



SN/Circ.29  
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I M C O

#### EFFICIENCY OF NAVIGATION LIGHTS

1. At the request of the Maritime Safety Committee, the Sub-Committee on the Safety of Navigation is examining the above subject, as recommended by Recommendation 51 of the International Conference on Safety of Life at Sea, 1960.
2. At its recent session, the Sub-Committee prepared the attached questionnaire and requested the Secretary-General to circulate it to Member Governments with a view to obtaining material necessary for the study of the subject in question.
3. Answers to the questionnaire by Member Governments are invited. It would be appreciated if these could be received by the middle of November 1966.

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QUESTIONNAIRE CONCERNING THE  
EFFICIENCY OF NAVIGATION LIGHTS

A. GENERAL

- (a) Are there regulations governing the carriage of ship's navigation lanterns, and if so, to what extent are oil and/or electric lanterns required?
- (b) Who is the authority responsible for the enforcement of standards for ship's navigation lanterns?
- (c) What provisions are made for the testing and the approval of navigation lanterns?
- (d) Is a standard definition of "a dark night with a clear atmosphere" recognized in the assessment of intensities of lights to be visible at 1, 2, 3 and 5 miles?
- (e) If a standard definition is recognized, what is it, and does this standard take into account a factor of atmospheric transmission?
- (f) Is a value of threshold of vision utilized?
- (g) If so, what is the value?
- (h) Comments, if any.

B. FACTORS CONCERNING RANGES OF VISIBILITY

1. Oil Navigation Lights

- (a) Are there regulations which govern the construction of oil lanterns?
- (b) Is a minimum candle power specified?
- (c) Are there specific requirements for (i) lenses, (ii) reflectors?
- (d) Do the lanterns' cases have to conform to specific dimensions?

- (e) Do the burners' glass chimneys, wicks, oil containers and the oil used have to conform to certain specifications?
- (f) Is the use of gas permitted, and if so, what is its nature and the intensity of light obtained therefrom?
- (g) If gas is used, what means are adopted to ensure that the colour of the gas flame matches that of the oil flame?
- (h) Comments, if any.

2. Electric Navigation Lights

- (a) Are there any regulations governing the construction of electric lanterns?
- (b) Do the electric bulbs have to conform to a specific size and type?
- (c) Are pearl or frosted bulbs permitted? If so, is there any specification covering the dimensions?
- (d) In the case of clear bulbs, is there a specification for the dimensions and form of the filament?
- (e) What wattages and voltages are specified and to what extent are these related to minimum intensities?
- (f) Is there a restriction on the type of bulb used, i.e. gas filled or vacuum?
- (g) Is the type of bulb holder specified?
- (h) Is the use of plain glass or dioptric lenses optional with electric lanterns?
- (i) Are reflectors employed?
- (j) Comments, if any.

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C. CHROMATICITY OF LIGHTS

- (a) Have colour standards been adopted?
- (b) If so, are the standards those of the International Commission on Illumination?
- (c) What devices are used to determine whether coloured slides actually fit within a standard?
- (d) To what extent is the use of plastic material, as an alternative to glass, permitted for coloured slides?
- (e) Are coloured lenses permitted?
- (f) Comments, if any.

D. SECTORS OF NAVIGATION LIGHTS

- (a) Are vertical sectors prescribed?
  - (b) If so, what are they, both below and above the horizontal plane?
  - (c) Are tolerances for spill-over of light imposed for the horizontal sectors?
  - (d) If so, what are they (extracts from regulations or standards would be useful)?
  - (e) Comments, if any.
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