

UNIFORMITY IN BUOYAGE

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Many attempts have been made in the past to establish a Uniform System of Buoyage ; so far unfortunately without much success.

Admiral Niblack, Director of the International Hydrographic Bureau, published a Summary of the Proposals, discussions and conclusions of various International Conferences in the *Hydrographic Review*, vol. III, n° 1, November 1925, at which time the Commission on Communications and Transit of the League of Nations had taken up the subject.

It has now been suggested that the International Hydrographic Bureau might carry on the work where the League left off, and the question of whether or not this should be done will probably be decided at the next International Hydrographic Conference to be held in 1947.

At the risk of repetition it is therefore considered advisable, to once more briefly summarise the various International and Inter-Departmental Conferences which have studied this question.

The chief divergence in the systems adopted by various countries is in the *colours* of and *lights* exhibited from Buoys marking the sides of channels ; this article will therefore be confined principally to different proposals which have been made regarding the lateral system of marking them.

- As regards their *shapes* a considerable amount of uniformity already exists, i. e. *conical* buoys on starboard side (*) and *Can* buoys to Port, but their colours vary considerably throughout the world and previous Conferences have sometimes put forward diametrically opposite proposals. The systems of Marking Wrecks adopted by various countries also show a considerable degree of uniformity.

In 1882-1883 : An *Inter-Departmental Conference for Great Britain and Ireland* arranged by the Corporation of Trinity House was held in London and amongst other propositions the General Lighthouse Authorities adopted the following : Starboard Hand buoys shall always be Conical and painted one colour only.

- Port Hand buoys shall be CAN and painted another characteristic colour either single or parti-colour.

(*) In all cases by Starboard or Port hand buoys is meant those on the Starboard or Port hand when entering from seaward or when proceeding in the direction of the main stream of the flood tide.

In 1888, the *Second Conference of Maritime Countries of the North* met in Copenhagen and studied a proposal put before them by Mr. Phillipson. This however was mainly a Cardinal system of Channel marking.

In 1889 an *International Marine Conference* was held in Washington, U.S.A., and having decided that Uniformity is more easily obtained by means of colour, advocated, for the Lateral System, that :

Starboard Hand buoys should generally be Red ;

Port Hand buoys should generally be Black, otherwise parti-coloured ; that the shapes of these buoys should remain optional, but suggested that starboard hand buoys might appropriately be Conical ;

Port hand buoys might appropriately be Can.

The French and American Governments officially adopted the proposals of this Conference in 1890 and Spain put this recommendation into effect in 1907.

In 1912 an *International Maritime Conference* was held at St. Petersburg and adopted the same system as the Washington Conference of 1889 but reversed the colour of the channel buoys, thus recommending that :

Starboard Hand Buoys be BLACK ;

Port Hand Buoys be RED, i. e. the same colour as the Port Hand Lights of ships.

The Spanish Government changed its Regulations for Buoyage in 1913 in conformity with the recommendations of the St. Petersburg Conference and Italy and Portugal subsequently followed suit to the extent of using Red Conical buoys on the Port hand and Black Can on the Starboard.

In 1923, the *XIIIth International Congress of Navigation* was held in London and considered many proposals for buoyage systems but no definite action was taken.

In 1924, the Section of the Communications and Transit of the League of Nations arranged a Meeting of its *Sub-Committee of Ports and Maritime Navigation* in London at which, among many other subjects, the question of Uniformity of Buoyage was taken up and it was decided to form a *Special Technical Committee for Buoyage and Lighting of Coasts*. This Committee met in Paris in December 1924, and finally proposed the following :

Starboard Hand Buoys Conical painted BLACK. If lighted Green or White Lights.

Port Hand Buoys CAN painted RED. If lighted RED or White Lights.

In 1925, this Special Technical Committee held its 2nd Meeting at Monaco, the International Hydrographic Bureau being represented by one of its Directors and a Technical Assistant. It was noted that so far as

the *Colour* of Channel buoys is concerned 18 countries had adopted the Washington System, namely Red on Starboard Hand and Black on Port Hand, and that 5 countries use the Cardinal (or Compass) System.

In 1926, a Sub-Committee established by the 1925 Committee met in Paris, the International Hydrographic Bureau again being represented by one of the Directors. This Committee studied the question of the Unification of Coastal Signals but not Buoyage.

In 1926, the *Technical Committee for Buoyage and Coast Lighting* held its 3rd. Session at Stockholm. A general Report on the Provisions agreed to for Unification, with an Annex setting out the various Regulations suggested by them was issued (Pamphlet n° C.C.T.-260, Geneva, 11th November 1926) and submitted for the consideration of the Governments of Maritime States with a view to the summoning, in the Autumn of 1927, of a Maritime Conference.

In 1926, during the *IInd International Hydrographic Conference* held at Monaco from 26th October to 10th November, it was decided that as it was proposed to convene a special International Conference on Buoyage, etc., under the auspices of the League of Nations, these subjects should not be included in the Agenda of the International Hydrographic Conference and thus prevent duplication of work.

In 1927, the United States Lighthouse Service issued an informal statement of its views on the proposals contained in the 1926 Technical Committee Report (see Circular C.C.T./P.M./B.E./36, Geneva, January 3rd 1928). An alternative System of Uniform Buoyage was submitted as a contribution towards further discussions of a feasible plan to secure uniformity involving the most moderate expenditure, taking into consideration the World as a whole. This statement was examined by the Technical Committee at a Meeting at Geneva from 27th February to 2nd March 1928, and in May 1928 they sent a delegation to visit the American Lighthouses Authorities. Their report is given in document C.C.T./P.M./B.E./38 of 5th September 1928.

In 1929, the League of Nations *Technical Committee for Buoyage and Lighting of Coasts* met in Genoa from 8th to 15th February. The Directors of Lighthouse and Buoyage Services of the following countries were represented : Chile, France, Germany, Italy, Japan, Netherlands, Portugal, Spain, Sweden and U.S.A. A representation of the International Hydrographic Bureau also attended.

All the various types of buoys were considered, and their proposals are contained in document C.59/M.34-1929, VIII, Geneva, 20th February 1929. They proposed that :—

Starboard hand buoys should be	}	Red Conical Topmark.
CONICAL painted RED.		L ^s red occulting or fixed, or white even number of flashes.

Port hand buoys should be CAN { Black Cylindrical Topmark.
 painted BLACK. L^t white, or Green odd number of flashes,
 or fixed.

In 1929, an *International Conference of Lighthouses and Maritime Signals* was held in London from 8th to 12th July but the subject of Unification of Buoyage was not officially on the Agenda.

In 1930, the League of Nations held a *Conference on the Unification of Buoyage and Coast Lighting* from 6th to 23rd October at Lisbon. Delegates from the following countries took part: Belgium, Brazil, Canada, Chile, Cuba, Danzig, Denmark, Estonia, Finland, France, Germany, Great Britain, Northern Ireland and all parts of the British Empire who were not separate Members of the League of Nations, Greece, Iceland, India, Italy, Japan, Latvia, Mexico, Monaco, Netherlands, Norway, Poland, Portugal, Roumania, Spain, Sweden, United States America, Uruguay and Yugoslavia.

Certain International Organisations, among which was the International Hydrographic Bureau, took part in an advisory capacity.

Following the decision of the Council of the League of Nations the Report of the 1929 Genoa Committee was submitted for consideration as a basis for discussion.

Great Britain, who was taking part in the work of the League's Technical Committee for the first time, presented a new scheme for the Unification of Buoyage in the lateral system; the delegation of the U.S.A. also presented a complete scheme both in the lateral and cardinal systems. The essential differences in those two schemes involved long and animated discussions.

The results of the Conference, which are summarised in the *International Hydrographic Bulletin* n° XI, November 1930, pages 261-263, were that it was not found possible to establish rules concerning buoyage which could be universally accepted, especially as regards the lateral System, for the allotment of colours, nor a parallel rule governing the lighting of the buoys. It was decided however that further efforts should be made to secure agreement between all the Maritime Nations rather than accept immediate agreement between certain of them only. The question was therefore postponed, the Conference expressing the hope that it would be given an opportunity of resuming its work in about a year's time after the Governments had had the opportunity of making fresh efforts to reach complete agreement. The League Assembly in 1931 however expressed the desire that a new Conference for the Unification of Buoyage and Lighting of Coasts should not be convened until it had been ascertained that it was likely to be fully successful. New proposals were drawn up by the French Lighthouse Service in 1932, and by the Chinese Government in 1933.

The United States Government declared that it attached great importance to the continuation of the efforts of the Technical Committee, and this was

agreed to at a Meeting at the Advisory Committee of the League of Nations in June 1932.

In 1933 : A Preparatory Committee of the 2nd International Conference for Unification of Buoyage and Coast Lighting met in Paris in June, and the following month in London when "Draft Rules for the Unification of Buoyage" with a draft Agreement and annexed Regulations were drawn up for communication to the various Governments, asking for any comments and whether they would be prepared to conclude an agreement on the basis of these Proposals. The result showed that the situation was approximately the same as at the time of the Lisbon Conference of 1931.

The Technical Committee therefore decided to set up a Committee of experts to frame a new text, having regard to the various amendments and modifications proposed by various Governments.

In 1936, this Committee of Experts met in London and drew up the text for a new Agreement (see Document C.128 a)-M.67 a) 1936, VIII, Geneva, March 26th, 1936). This stated that "Marks" on the two sides of a channel are characterised as follows :—

Starboard hand marks :

Shape or type : Conical or spar.

Colour : Black, or, for purposes of differentiation, in the case of conical marks, Black and white chequers ; in the case of spars for the purpose 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.

Numbers : Odd.

Lights : White, showing one or three flashes or occultations ; Green of a character not allocated to the marking of wrecks ; or both White and Green lights with the above characteristics.

Port hand marks :

Shape or type : Can or Spar.

Colour : Red, or in the case of Can shaped marks, for purposes of differentiation, Red and White chequers.

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.

Numbers : Even.

Lights : Red, showing any number of flashes or occultations up to four ; White showing two or four flashes or occultations ; or both Red and White Lights with the above characteristics.

The use of Yellow instead of white in the chequers is permitted in secondary channels (channels which are alternative to main channels).

A Protocol of Signatures was opened at Geneva on 1st May 1936.

This was ratified by the United Kingdom of Great Britain and N^o Ireland on 23rd February 1938 with the stipulation that the acceptance was conditional on the application of the System by Belgium, Denmark, France, Germany, Netherlands, Norway and Sweden.

On 30th April 1945 the French Lighthouse Authorities adopted a new system of Buoyage (see *Notice to Mariners* n° 21/1162, Paris, 26th May 1945) which is in close conformity with the League of Nations Technical Committee's proposals of 1936.

CONCLUSION. — It seems that one of the principal causes that has prevented the adoption of a uniform system of Buoyage has been the question of the cost and labour entailed in re-painting and re-mooring the buoys according to the new system adopted, and making the necessary amendments to the charts and other publications concerned.

The United States Lighthouse Service pointed out in a statement issued in 1927 that the plan proposed by the League of Nations Technical Committee in their Document T.C.C. 87/M. 36, 1927, VIII, of 2nd March 1927 would require the reversal of Standards of colours on the part of Countries maintaining 22,032 buoy stations and 8,638 Lights, whereas the retention of the Red colour for starboard hand buoys and making the Light colours conform would require the reversal of colour standards by countries maintaining 495 buoys and 6,521 Lights.

These relative numbers may not still hold good but it is unfortunately the fact that two of the countries maintaining the largest number of navigational aids and publishing the largest number of charts, namely the U.S.A. and Great Britain, still adopt different systems of Buoyage.

The present period, when so many buoys will have to be re-painted and re-placed in their pre-war positions would however seem to be an exceptionally favourable opportunity for all countries to do so according to one uniform system, and as already mentioned the French Lighthouse Service has recently adopted a System in close conformity with that proposed by the League of Nations Technical Committee in 1936.

