Practice Purposes. — Marks indicating the limits of such areas are as follows : " Shape : Optional. " Colour : White with appropriate inscription in red — e.g., ' D.A.' for Danger Area".</p>	<p>Nil.</p> <p>As it is becoming increasingly common for such areas to be marked by buoys, a rule governing their marking is considered desirable.</p>
<p>CHAPTER V.—MARKING OF WRECKS.</p> <p><i>Article 22.—General Provisions.</i></p> <p>.</p> <p><i>Characteristics in the Lateral System.</i></p> <p><i>Article 23.—Wreck-marking Buoys.¹</i></p> <p>Colour : Green.</p> <p>(a) If to be passed on the <i>starboard hand</i> :</p> <p>Shape or type : Conical, spindle or spar. Topmark (if any) : Conical. Light (if any) : Triple-flashing green.</p> <p>(b) If to be passed on the <i>port hand</i> :</p> <p>Shape or type : Can, spindle or spar. Topmark (if any) : Can. Light (if any) : Double-flashing green.</p> <p>If the body of the mark in the cases of (a) and (b) above does not conform to the characteristic shape, the lower part of the mark shall be coloured black or red, as the case may be, but the predominant colour shall be green.</p> <p>(c) If to be passed on <i>either hand</i> :</p> <p>Shape or type : Spherical spindle or spar. Topmark (if any) : Spherical. Light (if any) : Occulting green, giving equal periods of light and darkness. The duration of each period shall not be less than three seconds.</p>	<p>Nil.</p> <p>After the words " Colour : Green ", insert the words " (including topmark (if any)) ". For " Topmark (if any) : Conical " under (a) substitute " Topmark (if any) : Cone."</p> <p>Omit the word " spindle " under " Shape or type " in paragraphs (a), (b) and (c).</p> <p>Under " (c) ", substitute the following paragraph for the paragraph commencing " Light (if any) " : " Light (if any) : Single occulting green."</p>	<p>Nil.</p> <p>As regards the omission of the word " spindle ", see Article 4, second paragraph of Remarks.</p> <p>Strong representations have been made by Buoyage and Lighting Authorities in the United Kingdom that it would be preferable to reserve single occulting green lights for wreck-marking and not to use them also for channel-marking, which it is considered might lead to confusion. It is therefore proposed that the character of the occulting green light to be exhibited under (c) should not be restricted to one giving equal periods of light and darkness, to which certain authorities see objection, preferring a character which, in all conditions of weather, etc., will be unmistakably occulting.</p>

¹ When posts fixed in the ground are used to mark wrecks in shallow waters, they conform to the rules.

<p>Rule drafted by London Preparatory Committee, July 1933 (1)</p>	<p>Proposed amendment (2)</p>	<p>Remarks (3)</p>
<p>Where a wreck which can be passed on either hand is marked by more than one light, the lights may be differentiated by different periods of occultation.</p> <p><i>Article 24.—Wreck-marking Vessels.</i></p> <p>They display green painted shapes :</p> <p>(a) If to be passed on the mariner's <i>starboard hand</i> :</p> <p>Two spheres surmounted by a cone point upwards in a vertical line.</p> <p>(b) If to be passed on the mariner's <i>port hand</i> :</p> <p>A sphere surmounted by a cylinder in a vertical line.</p> <p>(c) If to be passed on <i>either hand</i> :</p> <p>Four spheres disposed vertically by pairs.</p> <p>The shapes are disposed so as to be distinctly visible above the vessel's superstructure.</p> <p>The shapes shall be disposed vertically with a clear space between each shape equal to not less than one and a half times the diameter of the spherical shape.</p> <p>The horizontal distance between the shapes in (c) shall be as great as possible and in no case less than twice the vertical distance between the shapes.</p> <p>Lights : fixed green ; shall correspond in number and arrangement to the shapes mentioned above.</p> <p>Vessels marking wrecks shall not carry the ordinary riding-light carried by a vessel at anchor.</p> <p>Sound signals : On manned wreck-marking vessels during fog, mist, falling snow or heavy rainstorms, a bell, if used, is rung at intervals of not more than thirty seconds, as follows :</p> <p>Three strokes, if the vessel is to be passed on the mariner's <i>starboard hand</i> ;</p> <p>Two strokes, if the vessel is to be passed on the mariner's <i>port hand</i> ;</p> <p>Four strokes, if the vessel can be passed on <i>either hand</i>.</p> <p>N.B. — Should sound signals be given by means other than by a bell, they shall be such as not to be mistaken for neighbouring sound signals.</p>	<p>For the word "light" in the last paragraph, substitute the words "lighted buoy".</p> <p>Add the following footnote to correspond with the footnote to the heading to Article 23 :</p> <p>"Where shapes and/or lights are exhibited from the wreck itself, instead of a floating mark being used, the colour green shall be employed and the shapes and/or lights shall not conflict with the Rules laid down in this article."</p>	<p>It appears desirable to make provision for the case of shapes and lights being exhibited from the wreck itself, as this form of marking may sometimes, particularly in narrow waters, be the only practicable one.</p>
<p><i>Characteristics in the Cardinal System.</i></p> <p><i>Article 25.—Wreck-marking Buoys.</i></p> <p>Wreck marks are only placed in the eastern and western quadrants and have the following characteristics :</p> <p><i>Eastern quadrant :</i></p> <p>Shape or type : Conical, ogival, or spar.</p> <p>Topmark (if any) : Two cones base to base.</p> <p>Colour : Green.</p> <p>Light (if any) : Green, interrupted flashing, giving a succession of rapid flashes, at a rate of at least forty per minute for a given period, followed by a given period of darkness.</p>	<p>Add the following note :</p> <p>"Where the shape of the mark used is conical, cylindrical spindle or spar, topmarks are compulsory in order to distinguish the wreck-marking buoys of the cardinal system from the wreck-marking buoys of the lateral system."</p>	<p>The suggested proviso appears to be necessary in order to prevent possible confusion.</p>

Rule drafted by London Preparatory Committee, July 1933 (1)	Proposed amendment (2)	Remarks (3)
<p><i>Western quadrant :</i></p> <p>Shape or type : Cylindrical, spindle, or spar.</p> <p>Topmark (if any) : Two cones point to point.</p> <p>Colours : Green.</p> <p>Light (if any) : Green flashing, at a rate of at least forty flashes per minute.</p> <p>CHAPTER VI.—MISCELLANEOUS PROVISIONS.</p> <p><i>Article 26.—Undefined Marks.</i></p> <p>Marks whose purpose is not defined in these rules are coloured in such a way as not to lead to confusion with marks whose purpose is defined in these Rules. The characteristics of bell and whistle buoys have, if practicable, the appropriate characteristics laid down in these Rules.</p> <p>Certain fixed marks indicating, for instance, the direction to be followed by a mariner may be provided with characteristics which allow them to be distinguished clearly from floating marks.</p> <p><i>Article 27.—Fixed Lights.</i></p> <p>The use of fixed lights on marks should be avoided wherever practicable, except in the case of wreck-marking vessels, where the lights should conform with the provisions of Article 24.</p> <p><i>Article 28. — Harbour Lights.</i></p> <p>In the case of lights placed on permanent works at the entrance of harbours, whose principal purpose is to mark the sides of a channel, the colour and rhythm should, as far as possible, be in accordance with the provisions of Article 10.</p> <p><i>Article 29.—Coloured Sector Lights and Leading Lights.</i></p> <p>Where practicable, coloured sector lights shall be in accordance with the provisions of Article 10. Where this is not considered practicable, the colours should preferably be allocated in accordance with a definite rule laid down for a particular region, in order that the sectors may be arranged in the same manner when the conditions of their employment are similar.</p> <p>Where a leading light or lights might be mistaken for a light or lights forming a part of the lateral system, the colour shall be in accordance with the provisions of Article 10.</p> <p><i>Article 30.—Fixed Supports for Lights.</i></p> <p>.</p>	<p>Omit the second sentence of the first paragraph and insert the following new paragraph :</p> <p>“ Bell buoys and whistle buoys have, if practicable, the characteristics appropriate to their position in accordance with the foregoing Rules.”</p> <p>Insert the word “ floating ” between the words “ on ” and “ marks ”.</p> <p>After the words “ a channel ” substitute the following words for the remainder of the article :</p> <p>“ Into the harbour, the general obligation to adopt the characteristics of colour and rhythm which would be in accordance with the provisions of Article 10 need not be considered binding, if, in the opinion of the responsible authority, local conditions render other characteristics of colour and rhythm more desirable.”</p> <p>Substitute the following for the first paragraph :</p> <p>“ When coloured sectors are used in lights forming part of the lateral system of buoyage, it is desirable, when circumstances permit, that their colours should be in accordance with Article 10. In cases where this is not considered practicable, the colours should preferably be allocated in accordance with a definite rule laid down for a particular region, in order that the sectors may be arranged in the same manner when the circumstances are identical.”</p> <p>Nil.</p>	<p>Nil.</p> <p>In view of the terms of Article 1, the proposed amendment is necessary in order to make it clear that Article 27 is not intended to apply to fixed lights on shore or on works, such as piers.</p> <p>It is thought that difficulties would arise in the practical interpretation of this article as it appears in column (1). In its amended form in column (2), the general scope of the article remains unaltered and it is made clear that a channel leading into the harbour and not a channel running past the entrance is referred to.</p> <p>The article in column (2) is Article 24 of the British proposals of November 1931. It is considered to be clearer and easier of interpretation than the article drafted by the London Committee.</p> <p>Nil.</p>

Rule drafted by London Preparatory Committee, July 1933 (1)	Proposed amendment (2)	Remarks (3)
<p><i>Article 31.—Topmarks.</i></p> <p>When a mark or its superstructure, having regard to its position in the system, does not conform to the characteristic shape laid down in the foregoing rules, it shall, as far as possible, be furnished with the appropriate characteristic topmark. Alternatively, an additional mark bearing the appropriate topmark may be used.</p> <p>Topmarks are generally painted with the darkest of the characteristic colours used for the corresponding mark, except in the case of an isolated danger mark. This provision is not obligatory when brooms are employed as topmarks.</p> <p>For purposes of differentiation where there are numerous neighbouring marks, additional topmarks of the same shape may be used on the same mark. The lower cone may be duplicated in the case of topmarks used in the eastern and western quadrants of the cardinal system.</p>	<p>Insert the words “owing to damage or other exceptional circumstances” after the word “When” at the commencement of the article.</p> <p>Substitute the words “pending repair or replacement” for the words “as far as possible” in the first paragraph.</p> <p>Substitute the following for the first sentence of the second paragraph :</p> <p>“Where not otherwise stated in the foregoing Rules, topmarks are painted with the darker of the colours used for the body of the mark.”</p> <p>The whole article should come after Article 26, and before Articles 27, 28, 29 and 30.</p>	<p>It is desirable to indicate that, except as provided by Article 2 of the draft agreement, departures from the Rules relating to shape may only be made in quite exceptional cases or in circumstances of temporary difficulty and that the article does not authorise any general use of topmarks as substitutes for the appropriate shape of the body or superstructure of buoys.</p> <p>The form of the Rule regarding the painting of topmarks has been slightly amended.</p>

MEMORANDUM ON THE DRAFT AGREEMENT RELATIVE TO THE UNIFICATION OF BUOYAGE RULES DRAWN UP BY THE PREPARATORY COMMITTEE.¹

Agreement as drafted by London Preparatory Committee, July 1933 (1)	Proposed amendment (2)	Remarks (3)
<p>DRAFT AGREEMENT RELATIVE TO THE UNIFICATION OF BUOYAGE RULES.</p> <p>The contracting Governments, represented by the undersigned, having decided to unify certain rules relative to buoyage, have agreed on the following provisions :</p> <p><i>Article I.</i></p> <p>In all cases in which the competent authorities in the territories of the contracting Governments communicate to navigators the information or warnings dealt with in the annexed rules, each of those Governments undertakes that only measures in conformity with the provisions of the said rules will be taken by such authorities for the particular purposes in question. The necessary measures to that effect shall be taken before the expiry of a period of ten years from the entry into force of the present Agreement.</p> <p>Every contracting Government that has completed the application of the aforesaid measures in its territory shall notify the Secretary-General of the League of Nations to that effect ; a copy of such notification shall be forwarded by the Secretary-General to the other contracting Governments.</p> <p>Each contracting Government shall do everything practicable, due regard being had more especially to the funds at its disposal, to reduce the length of the transitional period between the initiation and completion of the application of the aforesaid measures in its territory.</p>	<p>For the words “communicate to navigators the information or warnings dealt with in the annexed rules”, substitute the words “maintain for the benefit of navigators marks or other signals for the purposes mentioned in the annexed rules”.</p> <p>Add the following words at the end of the first paragraph : “as regards the territory concerned in accordance with Article 5 or 7 or 9, as the case may be”.</p>	<p>The words which it is proposed to alter appear to be based on a similar article in the Agreement concerning Maritime Signals, signed at Lisbon in 1930, but are not appropriate in the present instance.</p> <p>Acceding Governments should be allowed the same period of time as the original signatories (<i>i.e.</i>, a maximum of ten years) to give effect to the Rules.</p>

¹ Document C.465.M.238.1933.VIII.

Agreement as drafted by London Preparatory Committee, July 1933 (1)	Proposed amendment (2)	Remarks (3)
<p><i>Article 2.</i></p> <p>Departures from the provisions of the annexed rules shall only permitted in virtue of local conditions or exceptional circumstances, and particularly where the adoption of the rules in question might endanger navigation or where the expenditure involved might be out of proportion to the frequency of the traffic.</p> <p>Such departures from the rules should, nevertheless, be as limited as the situation allows, and proper notice of them should be given to mariners.</p> <p>As far as possible, they should not be such as to lead to confusion with the other provisions of the present rules.</p>	<p>For the words " or where the expenditure involved might be out of proportion to the frequency of the traffic " at the end of the first paragraph, substitute the words " or where the expenditure involved would be out of proportion to the nature and amount of the traffic ".</p>	<p>It is felt that the frequency of the traffic is not a satisfactory standard by which to measure marking requirements.</p>
<p><i>Article 3.</i></p> <p>The present Agreement should not be regarded as in any way modifying the legal situation in the different countries with reference to the relations between the public and the authorities in charge of buoyage.</p>	<p>Add the words " and lighting " at the end of the article.</p>	<p>This addition is desirable, especially in view of the provisions of Articles 28 and 29 of the Buoyage Rules.</p>
<p><i>Article 4.</i></p> <p>.</p>	<p>Nil.</p>	<p>Nil.</p>
<p><i>Article 5.</i></p> <p>Governments may accept the present Agreement by signature only, when the latter is not made subject to ratification, or by ratification or accession.</p> <p>The instruments of ratification shall be transmitted to the Secretary-General of the League of Nations, who will notify all the Governments concerned of their receipt.</p> <p>The Agreement shall enter into force on the ninetieth day following its acceptance by five Governments.</p>	<p>For the words " five Governments ", at the end of the article, substitute the words " ten Governments ".</p>	<p>By increasing the number as suggested, a definite measure of success towards the attainment of uniformity will be assured before any buoyage or lighting authority is required to incur expenditure.</p>
<p><i>Article 6.</i></p> <p>.</p>	<p>Nil.</p>	<p>Nil.</p>
<p><i>Article 7.</i></p> <p>After the coming into force of the Agreement in accordance with Article 5, each subsequent signature, ratification or accession shall take effect on the ninetieth day from the date of signature, or of the receipt by the Secretary-General of the League of Nations of the instruments of ratification or of the notification of accession.</p>	<p>For the words " After the coming into force of the Agreement in accordance with Article 5, each subsequent signature, ratification ", etc., substitute the following : " When the Agreement has been accepted by five (or ten) Governments as required by Article 5, each subsequent signature (if not subject to ratification), ratification ", etc.</p>	<p>This amendment seems desirable in order to cover the possibility of a State signing or ratifying during the ninety days between acceptance by the fifth Government (or tenth, if the proposed amendment to Article 5 is accepted) and the entry into force of the Agreement.</p>
<p><i>Article 8.</i></p> <p>.</p>	<p>Nil.</p>	<p>Nil.</p>
<p><i>Article 9.</i></p> <p>Any contracting Government may, at the time of signature, ratification or accession, declare that, in accepting the present Agreement, it does not assume any obligation in respect of all or any of its colonies, protectorates, or territories under suzerainty or mandate ; and the present Agreement shall not apply to any territories named in such declaration.</p>		

<p>Agreement as drafted by London Preparatory Committee, July 1933 (1)</p>	<p>Proposed amendment (2)</p>	<p>Remarks (3)</p>
<p>Any contracting Government may give notice to the Secretary-General of the League of Nations, at any time subsequently, that it desires that the Agreement shall apply to all or any of the territories which have been made the subject of a declaration under the preceding paragraph, and the Agreement shall apply to all the territories named in such notice ninety days after its receipt by the Secretary-General of the League of Nations.</p> <p>Any contracting Government may declare, either after a period of fifteen years from the date of the notification provided for in the preceding paragraph or at the time of the denunciation provided for in Article 8, that it desires that the present Agreement shall cease to apply to all or any of its colonies, protectorates, or territories under the suzerainty or mandate, and the Agreement shall cease to apply to the territories named in such declaration one year after its receipt by the Secretary-General of the League of Nations. In default of such a declaration, the denunciation of the Convention under Article 8 will not affect the application of the Convention to any territories referred to in the present article.</p>	<p>For the words "either after a period of fifteen years from the date of the notification provided for in the preceding paragraph", substitute the following words: "either after a period of five years from the date of notification of effect having been given to the Rules in the territories named".</p>	<p>Presumably the period of fifteen years mentioned in this paragraph was intended to comprise (a) the maximum period of ten years for giving effect to the Rules and (b) the period of five years for which the Rules must be in force before notice of denunciation is given. As, however, (a) is not a fixed but a maximum period, the position will be clarified by the proposed amendment.</p>
<p>Article 10.</p>	<p>Nil.</p>	<p>Nil.</p>
<p>Article 11.</p>	<p>Nil.</p>	<p>Nil.</p>
	<p>It is suggested that the following additional articles should be inserted after Article 8:</p> <p>"(a) <i>Inventions, etc.</i></p> <p>"Nothing in this Agreement shall debar any contracting Government from demanding at any time the revision of the annexed Rules on the ground of technical development in the nature or characteristics of marks, lights or sound signals, the full benefit of which could not be given to shipping under these Rules."</p> <p>"(b) <i>Procedure for revision of Agreements.</i></p> <p>"Any demand for a revision of this Agreement shall be communicated in writing by the interested contracting Government or Governments to the Secretary-General of the League of Nations, who shall take the necessary steps to give effect to the demand."</p>	<p>Whilst experiments could presumably be carried out under Article 2 of the Agreement, it is considered that definite provision should be made in order to secure that new developments or inventions which have been proved to be satisfactory can be brought into operation without undue delay. Under Article 8, revision of the Agreement can be demanded by (a) any contracting Government after the Agreement has been in force for fifteen years, and (b) by one-fourth of the contracting Governments at any time. It is considered undesirable that the benefit of new inventions, etc., should possibly be withheld for so long a period as that prescribed under (a) and, as regards (b), that, owing to the number of Governments likely to be concerned, there may in practice be difficulties and delays in securing the support of one-fourth of the contracting Governments for a demand for revision based solely on technical grounds.</p> <p>It seems desirable that the Agreement should specify the procedure to be followed on a demand being made for its revision, either under the article suggested above, regarding inventions, or under Article 8.</p>

BULGARIA.

In a letter dated June 18th, 1934, the Bulgarian Government stated that the competent authority, after a careful study of the Preparatory Committee's report, had expressed the opinion that Bulgaria could conclude an agreement on the subject in accordance with the system proposed by the United Kingdom.

CANADA.

In a letter dated October 9th, 1934, the Canadian Government made the following statement :

The proposals of the Preparatory Committee have received the careful and sympathetic study of the competent authorities of the Canadian Government. Their views on the general question of the unification of buoyage were expressed by their representative at the Lisbon Conference in 1930 (see document C.163.M.58.1931.VIII). They believe that the international unification of systems of lateral buoyage is in itself desirable, but—while attaching no importance to the attribution of particular shapes, colours and numbers to one side or other of the channel—they feel that, in seeking uniformity of practice, appropriate consideration should be given to the fact that the vast majority of lateral buoyage stations in the world is arranged in accordance with the recommendations of the Washington Conference of 1889. To these recommendations, the Canadian Government, in company with most Governments of the Commonwealth and of the world, have in practice conformed, and they are unwilling to reverse, at inevitable cost and confusion, a system which has been followed to the general satisfaction for some forty-five years.

As regards the other recommendations of the Preparatory Committee, the competent authorities of the Canadian Government submit the following observations :

(a) *Buoy Lights*.—It is not thought that the multiple flash characteristics proposed by the Preparatory Committee are either necessary or practicable. When several buoys are in sight at one time, it is not always possible to identify them by counted flashes, especially when there is any sea running. The increased number of spare lanterns that would have to be provided and carried aboard buoy vessels, were this recommendation adopted, is a further disadvantage which the proposed change would involve.

(b) *Spherical Buoys*.—The experience of the Canadian Lighthouse Service has not indicated any demand or necessity for their installation. The shape has the disadvantage of being expensive to construct, and, moreover, each additional authorised shape increases the number of spare or relief buoys which must be provided.

(c) *Topmarks* are neither necessary nor reliable, particularly when subject to ice conditions or the risk of being fouled by vessels.

(d) *Wreck-marking* proposals are thought to be unnecessarily complicated and liable to lead to confusion and disaster. The navigating officer who misses a flash in his count is likely to fetch up on the wreck he seeks to avoid.

CHILE.

In a letter dated August 28th, 1934, the Chilean Government stated that the buoyage of maritime routes was governed by Supreme Decree No. 1320, dated June 11th, 1929, and that the experiment had had favourable results, since both Chilean and foreign ships which had sailed and were sailing in Chilean waters had offered no objection to the system in force.

After a careful study of the draft rules by the competent services, the Chilean Government had thought it desirable to submit the following observations :

(a) The painting of buoys and beacons red to starboard and black to port in Chile was consecrated by half a century's tradition. The proposed rules, on the other hand, diametrically changed this system by fixing red to port and black to starboard, so that, if Chile acceded to the draft international agreement, she would have to make a fundamental change in the colours of the buoys and beacons on channels and rivers. Not only would this change, from the material point of view, involve considerable expense, but what was more important, it would require a complete change in the usages of Chilean naval and merchant seamen, who would have to pilot their vessels through the channels according to an entirely new system with a consequent risk of accidents.

This reversion of colours is the only important and substantial difference between the system of buoyage in force in Chile and that recommended by the proposed rules.

(b) In view of the configuration of the coasts and channels of Chile, it was considered that the lateral system should be exclusively used in that country ; the cardinal system might be adopted for isolated cases where a number of dangers existed on both shores.

(c) As regards the provisions of Article 6 of the Annex, it was essential for Chile to establish precise rules clearly defining which were the port and which the starboard sides of such straits and channels, as some lay in an east-westerly and others in a north-southerly direction. The rules at present in force were short and offered only limited possibilities.

The Chilean buoyage rules are reproduced below. The notes appended were embodied in log-books and navigation books and served to define these rules.

(d) The other provisions contained in the proposed rules would undoubtedly, in the Chilian Government's opinion, form a valuable addition to the system of buoyage on land and sea, and were therefore calculated to render navigation less dangerous. Some of them are excellent and quite novel, and their only drawback is that they would increase the number of conventional signs and consequently add slightly to the work of navigators.

To sum up, the Chilian Government had no objection to make to the proposed rules other than that appearing under (a)—i.e., with regard to the change in the colour of buoys and beacons.

Appendix.

REGULATIONS REGARDING THE SHAPE AND COLOURS OF BUOYS AND BEACONS IN CHILE.

(Supreme Decree No. 1320, of 1929.)

Starboard-hand buoys (conical) shall be painted red with two white horizontal bands, the first band being placed at one-third of the height of the buoy measured from the water-line to the tip of the cone, the second buoy at two-thirds of the height. Conical topmark painted red.

They shall be surmounted by a conical topmark painted red.

The name or number of the buoy shall be painted in white on the red part above the first white band (see Fig. 1 on the following page).

Port-hand buoys (cylindrical) shall be painted black with two white bands similar to the bands on the starboard-hand buoys. Cylindrical topmark painted black.

They shall be surmounted by a cylindrical topmark painted black.

The name or number of the buoy shall be painted in white on the black part above the first white band (see Fig. 2).

Mid-channel buoys (spherical) shall be painted white with black vertical bands. There shall be five bands equidistant from each other. White spherical topmark.

They shall be surmounted by a spherical topmark painted white.

The name or number of the buoy shall be painted in white on the black ground (see Fig. 3).

Starboard-hand beacons shall be pyramidal in shape, painted red with three white horizontal bands equidistant from each other. Beacons on land shall measure 6 metres in height by 2 metres at the base (see Fig. 4). Beacons on the water shall measure 4 metres in height by 1.60 metre at mean spring-tide high-water level (see Fig. 5). The bands on these beacons shall be equidistant from each other above this high-water level.

They shall be surmounted by a conical topmark painted red.

The name or number of the beacon shall be painted in white on the red part above the first white band.

Port-hand beacons shall be cylindrical in shape, painted black with three white horizontal bands equidistant from each other. Beacons on land shall measure 6 metres in height by 2 metres at the base (see Fig. 6). Beacons on the water shall measure 4 metres in height by 1.60 metre at mean spring-tide high-water level (see Fig. 7). The bands on these beacons shall be equidistant from each other above this high-water level.

They shall be surmounted by a cylindrical topmark painted black.

The name or number of the beacon shall be painted in white on the black part above the first white band.

Mid-channel beacons.—The body of the beacon shall be cylindrical in shape and the top shall be hemispherical. The beacon shall be painted black with white vertical stripes equidistant from each other. Beacons on land shall measure 6 metres in height by 2 metres at the base (see Fig. 8). Beacons on the water shall measure 4 metres in height by 1.60 metre at mean spring-tide high-water level (see Fig. 9).

They shall be surmounted by a spherical topmark painted white.

The name or number of the beacon shall be painted in white on the top part and on the black ground.

Note.—When beacons are situated inside harbours or creeks where the maximum visibility required is less than half a mile, the dimensions of the beacons will be reduced to one-half the regulation size—i.e., 3 metres in height for beacons on land and 2 metres above mean high-water level for beacons on the water.

Observations.

The term "enter" in the case of a channel with two entrances must be taken to mean following the direction of the flood or rising tide.

As, in the case of southern channels, this would necessitate frequent changes in the shape of the marks, the following rule has been adopted :

In the Strait of Magellan and the Patagonian channels the words "port" and "starboard" apply to vessels coming from the Atlantic or proceeding northward.

Consequently, the port marks will lie to the south in the Strait and to the west in the channels, and the starboard marks to the north and east respectively.

This refers solely to the main channel, following the course or track. The secondary channels will be buoyed in accordance with the general rule.

In the Beagle Channel, from Moat Bay to the Cockburn Channel, the same rule will be followed as in the Strait.

The shape of the mark is of greater importance than its colour.

In the case of beacons, the colour may vary according to the background or land against which it has to stand out.

The shape of the topmark is more authentic than that of the buoy or beacon supporting it, and the former may occasionally differ from the regulation shape.

CHINA.

In a letter dated October 5th, 1934, the Chinese Government states that it is prepared to conclude an agreement for the unification of buoyage based on the draft Agreement and Rules drawn up by the Preparatory Committee, provided that the Governments of the principal countries concerned will also adopt them.

Buoys and Beacons in use as prescribed in the Chilean Buoyage Rules.

On land.

In the water.



Fig. 1.



Fig. 2.



Fig. 3.

Diagrama de un buque de guerra

Fig. 4.

Fig. 5.



Fig. 4.



Fig. 5.



Fig. 6.

Diagrama de un buque de guerra

Fig. 7.

Fig. 8.



Fig. 7.



Fig. 8.



Fig. 9.

Diagrama de un buque de guerra

DENMARK.

In a letter dated June 23rd, 1934, the Danish Government stated the following :

In principle, the Ministry of Marine sees no reason to change the present Danish system of buoyage, which it considers suitable and particularly well adapted to Danish conditions, or indeed to adopt a uniform system.

The cost involved by the introduction of a uniform system of buoyage would hardly be proportionate to the practical advantages offered by such a system.

The present system has not caused any difficulty to navigation, but it is to be anticipated that the period of transition would expose it to very great inconveniences.

A uniform system on buoyage would in most cases be inferior to the systems of the different States, which are adapted to the special conditions (geographical, climatic, etc.) of each country.

Notwithstanding the foregoing considerations, Denmark will probably not refuse to adopt the existing scheme for a buoyage system, on condition that it is accepted as it now stands by other States—including the adjacent States of the North Sea and Baltic—in sufficient numbers for it to be really considered a European buoyage system.

FREE CITY OF DANZIG.

In a letter dated May 1st, 1935, the Polish delegation accredited to the League of Nations stated that the Free City of Danzig had no objection to the proposed unification.

EGYPT.

In a letter dated September 27th, 1934, the Egyptian Government stated that the competent departments had no objection to the provisions laid down in the draft Agreement and Rules, and that it would be disposed, should occasion arise, to conclude an agreement on the unification of buoyage on the basis of the draft in question.

SPAIN.

In a letter dated March 28th, 1935, the Spanish Government communicated the following observations on the draft Agreement and Rules together with an explanatory note :

OBSERVATIONS OF THE PERMANENT SPANISH LIGHTHOUSES COMMISSION REGARDING THE DRAFT RULES CONCERNING A UNIFORM SYSTEM OF BUOYAGE.¹

[Translation from Spanish.]

CHAPTER I. — GENERAL.

Same system. No observations.

CHAPTER II.—LATERAL SYSTEM.

Article 6.—Position of Marks.

Same system.

Article 7.—Shapes of Topmarks.

Same system.

Article 8.—Marking of Sides of Channels.

Marks on the two sides of the channel are characterised as follows :

(a) *Starboard-hand marks :*

Shape or type : Cone, spindle or spar.

Topmark : A cone point upwards for ordinary buoys and *diamond-shaped* for buoys indicating " take care " for a specific reason.

Colour : Black, both buoys and topmarks.

(b) *Port-hand marks :*

Shape or type : Can, spindle or spar.

Topmark : Can for ordinary buoys and T-shaped for buoys indicating " take care " for a specific reason.

Colour : Red, both for buoys and topmarks.

(Omit N. B.)

Article 9.—Numbering or Lettering.

Same system.

Article 10.—Lighted Marks.

Lights of marks on the two sides of the channel are differentiated by colour or by rhythm, where preferred, or by a combination of both colour and rhythm—viz :

(a) <i>Starboard-hand lights :</i> Green	} Slow rhythm flashes (less than thirty a minute).
(b) <i>Port-hand lights :</i> Red	

¹ See also explanatory notes following the observations.

(c) *Buoys meaning "take care" :*

Starboard-hand buoys : Green	} Rapid rhythm flashes (more than sixty a minute).
Port-hand buoys : Red	

(d) *Spherical bifurcation buoys :*

Showing the main channel to the right: A white light and a red light set vertically in the order given.
Junction buoy : Same lights in inverted positions—*i.e.*, red above white.

Showing the main channel to the left: A white light and a green light set vertically in the order given.
Junction buoy : Lights in inverted positions—*i.e.*, a green light above a white light.

Indicating channels of equal importance: Two vertical lights, one green and the other red, set in the order given. Junction buoy : Lights in inverted position—*i.e.*, a red light above a green light.

(e) *Buoys indicating the proximity of a secondary channel :*

Channel to the right, the buoy being to port : Two red lights set vertically.

Channel to the left, buoy being to starboard : Two green lights set vertically.

(f) *Lighted mid-channel marks indicating the deepest part of a deep-water channel or fairway :*

Two white lights set vertically.

(g) *Characteristics of the lights :*

All these lights must show flashes. Lights belonging to the same channel must all show the same number of flashes ; if there are different channels, a specific number of flashes is allotted to each channel according to the following rules :

All the lights of the main channel shall show two flashes ; the lights of secondary channels to the right of the main channel shall show four flashes for the first channel, one for the second and three for the third ; the lights of secondary channels to the left of the main channel shall similarly show four, one and three flashes respectively. This system of lighting, therefore, can be applied to seven channels in all, buoyed according to a uniform and perfectly clear system.

Article 11.—Bifurcation or Junction Marks.

Marks at the ends of middle grounds have the following characteristics :

Shape or type : Spherical, spindle or spar.

Colour : For buoys, vertical white and red bands, if the main channel is to the right ; horizontal black and white bands when the main channel is to the left, and horizontal black and red bands when the channels are of equal importance.

Topmarks (compulsory) :

(a) *Main channel to the right :*

Outer end : A can buoy	} Painted red
Inner end : A " T "	

(b) *Main channel to the left :*

Outer end : A cone point upwards	} Painted black
Inner end : A diamond	

(c) *Channels of equal importance :*

Outer end : A sphere
Inner end : A St. George's cross, painted red.

(d) *To indicate the entrance to a secondary channel, whether leading from the sea or from a main channel, the indicating buoys have the following shapes and characteristics :*

Can buoy, black and red check pattern, meaning that it must be left to port and that the secondary channel is in the immediate neighbourhood ; conical buoy, black and white check pattern, meaning that it must be left to starboard and that the secondary channel is in the immediate neighbourhood.

(Omit N. B.)

Lighted Marks.—The rules shall be based on those given in Article 10, paragraphs (d), (e), (f) and (g)

Article 12.—Mid-channel Marks.

Same system. No observations.

CHAPTER III.—CARDINAL SYSTEM.

Same system, subject to the observations submitted at the end of this report, in the third explanatory note.

CHAPTER IV.—MARKS COMMON TO BOTH SYSTEMS AND OTHER MARKS.

Article 17.—Isolated Danger Marks.

Our system is the same as that outlined in the draft, except as regards the following points :

Colour : Vertical black and red bands ;

Topmarks : Two topmarks set vertically, one spherical painted black, the other a St. George's cross, painted red ;

Light : White, quick flashing (more than sixty flashes a minute).

Article 18.—Landfall Marks.

Same system. No observation.

Article 19.—Transition Marks.

Buoys indicating the transition between the cardinal and lateral systems are painted with red and white spiral bands, in which case they must carry a fixed red light, or with black and white spiral bands, in which case they should carry a green fixed light.

Articles 20 and 21.

Same system. No observation.

CHAPTER V.—MARKING OF WRECKS.

Article 22.—General Observations.

Same system. No observation.

Characteristics in the Lateral System.

Article 23.—Wreck-marking Buoys.

Colour : Green.

(a) If to be passed on the *starboard hand* :

Type : Conical, spindle or spar.

Topmark : Conical.

Light : Green, quick rhythm (more than sixty flashes a minute).

(b) If to be passed on the *port hand* :

Type : Can, spindle or spar.

Topmark : Can.

Light : Red, quick flashing (over sixty flashes a minute).

If the body of the mark does not conform to the characteristic shape, the predominant colour shall be green, and the buoy should be marked with a capital W in white.

(c) If to be passed on *either hand* :

The previous marks (a) and (b), one at each end of the wreck.

Article 24.—Wreck-marking Vessels.

They display green painted shapes :

(a) If to be passed on the mariner's *starboard hand*, three cones point upwards in a horizontal line ;

(b) If to be passed on the mariner's *port hand*, two cans set in a horizontal line ;

(c) If may be passed on *either hand*, four spheres disposed vertically by pairs.

As regards the rest of this article, same system as in the draft, except that the lights be white fixed lights.

Characteristics in the Cardinal System.

Article 25.—Wreck-marking Buoys.

Same system, except as regards the colour of the lights, white being regarded as preferable.

CHAPTER VI.—MISCELLANEOUS PROVISIONS.

Article 26, 27, 28 and 29.

Same system. No observation.

Article 30.—Fixed Support for Lights.

Fixed supports for lights forming part of the lateral system of buoyage shall be painted white, if the light is to be of a colour characterising its position in the previous system, or of the colour which characterises this latter. If the correct characteristic colour cannot be used, the opposite characteristic colour shall, wherever possible, be avoided.

Article 31.—Topmarks.

Same system. No observation.

EXPLANATORY NOTES.

1. The Commission accepts the number and form of buoys and topmarks as provided in Article 8, but considers that, for the purpose of differentiating by shape, conical, can and spar buoys, painted either entirely black or red according to the side of the channel marked would be sufficient. As topmarks are grouped in pairs for each buoy, the Commission feels that it would be desirable to make a clear differentiation. There would be no difficulty in adopting the solution indicated in our draft—namely, a can topmark on a red buoy and a triangular topmark on a black buoy for ordinary purposes ; the same buoys with T shaped or diamond shaped topmarks would normally not only mark the channel, like the others, but would further mean “ take care ” (so as to warn navigators when approaching these buoys).

By this system, if the port and starboard buoys are numbered consecutively, channels or fairways would, in our opinion, be sufficiently clearly and definitely marked without there being any need to employ broom-shape topmarks or red and yellow chequered buoys. The use of such would, we think, even have certain disadvantages. We would suggest that white and black, or white and red chequered buoys

should be reserved to indicate the proximity of a secondary channel, but the Commission thinks that this mark should not be reserved solely to indicate entry into a secondary channel opening out from a main channel, as is laid down in the last paragraph of Article 8. This buoy might also be used to enable a vessel coming from the sea to enter a secondary channel, in which case, the white and red chequer would show the mariner that, if he passes the buoy to port, he will be near a channel of this kind; the same would apply to a white and black chequered buoy.

As regards bifurcation or junction marks, we agree to the same forms of buoys and topmarks and their respective meanings, and only detect confusion in the use of the same colours—white and red bands—as suggested in Article 11, paragraphs (a) and (c), for different cases. The Commission does not think that the difference between the topmarks is sufficient to obviate confusion, which the same colour on buoys of the same form might create. The Commission is therefore of opinion that this disadvantage could easily be remedied, and suggests for this purpose that spherical buoys indicating a bifurcation in channels of equal importance should be painted with black and red bands, colours which clearly indicate that the vessel may steer to port or to starboard, the channel being equally good on either side.

2. *Lighted Marks.*—Besides the explanation given in our report concerning the number of flashes desirable for the lights in each channel and the variation in the number of these flashes for different channels, the Commission considers it advisable, from the standpoint of mariners' requirements, that the colours of light buoys marking channels should be red to port and green to starboard. It does not think that the lights of secondary buoys should be white, as it is not in favour of marking dangerous spots at sea, such as shipwrecks, with a green light which, owing both to its colour and intensity, is of very low visibility on the surface of the sea, where we think it is absolutely necessary to adopt white. White, by its visibility, intensity and glare, is the colour most likely to be seen at a distance by navigators and consequently is best suited for marking dangerous spots. On the other hand, the Commission considers that white flashing lights on luminous buoys marking channels can easily, even though of low power, be mistaken for other white lights on motor-boats, jetties, etc.; again, they might prove to be dazzling if of any considerable strength. White is, in short, within port areas a colour that does not stand out clearly and might lead to unfortunate mistakes. On the other hand, the Committee considers—and this is the reason for its proposal—that for steering a course within a port area—an operation usually carried out with the utmost care—a green is the most appropriate colour in view of its very definite characteristics, its perfectly clear meaning (that is it to be passed on the starboard hand) and its power, which is sufficient for this kind of navigation, does not dazzle or cause the slightest confusion in the mind of the navigator.

3. *Cardinal System.*—We entirely accept the cardinal system set out in Chapter III (Articles 13, 14, 15 and 16), although in Article 16, in describing the form of the topmarks to be allocated to each quadrant, there seems to be an implication that the topmark adopted for each is common to both forms—conical or spar in the first quadrant, can or spar in the second, etc.

As, however, the diagram appears to show that only the spars have topmarks, and although the diagram is included merely as an illustration, we think it should be made quite clear that in signals specially reserved for navigation at sea—signals which should therefore have the greatest possible visibility—all buoys should have their corresponding topmarks.

Lighting.—Though accepting the system proposed, we think it might perhaps be improved by stipulating that both day and night the same colours should go together, and be so arranged that if, for instance, the coastline follows a S.W.-N.E. direction, these colours shall indicate to the navigator: white, that he is on the seaward side of the danger; red, that he is on the landward side of the danger. In other terms, it might be more advisable to set the colours cardinal-wise, but in such a way that they are the same by pairs according to the parallels which unite them at various distances from the land.

4. The Committee does not understand either the necessity or the reason for the proposal concerning landfall marks in Article 18. It feels that, if this mark were to be adopted, very careful enquiries would be necessary to determine the circumstances and conditions in which its use would be necessary. For instance, is it to be employed solely for marking seaplanes in port areas or should it also be used, as proposed in Article 18, to indicate the proximity of a river estuary or of a port? In this latter case, surely the indications given by other lights from lighthouses, etc., should be sufficient. In any case, it would be desirable to state when landfall marks should be lighted or not.

5. *Marks Common to Both Systems.*—This Commission approves the spherical form for isolated danger marks as proposed in Article 17 of the draft Rules. It also approves black and red as the colours for these marks, these colours concurring with the rules adopted generally for all kinds of obstacles giving rise to or involving a bifurcation; in order, however, to differentiate clearly between the bifurcation mark indicating two channels of equal importance and the isolated danger mark, we think that the bands for the latter mark should be vertical and, in accordance with the explanations already given concerning the principle on which our modest proposals for lighting are based, that the light (which is not specified in the draft) should be white and quick flashing (more than sixty flashes a minute).

6. This Commission considers that the marks for wrecks indicated in Chapter V are quite clear and definite. The provisions of Articles 22 and 23 only differ from the provisions in force in our country as regards the colour of the light—white instead of green—for the reasons indicated in the second observation.

With regard to Article 24, the Commission feels that the proposed system might lead to confusion if the distinctive marks—namely, cones or cans for vessels to pass on the port or starboard hand respectively—happen by accident to be missing. The Commission therefore proposes that, without modifying the number uniform marks should be adopted—i.e., all cans, all conical or all spherical.

7. To sum up all the modifications suggested and explanations given concerning each of the proposed changes, it may be noted that this Commission, having in view the interests of navigators and endeavouring to avoid any considerable cost as a result of the transformation of existing systems or the creation of marks of a type differing entirely from present types, proposes a system which, as a whole—in the form of the marks, colours, topmarks, colour and rhythm of flashes and all other essential characteristics of a buoyage system—is based on an endeavour to bring about unification by ensuring that identical forms, colours and flashes shall have everywhere the same signification, the number of these buoys being reduced to a minimum in order to achieve simplification in every direction.

ESTONIA.

In a letter dated October 22nd, 1934, the Estonian Government stated that the competent authorities, after carefully studying the subject, had pronounced in favour of the conclusion

of an agreement with other Governments on the basis of the Preparatory Committee's draft Agreement and Rules.

As regards the text of this draft, the Estonian authorities have no observations to submit.

FINLAND.

In a letter dated October 30th, 1934, the Finnish Government makes the following statement :

The Government is fully aware of the drawbacks created by the fact that, in spite of repeated attempts, it had not been possible to unify the buoyage of navigation routes by a general agreement between the countries concerned. In the Baltic alone, for instance, six different systems of buoyage are employed. Hence it is naturally most desirable that an agreement should be reached on the simplification of the present buoyage system, if only for Europe.

As regards the draft Rules for a uniform system of buoyage, the Government is in principle prepared to conclude with other Governments an agreement on the basis of this draft, although it will entail numerous changes in the system at present employed in Finland.

Nevertheless, as it is obvious that the *raison d'être* of the new system is to endeavour to achieve greater uniformity, Finland's participation would essentially depend on the accession of all the countries bordering on the Baltic, and also of Norway ; otherwise the only effect might be to add to the existing confusion in the confined space of the Baltic and on the European coast of the Arctic Ocean.

Lastly, as regards the details of the draft Agreement, Finland is particularly interested in buoyage according to the cardinal system, that system being at present employed on the Finnish maritime routes. Although the lateral system is employed in Finland only on what are regarded as inland navigation routes, Finland is nevertheless prepared to introduce the modifications proposed in the draft. The marking of wrecks by means of buoys arranged both according to the cardinal system and the lateral system also appears to the Finnish Government quite practicable, as also the proposed system of topmarks and lights.

FRANCE.

In a letter dated June 21st, 1934, the French Government stated that, without making it a *sine qua non* condition of acceptance of the Agreement, it would like the option to be allowed, in Chapter V, Article 22 (line 8), of the draft Agreement, of adding after the word "wreck" the equivalent word in the national language.

This amendment might be drafted as follows : *The word "wreck" followed, if deemed advisable, by the equivalent word in the national language, in white on both sides.*

Subject to this observation, the French Government considers that it would be particularly desirable to arrive as soon as possible at an agreement on the unification of buoyage on the basis of the draft Agreement and Rules prepared by the Committee.

IRISH FREE STATE.

In a letter dated July 25th, 1934, the Government of the Irish Free State informed the Secretary-General that it had no objection to offer to the adoption of the draft Rules for a uniform system of buoyage, and that it would be prepared, should the occasion arise, to conclude with other Governments an agreement based upon this draft.

ICELAND.

In a letter dated September 29th, 1934, the Danish Government forwarded the following memorandum containing the Icelandic Government's observations on the Preparatory Committee's draft :

There are very few buoys in Iceland, and they are for the most part similar in colour and shape to the buoys used in Denmark. Presumably, in course of time, many new buoys will be established in Iceland, and no great difficulty is anticipated in following provisions on which international agreement can be attained. It is, however, of decisive importance to Iceland how far the countries with which she has extensive shipping connections will follow the proposed international rules. This refers, however, only to the so-called lateral system, but not the cardinal system, which can hardly find application in Iceland.

It would appear difficult, however, for Iceland to accede to Chapter VI, Articles 28 and 29 of the draft, for the following reasons :

The main rule followed both in Iceland and elsewhere in this connection is that ships entering a harbour must see a green light on their starboard hand and a red light on their port hand, and this is particularly necessary in the case of fixed lights which might be mistaken for ships' lights. This danger does not exist in the case of flashing lights, and in such cases there may be other conditions which have to be taken into consideration. On various occasions therefore, the main rule has been departed from—for instance, in the case of the Grimsey lighthouse in the Steingrim Fiord, where there is a red sector on the right side of the main navigable channel and a green sector on the left side, because shelving rocks and shallows extend much further on the right side of the channel than on the left side ; since a red light is much stronger and clearer than a green light, the value of the lights is substantially increased

by this arrangement. It is of course not essential, but is highly advisable. Similarly, there are many departures from the rule in respect of the Sydøstland lighthouse (situated on the south east coast), which has many sectors, most of which are narrow and some even very narrow. If the general rule were followed, every sector coloured would have to be divided into two, one red and one green, in order that the ship entering a white sector, and steering towards the lighthouse, would always have green and red light to the left. Even if this were frequently possible, it would be highly inadvisable. This provision must therefore be regarded as unacceptable. It would appear to be more advisable to arrange lights and buoys so as to have the greatest possible practical value than to make a hard-and-fast rule which may be advisable for certain places and even for many or most places, but which, under special conditions, may be inadvisable or even useless. If, however, the rule is such that it cannot be applied without exceptions, seamen have still to consult the charts and sailing directions of the navigable channel in order to identify every mark; its value would accordingly appear to be substantially diminished.

Apart from the above objections to these two articles, the draft would appear on the whole to be acceptable from the Icelandic point of view.

ITALY.

In a letter dated September 1st, 1934, the Italian Government stated that it would be prepared to participate in an agreement for the unification of buoyage on the basis of the draft Agreement and Rules drawn up by the Preparatory Committee.

JAPAN.

In a letter dated October 24th, 1934, Japan made the following statement :

[*Translation.*]

1. At the Lisbon Conference in 1930, there were two schools of thought with regard to the unification of the buoyage of coasts. One was supported by Japan, the United States of America, Mexico and various South-American countries, and the other by the United Kingdom and the different States of Europe. The two opinions proving impossible to reconcile, the Conference was unable to reach any agreement on the unification of buoyage.

2. Before the beginning of the work of the Preparatory Committee in London in 1933, the Japanese Government emphasised the fact that if the unification scheme submitted by the United Kingdom Government were adopted as a basis of discussion, the Committee would arrive at the same result as the Lisbon Conference, and it stressed the importance, in drafting the proposal to be used as a basis of discussion, of asking the opinion of all the Powers concerned.

3. Subsequently, in the course of the Preparatory Committee's work, in which the States of the first group, with the exception of Japan, took no part, the Japanese experts stated their Government's view; but, that Government's opinion not having been accepted, the result achieved by that Committee only reflected, as could easily have been foreseen, the opinion of the United Kingdom and of the other European States—*i.e.*, of the second group of States concerned.

4. Although the Preparatory Committee's draft contains certain points which the Japanese Government is prepared to accept, the draft rules are diametrically opposed to Japan's opinion. The Japanese Government considers that the London draft Rules should be revised before proceeding to the conclusion of an agreement based on this draft, and that due account should be taken of the principles adopted at the Genoa meeting of the Committee on Buoyage and the Lighting of Coasts in 1929, which served as a basis of discussion at the Lisbon Conference. These principles are, it will be remembered, in keeping with the systems in force in the majority of States since the Washington Conference of 1889.

LATVIA.

In a letter dated July 30th, 1934, the Latvian Government stated that the competent authorities had pronounced in favour of the conclusion of an agreement on the basis of the Preparatory Committee's draft, and had added that they had no objection to make in that connection.

LITHUANIA.

In a letter dated September 25th, 1934, the Lithuanian Government stated that it had no observations to make on the Preparatory Committee's draft, and that it would be prepared, should occasion arise, to conclude an agreement with other Governments on the basis of that draft.

MONACO.

In a letter dated June 8th, 1934, the Government of Monaco stated that, in view of the trifling importance of buoyage in the waters of the Principality, it had no observation to make on the question of the unification of the buoyage of coasts.

NORWAY.

In a letter dated August 8th, 1934, the Norwegian Government made the following statement :

The draft Rules concerning a uniform system of buoyage as submitted by the experts after their meeting in London in July 1933 is more in conformity with the existing buoyage regulations in Norway than was any one of the previous drafts.

As regards the *marks without lights*, the proposed rules of the *lateral system* may, in all essentials, be deemed satisfactory from the Norwegian point of view, even if one, as far as some details are concerned, would have to avail oneself of the departure paragraph (Article 2) of the draft Agreement.

According to Article 6 of the draft Rules, the expression starboard-hand marks and port-hand marks refer either to the direction taken by the mariner when approaching a harbour or inlet from seaward, or to the main stream of flood tide. As far as Norway is concerned, the latter rule would have to be the decisive one, as there are often several inlets, having different directions, to a harbour.

In the proposed *cardinal system*, there are some quite essential differences from the Norwegian system, both as regards colours and, partially, also shape.

Types of marks as the Norwegian "*spars*" are in both systems accepted as equivalent to "buoys", and thereby a wish from the northern countries has been fulfilled.

Also, the rules for the colour and the character of the lights on *marks with lights in the lateral system* agree with the Norwegian point of view. However, such marks with lights are little used in Norway. The rules would principally apply to lighted buoys, whereof Norway has comparatively very few and, as a rule, very far between along the coast. On those few places in Norway where lighted buoys and fixed marks with lights may be said to belong to a lateral system, the colour of the lights is, as a rule, in conformity with the regulations of the draft.

On the other hand, in the *cardinal system*, the rules for the colour and character of the lights are such that they cannot be fitted into the combined lateral and cardinal system of Norway.

The most important objections from Norway must, however, be made against the rules of Article 29, which contains the rules for *coloured sector lights*. Norway's more than 1,600 lighthouse lamps would come under these regulations, and the arrangement of these lamps must be such as the complicated seaways of Norway necessitate. It is impossible to arrange the lamps according to Article 10, or according to any fixed rule given for a certain territory.

The rules for marks and lights for wrecks is of minor interest to Norway, as a ship grounded on the coast usually sinks in deep water unless it keeps on hanging on the sunken rock or the skerry. The only regulation in Norway hitherto has been : "A green spar is the mark for a wreck". There is, however, nothing in the way of arranging these spars such as the draft prescribes. Lights or lightships destined for marking a wreck have not been used in Norway, and will hardly be necessary.

It appears from the above-made remarks that the draft Regulations differ in several points from those in use on the coast of Norway, and that it is partly impossible to arrange things in accordance with them.

The Norwegian Government is, therefore, to its regret, unable to sign a convention in conformity with the draft in question. Should, however, such a convention be accepted by a majority of the European countries, and amongst them Norway's neighbour countries, then the Norwegian authorities would try, gradually, to put into operation as many of the proposed regulations as possible.

NETHERLANDS.

In a letter dated August 20th, 1934, the Netherlands Government communicated the following observations :

[*Translation.*]

1. The continuous numbering on each bank of the signs marking the bank of a channel seems preferable to the systems of placing odd numbers on marks to starboard and even numbers on marks to port. Moreover, such a distinction cannot be made if the marks carry letters.

2. The characteristics of light signals in a rough sea are often difficult to determine. A differentiation by the colour of the light, as allowed in Article 10, seems in this case to be preferable to differentiation by rhythm.

3. It would be desirable to give bifurcation and junction marks a colour different from that given to signals indicating that the main channel is to the right. In the system proposed by the Committee, the only difference is that between the topmarks, which has the drawback that if the topmarks are damaged or broken off by passing vessels, no difference remains. It would be desirable that the colour of one of these types should be red and black chequers.

4. With reference to observation 2, it would seem that the cardinal system might be simplified and improved by the adoption, in the southern and western quadrants, of red and

white high frequency scintillating lights instead of double red and white flashes. If flashing lights are employed in the northern and eastern quadrants, the difference between the two systems will be clearer.

5. As regards the marking of wrecks, it would be desirable to adopt the cardinal system which has been agreed upon between Germany, Denmark and Norway. In this system, the wreck is situated in a sector of 90° east or west of the signal. If two signals are placed, the wreck is situated in a well-defined rectangle, of which the two signals form the eastern and western angles.

6. It is understood that it will be possible to retain the following signals in the Netherlands Indies :

- (1) Fixed red lights for small ports ;
- (2) Fixed red lights for lantern buoys ;
- (3) Light signals without characteristics and of different shape to starboard and port ;
- (4) Light signals without topmarks ;
- (5) Signals painted white instead of signals painted red.

7. The colour of sea-lanterns need not be the same as that of the signals which they light.

Further, the Netherlands Government will be unable to accept any agreement as regards its European territory unless the unification agreement is also accepted by Germany, Belgium, France and the United Kingdom.

As regards the Netherlands Indies, the system of unification can be accepted only if the adjacent countries do the same. The acceptance of the uniform system by Curaçao depends on the attitude taken by the American continents towards the agreement, while Surinam is very little interested in the question.

POLAND.

In a letter dated March 25th, 1935, the Polish Government stated that it considered that the unification of the buoyage of coasts, in view of its importance to the safety of navigation, was extremely desirable. The Polish Government therefore has no reservation to make with regard to the Preparatory Committee's draft, and states that, as the question is one of general interest, any scheme of unification likely to be adopted unanimously will be acceptable to it.

ROUMANIA.

In a letter dated August 6th, 1934, the Roumanian Government stated that it had no objection to the Preparatory Committee's texts, to which it gives its entire support.

SWEDEN.

In a letter dated October 19th, 1934, the Swedish Government stated that, after consulting the competent authorities, it is prepared to conclude an agreement on the basis of the Preparatory Committee's draft on condition, however, that Germany, Belgium, the United Kingdom, Denmark, Estonia, Finland, France, Latvia, Norway and the Netherlands are or become at the same time parties to the agreement.

UNION OF SOVIET SOCIALIST REPUBLICS.

In a letter dated October 19th, 1934, the Government of the Union of Soviet Socialist Republics made the following statement :

[*Translation.*]

The competent services of the Union of Soviet Socialist Republics consider it desirable that there should be an international agreement for the unification of buoyage rules and for the purpose of increasing the safety of navigation in every sea.

Like several other countries, the Union of Soviet Socialist Republics employs simultaneously the lateral and cardinal systems of buoyage, and as a result of experience considers it necessary to continue to employ both systems, each of which is suitable for different circumstances.

The observations of the above-mentioned services are confined to details of no substantial importance. As regards lateral buoyage in particular, these services consider it desirable to introduce certain modifications in the shapes and colours of the buoyage marks and topmarks.

As regards the unification of rules for cardinal buoyage, the competent services of the Union of Soviet Socialist Republics make the following suggestions :

While accepting the shape and colour proposed in the draft for buoyage marks indicating a danger to the east or west, it would be desirable to reverse the combinations of topmarks on such buoys, thereby bringing the new system into line with that employed in the Union of Soviet Socialist Republics and the Baltic countries.

As regards the conclusion of an agreement on the unification of buoyage, the People's Commissariat for Foreign Affairs believes that the Soviet Government will willingly sign an agreement based on the Preparatory Committee's draft.

YUGOSLAVIA.

In a letter dated August 7th, 1934, the Yugoslav Government stated that, having no observation to make on the Preparatory Committee's draft Agreement and Rules, it would be prepared to conclude with other Governments an agreement based on that draft.

At the same time, the Yugoslav Government stated that the Maritime Department had already, as far as its budgetary resources permitted, proceeded to replace the lighting and buoyage systems of the coasts in order to bring them into line with the draft.

ANNEX 2.

LETTER TO THE SECRETARY-GENERAL OF THE ADVISORY AND TECHNICAL
COMMITTEE FOR COMMUNICATIONS AND TRANSIT FROM MR. TWEEDIE
STODART, ENGINEER-IN-CHIEF TO THE CHINESE MARITIME CUSTOMS
SERVICE, MEMBER OF THE PREPARATORY COMMITTEE ON THE
UNIFICATION OF BUOYAGE RULES.

With reference to the request made in your letter of October 18th, 1935, enclosing a summary of comments made by various maritime countries on the proposals drawn up by the Preparatory Committee on Unification of Buoyage in London in 1935, careful consideration, along with Captain L. R. Carrel, Coast Inspector, has been given to the above summary and, in particular, as requested, to the amendments proposed by the British Government to the original wording of the proposed rules.

Generally speaking, the British amendments to the rules appear to be designed to make the wording of the regulations more explicit rather than to alter the intention, and I think it may be assumed that the Chinese Government's position favourable to the proposals of the Preparatory Committee is not likely to be altered because of revision of such a nature.

We would, however, raise points for further consideration in connection with one or two of the British amendments, while concurring in the remainder.

DRAFT RULES.

Dealing with the rules, we would first of all state that we are very much in favour of the suggestion that well-proportioned diagrams illustrative of the standard shapes of marks be prepared to accompany the regulations. This is very desirable, as dictionary definitions are in certain cases indefinite and unsatisfactory. The Concise Oxford Dictionary (Second Edition, 1929), under "can" defines a "can" buoy as a "large *conical* buoy over sands, etc."

Ad *Article 7.*

The original wording appears to us to be preferable to the amended. A broom used as a topmark may have the rough appearance of a cone, but can hardly be accurately called a cone.

Also we think it may be fairly and perhaps usefully intimated that cone, cylinder and sphere are to be considered the principal shapes.

We think that in this article and in others following "cylinder" is preferable to "can" for defining topmarks of this nature, as these marks will in most instances actually be cylindrical.

Ad *Article 8.*

We would prefer that the clause permitting the use of yellow in the chequers for marking secondary channels should continue as at present to be shown as an "N.B." forming part of the article and not as a footnote.

Ad *Article 23.*

To the proposed amended wording : Under (c) "light (if any) single occulting green" add "having a period of light of not less than 3 seconds".

This is designed to ensure that in all cases the light shall be unmistakably occulting and not to be confused with any single flashing light.

Ad *Article 29.*

At the end of the amended paragraph substitute the word "similar" for the word "identical".

DRAFT AGREEMENT.

Ad Article 1.

We have no objection to the alteration of wording proposed in the British amendment—viz., that “ maintain for the benefit of navigators marks or other signals for the purposes mentioned in the annexed rules ” should be substituted for “ communicate to navigators the information or warnings dealt with in the annexed rules ”. We do not, however, agree with the British proposal that acceding Governments should each be given a maximum period of ten years from the date of their accession to give effect to the rules, as this would allow of the matter dragging on for a long period.

We would suggest that the following clause or one approximately to the same effect be added to Article 7 of the Agreement :

“ Governments which accede after the expiry of seven years from the date on which the Agreement came into force shall take the necessary measures to give effect to the rules within three years from the date of their accession.”

In Article 1, line 5, reading : “ The necessary measures to that effect shall be taken before the expiry, etc.”, we gather that the word “ taken ” is intended to mean “ completed ”, and suggest that this latter word be substituted, or that “ taken and completed ” be adopted.

Ad Article 5.

We would suggest that the British amendment be altered to read “ Governments of ten major maritime countries ”.

New Article proposed after Article 8 :

It is suggested that this should read as follows :

“ The present Agreement may be modified on the grounds of technical developments in the nature, design or characteristics of marks, lights or sound signals, the full benefit of which could not be given to shipping under these rules.

“ Request for revision of the Agreement on these grounds may at any time be forwarded in writing by the interested Government or Governments to the Secretary-General of the League of Nations, who shall immediately take the necessary steps to circulate the proposed modification to all contracting Governments, and thereafter to arrange for revision if one-fourth of these Governments are in favour of it.”

Generally, it appears to us from a perusal of the observations of the various Governments that there is a fair prospect of quite a wide regional agreement being arrived at if a reasonable spirit of compromise be exercised. The United States of America, Canada and Japan must, of course, be excluded, owing to fundamental differences in their proposals and practice. The communication submitted by the United States of America in support of their position appears to consist mainly of a restatement of the arguments they put forward at Lisbon, which were then fully discussed and to a large extent rejected as unsound. We concur in considering the United States of America's arguments unsound in a number of important aspects.

The Preparatory Committee's scheme now under discussion must, in our opinion, be recognised to be a compromise scheme falling short of the ideal in many important respects, but nevertheless constituting a valuable advance towards the ideal scheme of uniformity. It is because China considers the scheme to represent a step forward towards a future ideal that she is prepared to support it. Actually, her delegates on the Preparatory Committee endeavoured to obtain what they considered would have constituted valuable further advances towards an ideal scheme, such as distinction of the side lights in the lateral system of buoyage by colour, but without success ; and it appears plain that, under the present conditions obtaining in the different countries, advance towards the ideal can only be made gradually and by exerting to the utmost the spirit of reasonable compromise.

ANNEX 3.

STATEMENT MADE ON FEBRUARY 14TH, 1936, BY COUNT CAPPONI BEFORE THE
SMALL COMMITTEE.

Gentlemen,

I shall only make a very brief statement and should greatly appreciate it if it could be put on record in some way. As you know, I have been temporarily deputed to work on this Committee, and, personally, I do not think there are any difficulties from the point of view of my country's acceptance of the amendments to the draft Agreement and Rules relative to the

unification of buoyage drawn up by the Preparatory Committee, which we have been considering these last few days. However, it may happen that my Home Authorities might have some remarks or observations to make with regard to the work we have been doing here, especially on matters of principle.

On the other hand, as you know, Italy has already accepted the draft presented to us for amendment during this session as a basis for agreement. Should some points require adjustment, therefore, I trust you will agree that these points should be cleared up by correspondence with the Chairman and the Permanent Secretariat and communicated to you through the same channel for your information.
